

## **Comments on the Authority's Draft 2016 Business Plan**

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### **Issue 1: Ridership On IOS –North Between Bakersfield and San Francisco**

#### Comment:

Please explain in your Final 2016 Business Plan the 600% variance between the Bakersfield to San Francisco Bay Area high-speed train ridership as forecast by your first ridership consultant and that of your current consultant.

#### Discussion:

The perceived need for a statewide high-speed rail system was conceived shortly following the issuance of a grossly inaccurate May 1993 report by the California Department of Finance's Demographic Research Unit (DRU) projecting that the state's population would rise from 30 million in 1990 to 49 million in 2020 and more than double to over 63 million by 2040. The Intercity High-Speed Rail Commission, established in 1993, and its successor agency, the California High-Speed Rail Authority, established in 1996, were charged with developing and implementing a 20 year plan for a statewide high-speed rail system to meet the needs of California's rapidly growing projected population.

Both the Commission and the Authority used the services of Charles River Associates (CRA) to conduct ridership studies on the proposed statewide HSR system. CRA's first study was completed in July 1996, *Independent Ridership and Passenger Revenue Projections for High Speed Rail Alternatives in California* (1996 CRA Study). Writing about their study, CRA said, "these forecasts and sensitivity analyses represent the most advanced state-of-the-art, comprehensive HSR ridership and passenger revenue forecasts and analyses ever carried out in California, and possibly anywhere."<sup>1</sup> The Commission added, "to ensure investment grade results, the forecasts were subjected to extensive peer review."<sup>2</sup> To date, the 1996 CRA Study is the only ridership and revenue study that either the Commission or the Authority has dubbed "investment grade".

In making their forecast CRA first broke up the path along the proposed HSR alignment into Origin/Destination Pairings (O/D Pairings). Origin and Destination Areas are referred to as “Catchment Areas” in the following table.

Area	Geographic Definition of Catchment Area
Los Angeles	Los Angeles-Riverside-Orange County, CA CMSA
San Francisco	San Francisco-Oakland-San Jose, CA CMSA
Sacramento	SACOG Planning Area
San Diego	San Diego, CA MSA
Bakersfield	Bakersfield, CA MSA
Fresno	Fresno, CA MSA
Merced	Merced, CA MSA
Modesto	Modesto, CA MSA
Monterey	Salinas, CA MSA
Stockton	Stockton-Lodi, CA MSA
Visalia	Visalia-Tulare-Porterville, CA MSA

Areas of Origin or Destination for Potential Users of a High-Speed Train

CMSA is a Combined Metropolitan Statistical Area

MSA is a Metropolitan Statistical Area

CRA then estimated the annual number of person-trips by various modes between the O/D Pairings along the route of the high-speed train and then factored in expected growth rates to arrive at an estimate of total person-trips between these O/D Pairings in 2015, a year when they believed the entire statewide system would have been in service for a few years. When making their forecast CRA was working with DRU’s May 1993 population forecast predicting that California’s population would be 45.7 million in 2015. In their most recent forecast the DRU now predicts that a population of 45.7 million will not be reached until 2035. In other words, the table below, assembled from O/D Pairings found in the 1996 CRA Study, might have been labeled “Forecast Trips in 2035” if CRA had been working with a more accurate population projection. Results from the 1996 CRA Study are shown below.

Forecast Trips in 2015					
O/D Pairing	Person Trips by Private Vehicle	Local Air Trips	Connect Air Trips	Amtrak Rail Trips	O/D Pairing Total
SFBA - Merced	1,618,146	3,704	17,345	16,291	1,655,487
SFBA - Fresno	3,734,266	64,636	216,051	53,965	4,068,918
SFBA - Visalia	167,460	1,723	7,005	19,192	195,380
SFBA - Bakersfield	850,206	9,900	43,671	31,827	935,604
Total SFBA to CV	6,370,079	79,963	284,071	121,276	6,855,388
Within Central Valley	3,492,123	249	-	59,438	3,551,810
<b>Total</b>	<b>9,862,202</b>	<b>80,212</b>	<b>284,071</b>	<b>180,713</b>	<b>10,407,198</b>

1996 CRA Study of Forecasted Travel by Mode in 2015 w/o High-Speed Rail

CRA forecast a percentage of travel from each existing mode diverted to the high-speed train and then added induced travel to arrive at a forecast of HST ridership. Results are shown below.

O/D Aggrigated Pairings	2015 Ridership (M)
LA Basin - Bay Area	6.4
San Joaquin Valley - LA Basin	1.7
San Joaquin Valley - SF Bay Area	1.4
Within San Joaquin Valley	0.5
Other	1.2
Total Base System SFBay Area - LABasin	<b>11.2</b>

CRA Forecast Ridership on Basic System  
Millions of Riders in 2015

Note: Valley-LA Basin and Valley-SF Bay Area Prorated per Authority's Split in 2008 Business Plan as only a single figure for LA Basin/SF Bay Area to the Central Valley was contained in the 1996 CRA Report.

The Authority's Draft 2016 Business Plan forecast of 11.0 million riders on IOS-North (Bakersfield to San Francisco) in 2028<sup>3</sup> is nearly identical to the forecast ridership along the entire LA Basin to SF Bay Area alignment as forecast in the investment grade 1996 CRA Study. It is nearly six times CRA's forecast ridership of 1.9 million for a stretch of track running from the San Joaquin Valley to the SF Bay Area (i.e. IOS-North-Extended). Moreover, it is more than 100% of CRA's forecast ridership for ALL modes of travel forecast for 2015 (a reasonable proxy for 2035 given new population growth data) along the route of the Authority's Bakersfield to San Francisco initial operating segment.

Please explain in your Final 2016 Business Plan why your current ridership forecast is credible when it is so clearly at odds with the earlier forecast, the only forecast ever dubbed "investment grade".

## **Issue 2: Growth of Ridership On Phase 1 Blended**

### Comment:

Please explain in your Final 2016 Business Plan why you expect ridership growth on Phase 1 Blended connecting the Los Angeles Basin to the San Francisco Bay Area to increase at a rate of 1.1% per year in the years 2035-2060 (i.e. well after the initial ramp-up period), a rate more than twice the rate at which California's population is expected to grow during the same period.

### Discussion:

Your Draft 2016 Business Plan shows ridership increasing at a rate of 1.1%/year<sup>4</sup> during the period 2035 to 2060. However, the California State Department of Finance's Demographic Research Unit (DRU), currently forecasts a declining rate of population growth from .75%/year to .33%/year during this same period or an average annual rate of population growth of .49%<sup>5</sup>. Moreover, the DRU is designated as the single official source of demographic data for state planning and budgeting<sup>6</sup>. Therefore, you must be using DRU's projections.

Please explain why your ridership numbers are expected to increase at more than twice the rate of population growth.

### Issue 3: Statutory Requirements for a Business Plan

#### Comment:

Please explain how you can check off meeting all the statutory requirements of the 2016 Business Plan, including the following elements<sup>7</sup>:

- the business plan shall include the proposed chronology for the construction of the statewide high-speed rail system.
- the business plan shall include the estimated capital costs for each segment or combination of segments.

#### Discussion:

The statewide system described in voter approved Proposition 1A included a line running from the Los Angeles Basin to the San Francisco Bay Area as well as extensions to Sacramento and San Diego<sup>8</sup>. How do you reconcile not reporting the estimated completion dates of the extensions as well as not reporting their estimated construction costs in your Draft 2016 Business Plan with your claim that “all of these requirements are addressed in the business plan”?

One answer to this question might be that the Authority considers the line running from the Los Angeles Basin to the San Francisco Bay Area as the “statewide system”. However, all of the Authority’s current project level environmental permitting efforts (Tier 2) are being done with reference to the *Final Program EIR/EIS for the Proposed California High-Speed Train System* (2005 Tier 1 EIR). The Authority’s 2005 Tier 1 EIR compared the impacts and benefits of only a statewide high-speed train system consisting of a line running from the Los Angeles Basin to the San Francisco Bay Area with extensions to Sacramento and San Diego to a “No Project Alternative” and a “Modal Alternative (2970 miles of new freeway lanes, 5 new airport runways, and 90 new airport gates) and found in favor of the statewide high-speed rail system. Never once did the Authority’s 2005 Tier 1 EIR even mention a high-speed rail alternative other than the statewide system including the extensions to Sacramento and San Diego.

If the Authority is claiming their Draft 2016 Business Plan is in compliance with all statutory requirements because the Authority considers the line connecting the Los Angeles Basin to the San Francisco Bay Area to be the statewide system referenced in the cited statute, then the Authority is describing a system that is out of compliance with the Authority’s 2005 Tier 1 EIR. If this is the case, then the Authority is also not in compliance with the statutory requirement of Proposition 1A mandating that it initiate the construction of a high-speed train system that connects the all the state’s major population centers, including San Diego and Sacramento, “consistent with the Authority’s certified environmental impact reports of November 2005 (2005 Tier 1 EIR) and July 2008.

Please explain in your Final 2016 Business Plan exactly how your plan meets the cited statutory requirements and still meets the statutory requirement contained in Proposition 1A that the proposed system be consistent with the Authority’s 2005 Tier 1 EIR.

#### Issue 4: Project Level Environmental Impact Reports

##### Comment:

The Authority's December 2009 Report to the Legislature and the subsequent 2012 BP, 2014 BP, and 2016 Draft BP consistently promise that the Authority will complete the project level permitting of each Phase 1 segment within roughly 2 years from the issuance of their then current plan/report. In other words, roughly every two years the Authority puts out a new plan pushing their permitting efforts out another 2 years. Now the Authority says that every project level permitting effort will be complete by the end of 2017. Yet in the more than 10 years since completing your 2005 Tier 1 EIR you have completed only 1 project level EIR, that for a small stretch of track between Merced and Fresno. Even your project level permitting effort for the Fresno to Bakersfield segment is not truly complete because you still are working on the alignment through the City of Bakersfield. Why should anyone, even members of the Authority, believe that you will now complete permitting efforts on all Phase 1 segments by the end of 2017?

##### Discussion:

See the following table detailing the Authority's past failures to deliver progress as promised.

Promised Completion Dates for Project Level EIR's Per Authority Plans				
Segment	Dec. 2009 Report to Legislature	2012 Business Plan	2014 Business Plan	Draft 2016 Business Plan
San Francisco to San Jose	Oct. 2011	Dec. 2014	Summer 2017	2017
San Jose to Merced	Mar. 2012	Dec. 2013	Fall 2016	2017
Central Valley Wye	Mar. 2012	Dec. 2013	Fall 2016	2017
Merced to Fresno	Nov. 2011	June 2012	Completed	<b>Completed</b>
Fresno to Bakersfield	Nov. 2011	Dec. 2012	Spring 2014	Completed
Bakersfield F Street Alignment	Nov. 2011	Dec. 2012	Spring 2014	2017
Bakersfield to Palmdale	Dec. 2012	Feb. 2014	Fall 2015	2017
Palmdale to Burbank	Dec. 2011	Oct. 2013	Summer 2015	2017
Burbank to Los Angeles	Dec. 2011	Oct. 2013	Summer 2015	2017
Los Angeles to Anaheim	June 2011	Dec. 2014	Spring 2017	2017
Los Angeles to San Diego	-	-	TBD	TBD
Merced to Sacramento	-	-	TBD	TBD

The Authority has a history of breaking out segments in a business plan to two or more segments in a subsequent business plan. The table above attempts to deal with this fact. For example, the segment Palmdale to Los Angeles had a completion date of December 2011 in the December 2009 Report to the Legislature. This segment was later split into Palmdale to Burbank and Burbank to Los Angeles. Both these sub-segments of the original segment show in the December 2009 Report to the Legislature column as having completion dates of December 2011.

## **Issue 5: Commuting from Fresno to the Silicon Valley**

The Authority makes the following claim in the Draft 2016 Business Plan:

“With this new connection, a trip from Fresno to San Jose will take about an hour on high-speed rail which is a game changer both for the people and the economy of the Central Valley and for Silicon Valley as well. New job markets will be opened up for people living in the Central Valley and creating a high-speed connection to the Central Valley would help address the affordable housing crisis in the Bay Area.”<sup>9</sup>

### Comment 5A:

The Authority seems to be suggesting that significant numbers of people will live in Fresno and work in the Silicon Valley. However unlikely that this will occur, given the cost of daily commuting by high-speed rail, the Authority’s Final 2016 Business Plan needs to clearly make the case that this will happen.

### Discussion 5A:

Per the formula provided in 2016 Ridership and Revenue Forecasting Technical Supporting Document<sup>10</sup> the cost of a roundtrip (150 miles times 2) ticket for a commute from Fresno to San Jose will be \$125 in 2015 dollars. The monthly cost will be \$125 x 20 or \$2,500. Your Final 2016 Business Plan needs to show evidence that persons currently living in San Jose would want to move to Fresno in search of more “affordable housing”, but then spend \$2,500/month commuting to work.

### Comment 5B:

The Authority’s 2005 Tier 1 EIR never addressed the issue of long distance commutes from Fresno to the Bay Area. If this practice was to become a reality it would be damaging to the environment in ways never addressed in the 2005 Tier 1 EIR.

### Discussion 5B

First, in the unlikely event it was to occur, it could cause a new type of “urban sprawl” impacting farmland around the City of Fresno.

Second, the Authority’s electrically powered trains running between Fresno and the Bay Area carrying commuters who previously lived in the Bay Area will place a new demand on California’s electrical power grid without taking any automobiles off the road. Moreover, the Authority’s trains will not run on 100% renewable energy just because the Authority says they will. The new electric power demand caused by high-speed long distance commuter trains can only be initially met by existing surplus electrical generating capacity. These surplus power generating sources are not renewable. They are fossil fuel peaking plants and coal fired plants in

the southwest U.S. Therefore, the Authority's postulated long-distance commuters would cause a significant increase in California's greenhouse gas emissions.

For these two reasons, and numerous others provided as comment in a separate comment submittal (*Argument for a Supplemental Statewide HST Program Level EIR/EIS*) the Authority needs to stop all work on this project until a new supplemental statewide HST program level EIR/EIS is completed. Alternatively, please explain in your Final 2016 Business Plan why your current efforts are continued to be justified under your original 2005 Tier 1 EIR.

### **Issue 6: Running a High-Speed Train on 100% Renewable Power**

#### Comment:

Your claim that your train will be "all powered by 100% renewable energy"<sup>11</sup> is a complete fabrication.

#### Discussion:

High-speed trains will not run on 100% renewable energy just because the Authority says they will. The electrically powered trains, replacing fossil fuel powered automobiles and airplanes, will place a new demand on California's electrical power grid. This new demand can only be met by surplus electrical generating capacity in existence at the time the high-speed trains begin to operate. These surplus power generating sources will not be renewable. They will be fossil fuel peaking plants and coal fired plants in the southwest U.S. (See comment submitted separately entitled *The Green Train*.) The Authority should conduct a new supplemental program level EIR to study this issue in an open and transparent way. However, short of doing that, your Final 2016 Business Plan needs to at least attempt to make the case that the train will run on 100% renewable power. For example, you say you will contract for 400-600 megawatts of renewable power.<sup>12</sup> Your Final 2016 Business Plan should tell the reader how when you plug your train into the electric grid your trains will somehow run on renewable power sources without causing homeowners and businesses throughout California to reduce their consumption of renewable power by exactly the same amount and replace it with power generated from fossil fuels.



## **Issue 7: Greenhouse Gas Emissions from Construction of Phase 1 Blended**

### Comment:

Your 2014 Business Plan made the claim that there would be zero net greenhouse gas emissions from construction. This again was an obvious fabrication and the Draft 2016 Business Plan repeats this lie<sup>13</sup>. The Final 2016 Business Plan should tell Californians just how many millions of tons of greenhouse gasses will be emitted during construction of Phase 1 Blended, and then mitigated so that the scope of your lie is at least visible to the reader.

### Discussion:

Your report entitled *Contribution of the High-Speed Rail Program to Reducing California's Greenhouse Gas Emission Levels* of 2013 failed to tell Californians just how many tons of GHG's would be emitted during construction of Phase 1 Blended. Your rationale for failing to provide this number had to do with not knowing the amount of concrete, steel, and other materials needed to complete the project<sup>14</sup>. However, the Authority's CEO testified before the Assembly Budget Committee responsible for High-Speed Rail Oversight on January 27, 2016 about construction cost estimates. In his testimony he said that the Authority has 200,000 line items in its construction cost estimate, including lines for construction materials like concrete and steel. Moreover, Mr. Morales testified that each line item includes an amount (ex. cubic yards of concrete, feet of steel rail, etc.). Therefore, there seems to be no reason preventing the complete disclosure of all GHG emissions that will result from the construction of your project. After disclosing the estimated GHG emissions, the Final 2016 Business Plan must state how many trees need to be planted through your proposed tree planting program and how many engines need to be replaced with more efficient engines through your proposed engine replacement program<sup>15</sup> to mitigate all construction emissions. Lastly, provide in your Final 2016 Business Plan the progress you have made to date in planting trees and replacing engines.

## **Issue 8: Safety and Security**

### Comment:

Your 2016 Final Business Plan must describe the security measures your operating high-speed rail system will incorporate to ensure the safety of its passengers from acts of terrorism.

### Discussion:

A California high-speed rail system, if ever built, will likely be an inviting target for terrorists. This is an important issue that could seriously affect ridership. Airport style security measures might be able to provide the necessary security, but it would be expensive and add to delays for passenger travel. Both the expense and the delays would likely result in a loss of ridership. Conversely, the lack of airport style security seems to invite an attack and a successful attack, a catastrophe in itself, would also have an adverse effect on ridership. Yet your Draft 2016 Business Plan fails to describe your security measures other than saying that you will implement "a comprehensive safety and security program."<sup>16</sup> The recent terrorist attacks last year in Paris and just this week in Brussels (which included an attack on a train) highlight the need for you to address terrorism in your Final 2016 Business Plan.



## **Issue 9: Taking Cars Off the Road**

### Comment:

Your Draft 2016 Business Plan quotes the Mayor of Palmdale as saying, “By 2040, the system will reduce vehicles miles in the state by almost 10 million miles every day, a game-changer.”<sup>17</sup> Please put this quote in perspective in your Final 2016 Business Plan by stating that 10 million miles per day represents less than 2% of miles driven today on California’s highways and an even smaller percentage in 2040.

### Discussion

Readers of your Final 2016 Business Plan should have this quote put in perspective. Last year Californians logged over 190 billion<sup>18</sup> vehicle miles or roughly 520 million miles per day. Although 2040 is nearly a quarter century into the future and little is known about driving habits in 2040, the “game-changer” of 10 million miles per day is less than 2% of miles driven in California today.

## **Issue 10: Load Factor on a Train Running from Bakersfield to San Jose**

### Comment:

Your Draft 2016 Business Plan is silent with regard to the ridership load factor on trains running from Bakersfield to San Jose with essentially one stop, Fresno. Load factors affect profitability and should be discussed and forecast in your Final 2016 Business Plan.

### Discussion:

Consider a high-speed train running from Bakersfield to San Jose. A reasonable assumption is that more riders will get on in Fresno because many more trips are forecast between Fresno and the Bay Area than between Bakersfield and the Bay Area (See Comment 1). Therefore, a train originating in Bakersfield must travel the first 110 miles to Fresno largely empty to allow room for a larger number of passengers to get on at Fresno and travel the remaining 150 miles to San Jose. For simplicity sake let’s assume the train had 100 seats and twice as many riders boarded at Fresno as at Bakersfield and that the train will be 70% occupied leaving Fresno. That would mean that 23 persons got on at Bakersfield and 47 got on at Fresno. A train with the capacity of 26,000 passenger miles (260 miles x 100 passengers) actually provided only 13,000 passenger miles (260 miles x 23 passengers + 47 passengers x 150 miles), a load factor of 50%.

Your 2014 Business Plan supporting documents included a technical report entitled *2014 Service Planning Methodology*. In that document it was reported that an occupancy of 85% was forecast for all of your trains<sup>19</sup>. The 2016 Draft Business Plan is accompanied by a similarly titled technical document. However, the *2016 Service Planning Methodology* technical document does not discuss load factors. Your Final 2016 Business Plan should include information detailing your forecast load factors and information supporting those load factors for systems connecting the Bay Area to Bakersfield and your shorter proposed route connecting San Jose to Shafter.

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<sup>1</sup> *Independent Ridership and Passenger Revenue Projections for High Speed Rail Alternatives in California*, July 1996 by Charles River Associates, Executive Summary, page E-2. Copy of report located in Davis Transportation Library at UC Berkeley

<sup>2</sup> *Intercity High Speed Rail Summary Report and Action Plan*, December 1996 by ICHSR Commission, page 4-1. Copy of report located in Davis Transportation Library at UC Berkeley

<sup>3</sup> Draft 2016 Business Plan, page 70

[http://www.hsr.ca.gov/docs/about/business\\_plans/DRAFT\\_2016\\_Business\\_Plan\\_0201816.pdf](http://www.hsr.ca.gov/docs/about/business_plans/DRAFT_2016_Business_Plan_0201816.pdf)

<sup>4</sup> Draft 2016 Business Plan, page 70

<sup>5</sup> December 2014 Demographic Research Unit Report

[http://www.dof.ca.gov/research/demographic/reports/projections/P-1/documents/P-1\\_Total\\_CAProj\\_2010-2060\\_5-Year.xls](http://www.dof.ca.gov/research/demographic/reports/projections/P-1/documents/P-1_Total_CAProj_2010-2060_5-Year.xls)

<sup>6</sup> The Demographic Research Unit (DRU) of the California Department of Finance makes this statement on their official website.

<http://www.dof.ca.gov/research/demographic/dru/index.php>

<sup>7</sup> Draft 2016 Business Plan, section entitled *Meeting Business Plan Statutory Requirements*

<sup>8</sup> Text of Proposition 1A, Article 2, Section 2704.04, paragraph (a).

<sup>9</sup> Draft 2016 Business Plan, page 12

<sup>10</sup> Ridership and Revenue Forecasting DRAFT 2016 BUSINESS PLAN: TECHNICAL SUPPORTING DOCUMENT, Section 3.2

[http://www.hsr.ca.gov/docs/about/business\\_plans/DRAFT\\_2016\\_Business\\_Plan\\_Ridership\\_Revenue\\_Forecast.pdf](http://www.hsr.ca.gov/docs/about/business_plans/DRAFT_2016_Business_Plan_Ridership_Revenue_Forecast.pdf)

<sup>11</sup> Draft 2016 Business Plan, page 15

<sup>12</sup> Draft 2016 Business Plan, page 28

<sup>13</sup> Draft 2016 Business Plan, page 32

<sup>14</sup> *Contribution of the High-Speed Rail Program to Reducing California's Greenhouse Gas Emission Levels*, June 2013, page 14

[http://www.hsr.ca.gov/docs/programs/green\\_practices/HSR\\_Reducing\\_CA\\_GHG\\_Emissions\\_2013.pdf](http://www.hsr.ca.gov/docs/programs/green_practices/HSR_Reducing_CA_GHG_Emissions_2013.pdf)

<sup>15</sup> *Contribution of the High-Speed Rail Program to Reducing California's Greenhouse Gas Emission Levels*, June 2013, page 19

<sup>16</sup> Draft 2012 Business Plan, page 30

<sup>17</sup> Draft 2016 Business Plan page 32

<sup>18</sup> Caltrans Website

<http://traffic-counts.dot.ca.gov/docs/VMTHIST1.XLS>

<sup>19</sup> *2014 Service Planning Methodology* technical document, page 11

[http://www.hsr.ca.gov/docs/about/business\\_plans/BPlan\\_2014\\_Sec\\_4\\_5\\_Service\\_Planning\\_Methodology.pdf](http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2014_Sec_4_5_Service_Planning_Methodology.pdf)