Review of High-Speed Rail Draft 2016 Business Plan

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Summary

On February 18, 2016, the California High-Speed Rail Authority (HSRA) released a draft of its 2016 business plan, as required by state law. The plan provides updated information on the project and proposes changes to the project's construction plan. Specifically, the plan (1) changes the initial operating segment (IOS) of the project from the south (Central Valley to San Fernando Valley) to the north (Central Valley to Silicon Valley), (2) updates the capital cost and schedule for Phase I of the system (San Francisco to Anaheim), (3) identifies full funding for the proposed IOS North, and (4) assumes additional funding will become available for the remainder of Phase I of the system.

Given the significant cost of the planned high-speed rail project and the level of investment that the state has thus far made on the project, it will be important for the Legislature to ensure that the final version of the authority's business plan is aligned with its priorities. In this report, we identify three major issues that merit legislative consideration. First, there are several uncertainties regarding the funding plan for Phase I, such as uncertainty regarding the future availability of cap-and-trade auction revenues to fund the project as planned. Second, the Legislature will want to ensure that the change in the scope of the IOS meets its priorities. To the extent that the Legislature concurs with the proposed IOS North, it will want to consider whether the IOS has stand-alone value. Third, in order for the Legislature to maintain oversight of the project, it needs detailed information about the cost, scope, and schedule of each segment HSRA is planning to construct in order to easily track changes over time.

INTRODUCTION

The California High-Speed Rail Authority (HSRA)—an independent authority consisting of a nine-member board appointed by the Legislature and Governor—is responsible for planning and constructing an intercity high-speed train system that would link the state's major population centers. Under existing state law, HSRA is required to prepare a business plan every even year that provides certain key information about the planned high-speed rail system. On February 18, 2016, HSRA released a draft of its 2016 business plan. The authority must adopt a final business plan by May 1 following public review and comment on the draft plan. In this report, we (1) provide background information on the planned high-speed rail system, (2) describe the major changes proposed in the draft 2016 business plan to the project, and (3) identify issues for legislative consideration.

BACKGROUND

Overview of the Planned High-Speed Rail System

Project Initiated in 1996. Chapter 796 of 1996 (SB 1420, Kopp) established the HSRA to plan and construct an intercity high-speed train system that would link the state's major population centers. In November 2008, voters approved Proposition 1A, which specified certain criteria and conditions that the high-speed rail system must ultimately achieve. (As we discuss below, Proposition 1A also authorized the state to sell bonds to partially fund the system.) For example, the measure requires electric trains capable of operating speeds of at least 200 miles an hour and specifies maximum travel times along specific routes, such as nonstop travel from San Francisco to Los Angeles being no more than two hours and forty minutes. Proposition 1A also requires that the system operate without requiring a subsidy. The planned project would be the first high-speed rail system in the U.S. and one of the state's largest public works projects.

Construction of Project Divided in Two Phases. The HSRA plans to construct the high-speed rail system in two phases, as shown in Figure 1. Phase I of the system would provide service for about 500 miles from San Francisco to Anaheim. Phase II of the system would connect the system to Sacramento in the north and San Diego in the south. In 2014, HSRA estimated that Phase I of the system would be completed in 2028 and cost about $68 billion. The authority has not provided estimates of the cost or schedule for Phase II.

The HSRA plans to build Phase I of the system in segments as funding becomes available. As discussed below, the authority has been planning since 2012 for the first segment to connect the Central Valley to the Los Angeles region. Initial work on Phase I also includes certain early improvements to the "bookends" of the system. These are projects on commuter rail lines in the Bay Area and Southern California that will facilitate high-speed rail and also provide benefits to existing commuter rail systems.

First Operable Segment Planned to Go South. Since 2012, HSRA has reported that the first operation of high-speed rail in the state will be after the construction of an initial operating segment (IOS) of Phase I, which would connect Merced to the San Fernando Valley (commonly referred to as the "IOS South"). The HSRA selected the IOS South partly because the authority estimated it could

Figure 1

Planned High-Speed Rail System

meet the requirement of Proposition 1A to operate without requiring a subsidy due to potentially high levels of ridership to and from the densely populated Los Angeles region. The authority's plan was to build the IOS South in smaller construction segments, but not operate high-speed trains on the system until the entire IOS South was completed. In 2014, HSRA reported that the IOS South would cost about $31 billion and be completed by 2022.

Initial Construction Began in the Central Valley. Construction of the IOS South began on a segment—commonly referred to as the initial construction segment (ICS)—extending 130 miles from Madera (about 30 miles south of the proposed northern terminus of IOS South in Merced) to an area north of Bakersfield. The HSRA initially estimated that the ICS would be completed by 2017 and cost $5.9 billion.

Funding Provided for the Project. The HSRA has received partial funding to plan and construct the high-speed rail system. Specifically, through 2015-16, HSRA will have received an estimated $8.1 billion to build the system. The specific funding sources provided for the project are:

- ***Proposition 1A Bonds.*** This measure authorized the state to sell $9.95 billion in bonds, with $9 billion of this amount for the high-speed rail project. These bond funds cannot be used for more than 50 percent of the construction cost of a segment of the system. The Legislature has appropriated $3.7 billion of the bond funds authorized for high-speed rail, most of which remains unspent. About $1.1 billion of the funding appropriated is for the bookend projects on commuter rail lines, as discussed above.

- ***Federal Funds.*** The HSRA has received $3.5 billion in federal funds. This amount includes $2.6 billion in federal stimulus funds, which are available for expenditure only through September 30, 2017. As of November 2015, HSRA had spent $670 million of these funds. The remaining $928 million in federal funds are subject to a funding agreement with the Federal Railroad Administration. According to HSRA staff, the terms of the agreement can potentially be changed in the future to align with the project's needs. At this time, HSRA has not spent any of the $928 million in federal funds.

- ***Cap-and-Trade Auction Revenue.*** In 2014, the state began providing cap-and-trade auction proceeds to HSRA for the high-speed rail project. Cap-and-trade auction proceeds are revenue generated by the state from the sale of emission allowances as part of the state's efforts to reduce greenhouse gas (GHG) emissions. The Legislature authorized the state's cap-and-trade program as one of several programs to reduce GHG emissions to 1990 levels by 2020. In 2014-15, HSRA received $250 million in cap-and-trade auction revenues. As part of the 2014-15 budget, the Legislature also adopted budget trailer legislation to continuously appropriate, beginning in 2015-16, 25 percent of annual cap-and-trade auction revenue for the planning and capital costs for Phase I of the high-speed rail project. In 2015-16, this amount is estimated to be $600 million. The Governor's budget estimates that HSRA will receive $500 million in auction revenues in 2016-17. In addition, state law currently provides that an additional $400 million in cap-and-trade revenues that were previously loaned to the General Fund will be provided to HSRA. The Governor's budget assumes that $100 million of this will be provided in 2016-17 and $300 million in 2017-18.

HSRA Statutorily Required to Prepare Business Plan

State law requires HSRA to prepare a business plan every even year that provides certain key information about the planned high-speed rail system. Specifically, the authority must adopt a final business plan by May 1 every even year, and a draft of the plan is required at least 60 days prior for public review and comment. Under current law, the biennial business plan must include the following:

- ***Construction Plan.*** The business plan must include a description of the type of train service HSRA is developing, the timing and order for building various segments of the system, estimated schedules for completing environmental clearance, and estimated capital costs of constructing the system.

- ***Funding Information.*** The plan is also required to include information on the funding HSRA anticipates receiving to construct the system from various sources, such as state bond funds and federal funds.

- ***Risks to Completing the System.*** The plan also must include information on the risks faced by the project, such as risks related to financing, ridership, and construction.

On April 30, 2014, HSRA adopted a final 2014 business plan. Our above description regarding the planned high-speed rail project reflects the final 2014 business plan. As we discuss in the following section, the authority recently released a draft 2016 business plan.

MAJOR FEATURES OF DRAFT 2016 BUSINESS PLAN

As required by state law, HSRA released a draft business plan for public review and comment on February 18, 2016. Specifically, the draft 2016 business plan provides updated information on the project and proposes changes to the project's construction plan. The major features of the draft plan are summarized in Figure 2 and discussed below.

Changes IOS From South to North

Silicon Valley to Central Valley IOS. The draft 2016 business plan changes the direction

Figure 2

Major Features of Draft 2016 High-Speed Rail Business Plan

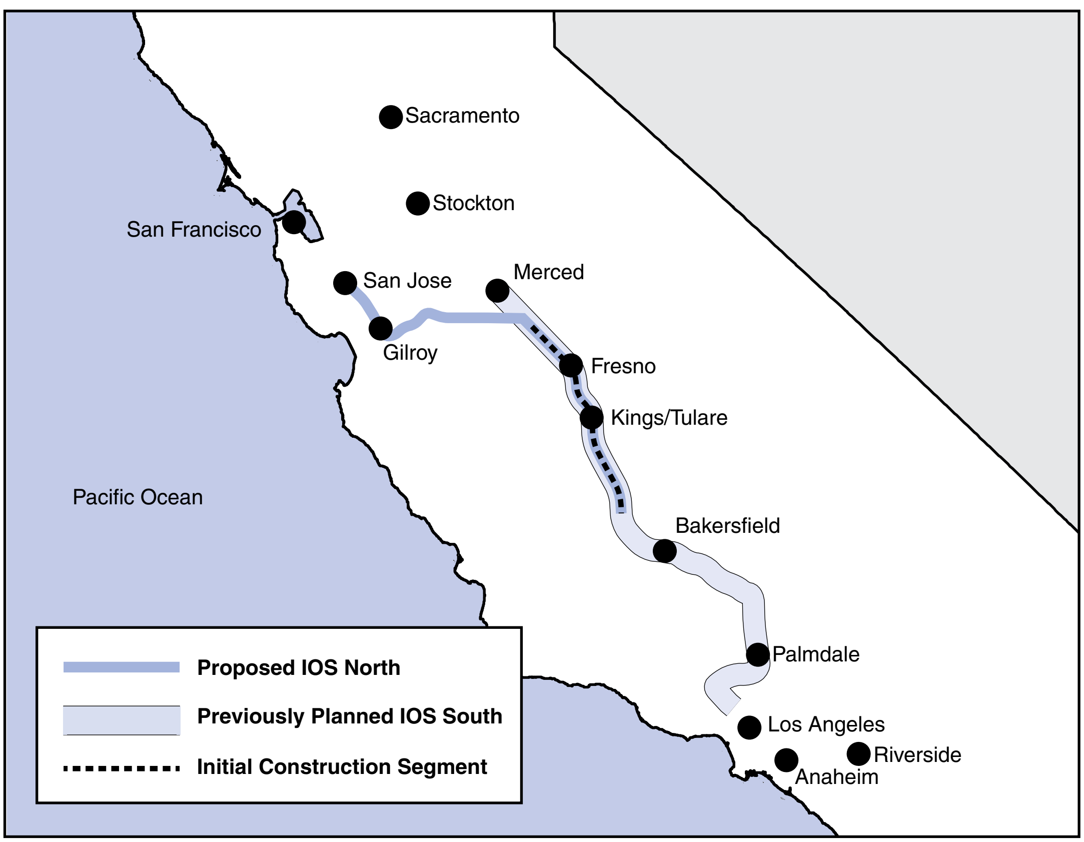
- ✓ ***Changes Initial Operating Segment (IOS) From South to North.*** The plan changes direction of the IOS from south to north. Specifically, the IOS would extend from the Central Valley to the Silicon Valley, rather than from the Central Valley to the San Fernando Valley in Southern California.
- ✓ ***Updates Capital Cost and Schedule for Phase I.*** The plan estimates the capital cost of Phase I at $64 billion, about $4 billion less than identified in the prior business plan.
- ✓ ***Identifies Full Funding for Proposed IOS North.*** The plan identifies sources to fully fund the proposed IOS North (Silicon Valley to Central Valley).
- ✓ ***Assumes Additional Funding Will Become Available for Remainder of Phase I.*** The plan discusses potential sources that might be available to partially fund the remainder of Phase I, but does not include a full funding plan.

of the IOS from south to north, as shown in Figure 3. Under the draft plan, the IOS would extend 239 miles from the Central Valley to the Silicon Valley (referred to in this report as the "IOS North"), rather than from the Central Valley to the San Fernando Valley. Under the plan, HSRA would connect the ICS that is currently under construction in the Central Valley to San Jose. Specifically, the IOS North would connect Diridon Station in downtown San Jose to an agricultural area north of the city of Shafter in the Central Valley. Because the southern terminus of the line would be roughly 50 miles south of the last station, HSRA plans to build an interim station at the southern terminus north of Shafter. The draft plan estimates that in 2025, the first year of operation, the IOS North would carry between 2.2 million and 4.1 million passengers.

Estimated Capital Cost of Proposed IOS. A primary reason for the change in the IOS is because of insufficient funding to complete the planned IOS South. As we discuss below, the draft business plan identifies funding sources to complete the proposed IOS North, which is estimated to cost less than the IOS South. Specifically, HSRA estimates that the IOS North would have capital costs of $20.7 billion, including $7.3 billion for the ICS and $13.4 billion to extend from Madera (the northern terminus of the ICS) to San Jose. This is about $10 billion less than the estimated cost of the IOS South. In addition, HSRA would incur financing costs for the IOS North. The HSRA also indicates that the

Figure 3

Proposed Initial Operating Segment (IOS)



Silicon Valley to Central Valley segment has fewer engineering challenges and could therefore be built more quickly than the more technically complex connection into the Los Angeles region.

Updates Capital Cost and Schedule for Phase I

The 2016 draft business plan includes an updated capital cost of Phase I of the system (San Francisco to Anaheim) of an estimated $64 billion, which is about $4 billion less than the cost provided in the 2014 business plan. As shown in Figure 4, this includes the cost of the proposed IOS North and costs to complete the other segments of Phase I. These costs reflect estimated capital costs for the project and do not include certain other costs associated with building the system, such as financing and administrative costs. The plan assumes Phase I would be complete by 2029.

Identifies Full Funding for Proposed IOS North

The draft business plan identifies sources to fully fund the proposed IOS North (Silicon Valley to Central Valley). These sources include:

- $6.8 billion from Proposition 1A, including $4.2 billion that has not yet been appropriated by the Legislature.
- $3.2 billion in federal funds already appropriated to HSRA.
- $17.8 billion in cap-and-trade auction revenues through 2050. This amount includes (1) $5.3 billion through 2024 that would support pay-as-you-go expenditures on the project and (2) $12.5 billion from 2025 through 2050 to support financing. Specifically, the $12.5 billion would be securitized to generate $5.2 billion in financing proceeds. While not specified in the plan, the remaining $7.3 billion would presumably support financing costs.
- $338 million from various sources, such as Proposition 1A and federal funds, that are allocated to project planning.

Of the above $28 billion, (1) $20.7 billion would support the estimated capital costs of the IOS North and (2) $176 million would support a reserve for the project. According to the business plan, the remaining $7.3 billion appears related to financing costs.

Assumes Additional Funding Will Become Available for Remainder of Phase I

While the draft plan identifies funding sources to complete the proposed IOS North of Phase I, as well as meet certain costs for the bookends of the system, the plan does not identify specific funding to support the construction of the remainder of Phase I. This would mean that the state would need to identify additional funding sources in the future

Figure 4

Phase I Capital Cost—2016 Draft Business Plan[a]

(In Billions)

Segment	
IOS North—Silicon Valley to Central Valley	
North of Shafter to Madera (ICS)	$7.3
Madera to San Jose	13.4
Subtotal	($20.7)
Remainder of Phase I	
IOS North extension to San Francisco and Bakersfield	$2.9
Other Phase I segments	40.6
Subtotal	($43.5)
Total	**$64.2**

[a] Estimated dollar amounts are in year of expenditure.

IOS = initial operating segment and ICS = initial construction segment.

to pay for the $43.5 billion in construction costs for other segments of Phase I, in addition to any financing costs that might be required. The draft business plan assumes that this additional funding would be available in order to begin construction on the remainder of Phase I in 2018, so that the entire Phase I system would be completed and operational by 2029. While the plan discusses potential sources that might be able to partially fund additional portions of Phase I, as we discuss below, it does not include a full funding plan.

Seek Federal Funds to Connect IOS to San Francisco and Bakersfield. As part of the plan to complete Phase I, HSRA plans to extend the proposed IOS from San Jose to San Francisco and from the southern terminus into Bakersfield. The HSRA estimates these extensions would require an additional $2.9 billion in funding—$2 billion to extend the line into Bakersfield and $900 million for improvements to facilitate service into San Francisco. The $900 million for the San Jose to San Francisco section represents only a portion of the total cost of that segment. The business plan indicates that HSRA will request funding from the federal government for the extension of the IOS into San Francisco and Bakersfield.

Use Operating Revenues to Partially Fund Other Segments of Phase I. Assuming the IOS North is constructed as well as the extension of the IOS described above, HSRA estimates that the other segments of the Phase I system will cost $40.6 billion to construct. In addition, HSRA will have administrative costs, and could potentially have financing costs related to the completion of Phase I that are not required to be included in the business plan. The draft business plan estimates that the IOS North will generate an operating surplus after it is completed. The plan assumes that this net operating revenue could be securitized, meaning the state could essentially sell the right to these ongoing revenues in order to generate a one-time up front payment to the state. Specifically, the business plan estimates that the state could generate $3.2 billion from such securitization. The HSRA also estimates that if the IOS were extended to Bakersfield and San Francisco, that would allow for an additional $4.2 billion in financing, for a total of $7.4 billion. These leveraged funds would then be available to fund construction of a portion of the remainder of Phase I. The HSRA has not identified where the remaining funding would come from in order to complete Phase I of the system.

ISSUES FOR LEGISLATIVE CONSIDERATION

Given the significant cost of the planned high-speed rail project and the level of investment that the state has thus far made on the project, it will be important for the Legislature to ensure that the final version of the authority's business plan is aligned with its priorities. Below, we identify three major issues that merit legislative consideration: (1) uncertainties regarding the funding plan for Phase I, (2) the scope of the IOS, and (3) adequate oversight of the project.

Uncertainties Regarding Funding Plan for Phase I

In order to ensure that Phase I of the high-speed rail system is completed as planned, it is essential that HSRA develops a comprehensive and credible funding plan for the project. While the 2016 draft business plan identifies sources to fully fund the proposed IOS North, there is some uncertainty regarding the future availability of cap-and-trade auction revenues to fund the project.

In addition, the business plan lacks a complete funding plan for the remainder of Phase I. We discuss each of these issues in more detail below.

Availability of Future Cap-and-Trade Revenue to Complete IOS Could Potentially Require Certain Legislative Actions. As discussed above, about half of the funding identified in the draft business plan for the proposed IOS is from cap-and-trade auction revenues after 2020. While the administration indicates it plans to continue the cap-and-trade program beyond 2020, current law does not appear to authorize the program's continuation beyond 2020. This means that without legislative action, the cap-and-trade funds HSRA plans to use to build the IOS would likely not be available. At a minimum, these funds are subject to considerable legal uncertainty. The Legislature will want to consider whether to approve the state's cap-and-trade program beyond 2020 on the merits of that program as a policy tool to achieve its GHG emission reduction goals. To the extent that the program is authorized beyond 2020, these revenues could be available for the high-speed rail project, as well as other uses.

If the legal uncertainty around the continuation of cap-and-trade is resolved, in the short-run HSRA's estimate of $500 million annually from cap-and-trade auction revenues (based on the 25 percent continuous appropriation) appears reasonable. However, in order to help facilitate the long-run securitization of future cap-and-trade revenues as assumed in the plan, the Legislature would need to take steps to ensure the availability of an adequate amount of revenues to support such financing. For example, the Legislature could specify that the first call on annual cap-and-trade revenues would be for the repayment of high-speed rail financing. Such changes in the allocation of cap-and-trade auction revenues could impact the level of funding available for other programs intended to reduce GHG emissions.

No Complete Funding Plan for Remainder of Phase I. As mentioned above, HSRA estimates that the capital costs to complete the remainder of Phase I after the IOS North are $43.5 billion. There would also be an unidentified amount of administrative costs as well as potentially significant financing costs. While the draft business plan discusses the possibility of securitizing the net operating revenues once the proposed IOS North is complete to support part of the costs to complete Phase I, it is unclear whether the system will actually generate an operating surplus. Moreover, the plan estimates that the amount of funding that could be generated would fall significantly short of the level needed to complete Phase I and does not identify how this shortfall would be met.

Scope of IOS

Weigh Trade-Offs of Proposed IOS Scope Change. The Legislature will want to ensure that the change in the scope of the IOS meets its priorities. While the previously planned IOS South would have connected a more populous region of the state and had higher projected ridership, it is not possible to be completed as scheduled due to insufficient funding. To the extent that the Legislature wants to ensure the continued development of a high-speed rail system, the proposed IOS North has some merit. Since the proposed IOS North has construction costs of about $10 billion less than the initially planned IOS South, it is much more likely that a full funding package to complete the segment could be achieved. In addition, the proposed IOS North would have less risk than trying to complete the more technically complex line into Southern California.

Ensure IOS Has Stand-Alone Value. If the Legislature concurs with the business plan's changed scope of the IOS, it will want to consider whether the IOS has stand-alone value—meaning that the entire IOS is usable and that it connects major metropolitan regions of the state. If the remaining parts of Phase I were not built due to a lack of available funds, the state would still have a usable asset.

In evaluating the stand-alone value of the IOS North, the Legislature will want to consider whether the southern terminus of the proposed IOS makes sense. As mentioned above, under the plan, the IOS North would have its southern terminus at an agricultural area north of the small city of Shafter, which is about 50 miles south of the last planned station on the IOS. In order to make the southernmost portion of the IOS usable, HSRA plans to build a temporary station or platform at this location. However, doing so would require additional environmental clearance as a station at this location was not previously evaluated by HSRA. Even with a temporary station or platform, ending the IOS in an unpopulated agricultural area does not appear to be an effective approach. This is because this location would not have the types of facilities and nearby businesses, such as transit connections, rental car facilities, and shops necessary to meet the needs of train passengers. To address these concerns, the Legislature could direct HSRA to limit work beyond the last permanent station (Kings/Tulare) near Hanford. This could free up some funding to support other aspects of the system, such as the IOS North or the bookend projects that make improvements to existing commuter rail lines. Alternatively, the Legislature could make it a priority to identify the additional $2 billion necessary to extend the IOS to Bakersfield.

Adequate Legislative Oversight

Given the state's significant investment in the high-speed rail project, it will be important for the Legislature to maintain oversight of the project to help ensure it is completed as planned and within budget. In order to facilitate such oversight, the Legislature needs certain information to hold the HSRA accountable. Specifically, the Legislature needs detailed information about the cost, scope, and schedule of each segment HSRA is planning to construct. However, the information provided by HSRA in the business plan and other documents can be difficult to compare over time. For example, since beginning work on the ICS, the scope, cost, and schedule of the project has changed, making it difficult to determine how well HSRA is adhering to the budget for that segment. Specifically, the length of the ICS was reduced to 118 miles from 130 miles. The projected cost of the ICS assumed in the draft 2016 business plan is $7.3 billion, compared to the initially planned $5.9 billion cost. However, based on the information provided by HSRA, it is difficult to determine the extent to which the change in costs is related to the changes in scope or other factors.

The Legislature may want to consider defining specific segments of the system and requiring future business plans and other legislative reports to provide information on the cost and schedule of these fixed scopes of work. This would make it easier to track changes over time and understand the reasons for cost changes. In addition, state law requires HSRA to identify the capital costs related to the planned system, but not other costs. The Legislature will want to consider requiring future business plans to include all costs associated with the planned system and construction of the various segments, such as financing and administrative costs.

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