



May 4, 2012

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CALIFORNIA HIGH-SPEED RAIL AUTHORITY RESPONDS TO FLAWED REPORT: CORRESPOND WITH AUTHORS

SACRAMENTO, Calif. – The California High-Speed Rail Authority (CHSRA/Authority) rejects claims made by an anti-high-speed rail group that operating and maintenance costs of California’s project are underestimated. The erroneous claims are based on the mistaken information and flawed comparisons on the part of the authors.

In a letter from Board Member Mike Rossi to the authors, Mr. Rossi states, “over the past few days there has been much public discussion of your March 17th report on the California High-Speed Rail Authority’s projected operations and maintenance costs.” He went on to say, “I want to set the record straight by providing you with some information to clarify the errors in the underlying data relied upon in your report.”

Four primary sets of facts demonstrate the fallacy of the March 2012 report by Community Coalition on High Speed Rail.

The first is the mistaken use of capital costs. The report mischaracterized rolling stock acquisition costs and annual operating costs from the original data source. The data came from a report by the Spanish foundation BBVA based on a database at the International Union of Railways (UIC) in Europe. The UIC has confirmed this error and has sent an extract of their high-speed rail database to show that the data used was indeed acquisition cost of rolling stock.

The second is the authors’ suggestion that the Authority relied on the BBVA report to produce certain estimates in the Business Plan. The BBVA report was referenced in CHSRA technical documents, but no data from the report was used; it was referenced as an example of other benchmarking work being done. The data and methodology used to compile the estimated operating costs for the proposed high-speed rail system are explained in Chapter 6 of the Plan and in supporting technical documents.

The third is the use of passenger-miles for measurement of operating costs. The report compares high-speed rail systems based on the cost per passenger-mile. The appropriate determination of operating costs is the cost per seat-miles, not passenger-miles.

“Using passenger miles for operating costs is not only contrary to standard industry practice, but incorrect and misleading,” said Mr. Rossi.

When rail operators both domestic and abroad calculate their operational costs, they look at the cost of moving trains, not moving people. Simply put, it takes the same amount of money to power a train whether there are 10 passengers or 100 passengers. Therefore, a cost per passenger-mile metric artificially skews the measurement of operating costs, making them appear lower for high passenger loads and higher for low passenger loads. This is why neither the airline nor passenger rail industry relies on cost per passenger-mile as the measure of operating costs.

A cost per passenger-mile calculation also implies that the wear and tear on the system would vary with the level of ridership, producing higher maintenance cost estimates. Rather, the primary maintenance cost driver is the number of trains running, not the number of passengers on board.

The fourth is the report's biased reliance on the significantly different business model used for railway undertakings in Europe. European systems are dramatically different than the one planned for California High-Speed Rail. In fact, the best parallel to California's proposed system is Taiwan's high-speed rail model where, unlike in Europe, the train operators own the tracks. If the authors of the study had used this correct comparison, they would have found that the Authority's assumed operating and maintenance costs are actually 60 percent higher than Taiwan's, not lower.

In the letter, Mr. Rossi concludes the following: "We may well disagree on certain things going forward. However, I hope we can maintain a shared interest in open, accurate analysis and presentation of the information that shapes public discussion about high-speed rail in California."

PDF Letter and Supporting Documents Attached

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May 4, 2012

William H. Warren
2909 Waverly Street
Palo Alto, CA 94306

William C. Grindley
151 Laurel Street
Atherton, CA 94027

Dear Messrs. Warren and Grindley:

Over the past few days there has been much public discussion of your March 17th report on the California High-Speed Rail Authority's projected operations and maintenance costs. Since your work reopened debate over these projections, I want to set the record straight by providing you with some information to clarify the errors in the underlying data relied upon in your report.

Had the Authority been given the opportunity to discuss or review your report prior to your press conference, we likely could have avoided this misunderstanding. Still, it is important to clearly state the flaws in your analysis so that we can have a fact-based, professional discussion about the project going forward.

Specifically, there are four issues regarding your report and subsequent public statements that warrant clarification:

1. Mistaken use of capital costs.

The Authority takes criticism seriously, and insists that our staff review external reports and reviews carefully. In fact, many of the revisions to our draft Plan were a direct result of external input.

So, when we learned of your report, we directed staff to review the BBVA study you cited and the underlying UIC data on which it was based (but which you did not reference). The Authority wanted to make sure that if you had indeed found an error that we were not aware of, we would be able to modify our plan to address the problem in an expeditious manner. The magnitude of the discrepancies you identified suggested that there was a serious problem with the data you used, leading us to consult the source data as opposed to relying on second-hand information.

Board Members:

Dan Richard
Chairperson

Lynn Schenk
Vice-Chairperson

Thomas Richards
Vice-Chairperson

Robert Balgenorth

Russell Burns

Jim Hartnett

Michael Rossi

Thomas J. Umberg

JERRY BROWN
GOVERNOR



Staff quickly discovered that the BBVA report included a critical mistake – the authors had cited the UIC data incorrectly, using rolling stock acquisition costs as operating costs. The UIC has confirmed this error and has sent an extract of their HSR database to show that the data used was indeed acquisition cost of rolling stock (see table 1 attached).

As stated by Gianfranco Cau, senior advisor on rolling stock at UIC, in an April 26 email to our staff, “the ‘Operating Costs per train’ into your table [the table from BBVA report used in your report] are the data of acquisition for the High Speed Trains, not the operating costs. Our table says literally *Coûts/ Coût total - monnaie nationale, date d'achat* and I verified, as a reference, the costs of the Italian High Speed Trains that I know.”

2. Reference to BBVA report in the supporting technical documents of the Business Plan.

In the days since your report became publicized, Mr. Warren was quoted as saying that you, “took the BBVA data because it was footnoted in (the bullet train’s) business plan.”

The Business Plan did not utilize data from the BBVA report. Rather, the reference to the BBVA report in the Plan was only made to highlight other efforts to benchmark costs. There was no citation or use of BBVA data, so your suggestion that our Plan relied on the same flawed data as your report is inaccurate.

The data and methodology used to compile the estimated operating costs for the proposed high-speed rail system are explained in Chapter 6 of the Plan and in the supporting technical document available on the Authority’s website.

3. Use of passenger-miles for measurement of operating costs.

As we discussed at our November 17, 2011 meeting, the appropriate determination of operating costs is the cost per seat-mile, not passenger-mile. Using passenger-miles for operating costs is not only contrary to standard industry practice, but incorrect and misleading.

From a cost perspective, a railroad (or airline) is moving its equipment, not the people riding the train. The cost of moving the train (power, labor, etc.) is the same whether there are 10 passengers or 100 passengers. A cost per passenger-mile metric artificially skews the measurement of operating costs, making them appear lower for high passenger loads and higher for low passenger loads. This is why neither the airline nor passenger rail

industry relies on cost per passenger-mile as the measure of operating costs.

Surely, ridership is critical because passengers provide the primary source of revenues that offset the costs. Yet, while it is possible to make a calculation of costs per passenger-mile, such a calculation effectively mixes costs and revenues and does not provide an accurate picture of the cost of providing service.

4. Comparisons with other systems.

As we have noted in the past, comparisons with European systems are misleading because of the very different business structures they utilize. To get an accurate assessment on such matters, data cannot be used without ensuring that a true apples-to-apples comparison is being made. Below, we provide several comparisons of operation and maintenance costs between the proposed California HSR and international systems (see table 2 attached). The best parallel to California's proposed system is Taiwan's high-speed rail model where, unlike in Europe, the train operators own the tracks in a lean vertically integrated structure, similar to the one we are developing in California.

A study from UIC and data from Spanish AVE also contribute to demonstrate that the projected O&M costs for California high-speed rail are higher than those observed in other international systems; that is, that we have not understated costs.

I expect that we may well disagree on certain things going forward. However, I hope we can maintain a shared interest in open, accurate analysis and presentation of the information that shapes public discussion about high-speed rail in California. I trust that you will address the mistakes in your report that resulted from your reliance on the BBVA report.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mike Rossi', with a long horizontal line extending to the right.

Mike Rossi
Member, California High-Speed Rail Authority Board

cc: California State Senate Committee on Transportation and Housing
California State Assembly Committee on Transportation
California State Senate Budget Subcommittee No. 2
California State Assembly Budget Subcommittee No. 3
California High-Speed Rail Legislative Peer Review Group
Alain Enthoven
Alan Bushell

TABLE 1

1 MATERIEL ROULANT A GRANDE VITESSE		HIGH SPEED RAIL ROLLING STOCK																				
2	3	UNITÉ	UNIT	ETR 500 (4)	ETR 480	AVE	ALARIS	ICE 1	ICE 2	ICE3	ICE 3 Polycourant	ICE / T - ET415	TGV Réseau	THALYS	TGV DUPLEX	TGV Réseau tric.	TALGO (REMORQ.)	TALGO (LOC+REM.)	ETR 500	VELARO	HTE	ICN
37	Coûts	Costs																				
38	Coût total - monnaie nationale, date d'achat	Total Cost of Acquisition - local currency, year of purchase		46,025 M ITL	28,750 M ITL	2 693 M ESP		51,556 M DEM	38,550 M DEM	33,292 M DEM	37,970 M DEM	25,000 M DEM	13.57	19.82	130 M FRF		590 M ESP		37,900 M ITL			
39	Coût total - monnaie nationale, actualisé 1997	Total Cost of Acquisition - local currency, actualized 1997		52,560 M ITL	32,632 M ITL	3 139 M ESP	860 M ESP (1)	61,145 M DEM	40,786 M DEM			26,450 M DEM	89 M FRF	130 M FRF		93 M FRF	605 M ESP		49,535 M ITL			20,75 M CHF
40	Coût total - €, actualisé 1997 (ou année achat)	Total Cost of Acquisition - in € actualized 1997	Mio €	27.24	16.91	18.92	5.18	31.13	20.76	17.02	19.41	13.46	13.57	19.82	19.82	14.06	3.64		25.67			14.09
41	Coût total - €, actualisé 2002 (aprox. 5 % annuel)	Total Cost of Acquisition - in € actualized 2002	Mio €	34.05	21.1375	23.65	6.475	38.9125	25.95	17.871	20.3805	15.479	16.96	24.78	20.81							
48																						
49				ETR 500	ETR 480	AVE	ALARIS	ICE1	ICE2	ICE3	ICE 3 Polycourant	ICE/T ET415	TGV Réseau	THALYS	TGV DUPLEX	TGV Réseau tric.	TALGO (REMORQ.)	TALGO (LOC+REM.)	ETR 500	VELARO	HTE	ICN

TABLE 2

O&M Costs of HSR		Notes	Cost per Seat-Mile
O&M Costs [cents per seat-mile]	CAHSR	(1)	¢ 6.3 – 6.7
	Taiwan HST	(2)	¢ 3.1
	AVE Spain	(3)	¢ 2.4 – 3.4
	UIC	(4)	¢ 5.4

(1) - Phase 1 Blended forecast in 2040 in \$2010 (low – high range)

(2) - Taiwan HSR Corporation, “Year End Financial Report 2010 & 2009”, March 31, 2010

(3) - Sanchez-Borras, Robuste, & Criado, “High-Speed Railways in Spain”, pp. 39-48, “Transportation Research Record, No. 2261 -- Railways 2011”. Range calculated from Figures 4, 5, & 6, and Table 4.

(4) - “Relationship between rail service operating direct costs and speed”, UIC, January 2010, pages 44-45, Table 10 and Figure 6, http://www.uic.org/IMG/pdf/report_costshs.pdf