

## REVENUE GUARANTEE PACKET

March 1, 2010

### BACKGROUND

[AB3034](#), the California law that put High Speed Rail bonds on the ballot, contained several provisions promoting the use of private investors in the project and expressly forbidding any public operating subsidies.

Private money was important both because sufficient public funds weren't likely to be available and the willingness of private investors to lend against the promise of train revenues was viewed as an important validation of the aggressive ridership forecasts produced by the Authority.

[The 2008 Business Plan](#) assumed \$6.5-7.5 billion of private financing (presumably debt), yet included no calculation of the costs of servicing this debt even though provisions had been added to AB3034 to allow such payments.

CARRD did a basic cashflow analysis last May and came to the conclusion that it was very unlikely that the private sector would lend significant amounts of money just on the basis of projected revenues.

Last September, the Authority's financial team ([Infrastructure Management Group, Inc.](#) and Goldman Sachs) presented a similar conclusion to the Board. [In a finance workshop](#), they told the Board that private investors would require some type of guarantee. Page 9 of the presentation states, "Private appetite for ridership risk is limited without revenue guarantee or until ridership proven."

Last December, the Authority issued a new Business Plan which called for even more private investment (\$10-12 billion) and noted that some type of revenue guarantee would be required.

The Legislative Analyst's Office (LAO) called attention to this guarantee, noting that it might violate AB3034's ban on operational subsidies.

California State Senators Alan Lowenthal (D-27) and Joe Simitian (D-11) chair the committees with oversight responsibilities for the project. During hearings held on January 19 and January 21, they called for the Authority to provide an explanation of how such guarantees would work yet not violate the law.

The Authority's financial consultant has produced a memo (included in this packet) for the Board with a structure for the guarantees that they believe will not violate the law. It will be discussed [at the March Executive/Administrative Committee meeting](#) (PDF).

*The proposal is that private investors would be eligible for a rebate of some or all of the money they lent for construction if revenue and/or ridership fails to meet the current projections that show the system earning 60% or greater operating margins.*

## QUESTIONS

Does this provision meet the spirit of AB3034, in which the State's commitment would be limited to providing \$9 billion towards the construction of the system?

Does it meet the letter of the law of AB3034, which uses the phrase "operating subsidy" but never actually defines it?

Will the Board and the Legislature be comfortable with a provision that uses complicated financial engineering?

If the letter of the law determines that this type of contingent payments is a capital expense contingency, what type of reserves will High Speed Rail be required to include in the construction budgets, as AB3034 explicitly requires adequate reserves for all contingencies?

Has any financial institution expressed interest in lending money under this arrangement?

If private firms are unwilling to lend without a guarantee, what will the Authority rely on to validate the ridership and revenue forecasts?

## INCLUDED IN THIS PACKET

Page 3 - 4. The memo from the finance consultant outlining mechanics of a revenue guarantee.

Page 5. The page from the LAO presentation asking about the legality of a revenue guarantee.

Page 6-11. The pages from the 2009 Business Plan referenced by the memo from the finance consultant.

More information is available at our website, [www.calhsr.com](http://www.calhsr.com).



**TO:** Curt Pringle, Mehdi Morshed, Jeff Barker, CA High-Speed Rail Authority  
**FROM:** Sasha Page, Alene Tchourumoff, Infrastructure Management Group  
**DATE:** February 21, 2010  
**RE:** Minimum Revenue Guarantee

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You have asked us to provide clarification on the recommendation in the Authority's 2009 Business Plan (the Business Plan) for a minimum revenue guarantee to secure some of the financing for the Phase I project. Please find below such a clarification that we believe will be accepted in the financial marketplace and conform with the Proposition 1A Bond Measure (the Bond Measure) requirements.

The revenue guarantee is discussed on pages 101-106 in the Business Plan. From page 103 of the Business Plan it is described as follows:

*Implicit in these assumptions is some form of a revenue guarantee that would guarantee to private sector participants that a minimum level of revenues would be received in the event that system revenues are significantly lower than forecast.*

We believe that this revenue guarantee should be further defined as follows:

- The revenue guarantee would **not** be used as an operating subsidy in the Authority's funding plan, which is prohibited in the Bond Measure. Such an operating subsidy implies that the system is not projected to generate sufficient revenues to cover operating costs. Unlike transit systems that often require long-term operating subsidies, the Authority's current ridership and revenue projects show that the project will in fact **generate operating surpluses**.
- Rather, the minimum revenue guarantee would be modeled in the funding plan as a **limited term contingent liability** to support up-front capital investments. This proposed structure would make it distinct from an operating subsidy in the following ways:
  - As a contingent liability, it would only be made available to fund a **portion of previously identified financing and capital costs** when certain benchmarks are not met. For instance, this could be calculated as a percentage of projected net revenues, e.g., 80 percent, that would balance the goal of incentivizing efficient high quality service by the operator with the risk profile of the lenders given market conditions at the time of receipt of bids.

# M E M O R A N D U M

To: Pringle, Morshed, Barker  
Re: Minimum Revenue Guarantee  
February 21, 2010

- The Authority could structure the revenue guarantee mechanism in its agreement with the operator such that the operator would still be required to cover project operating expenses from project revenues or reserves, but could be eligible to have part of its capital related costs defrayed. **This type of capital cost-only limitation has been employed both in federal and state highway and transit projects and cannot in any sense be considered an “operating subsidy.”**
- Enforcement of this requirement could involve a number of measures, including 1) the requirement that the recipient of the revenue guarantee **certify** that the funds have only been used for capital costs and/or 2) that the recipient’s financial accounts could be **audited** by an a third-party appointed by the Authority, and/or 3) that the parties refer to a **financial model** that would be produced either by the Authority or the selected operator (yet audited by a third-party) that would determine the guarantee amount based calculations established at signing of the concession.
- Unlike transit that often requires long-term guarantees, the revenue guarantee would be designed to be **limited in duration (5-10 years)** to demonstrate demand forecasts during ramp up period for new high-speed mode.

We hope that this clarification is helpful.



## Funding Plan Uncertain; Appears to Violate Law

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- ☑ ***Operating Subsidy Necessary for Private Funding.*** The Proposition 1A bond measure explicitly prohibits any public operating subsidy. However, the plan expects the following items to be funded by the private sector.
  - ***Revenue Guarantee.*** The plan assumes some form of revenue guarantee from the public sector to attract private investment. This generally means some public entity promises to pay the contractor the difference between projected and realized revenues if necessary. The plan does not explain how the guarantee could be structured so as not to violate the law.
  - ***Operations Insurance.*** The plan anticipates the cost of insurance for operating the system would not be borne by the private operator. If the public sector pays for insurance, that would constitute an operating subsidy in violation of Proposition 1A.
  
- ☑ ***Federal Funding Expectations Highly Uncertain.*** The plan assumes between \$17 billion and \$19 billion from federal funds by 2016, or nearly \$3 billion per year for the next six years. In comparison, over the past five years California has received roughly \$3 billion per year of formula funding for the state's entire highway system, which is primarily funded through federal gas tax collected in the state

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### Local Cooperation: OCTA Example

OCTA is committed to dramatically increasing transit options in Orange County. OCTA already uses Measure M sales tax revenues to fund transit projects throughout the county. In November 2006, Orange County residents voted to extend Measure M until 2046. Although OCTA has covenanted to spend some of its Measure M sales tax revenues on specified freeway projects, OCTA also has a wide degree of flexibility in spending remaining Measure M sales tax revenues on transit projects, including rail. Additionally, OCTA and the City of Anaheim have formed a joint powers authority, the Anaheim Regional Transportation Intermodal Center (ARTIC) that is pursuing a public-private partnership for development of an intermodal transportation center that can accommodate freeway, bus, Metrolink, Amtrak, and high-speed rail access.

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## Private Funding / Public-Private Partnerships

### Introduction

One of the ways the Authority would like to leverage public funds for this project is through pursuing public-private partnerships. High-speed rail, unlike most transit services, is expected to generate significant operating surpluses. These operating surpluses are the basis for the Authority's plans to engage private sector support. Private funding through public-private partnership arrangements is an increasingly accepted method to support the development of infrastructure projects.

Based on this premise, the Authority's Financial Plan is targeting \$10 to \$12 billion (in year of expenditure dollars) from potential private sources for the San Francisco-to-Anaheim segment. This investment is primarily backed by the high-speed rail's projected future operating surpluses as well as some type of revenue guarantee and is based on a level of risk and capital markets terms that the team believes are appropriate for this type of project.

To gain a better understanding of private interest in the project, the Authority issued a Request for Expressions of Interest (RFEI) in the Spring of 2008. Since that time, the Authority has continued to reach out to private industry leaders with experience in High Speed Rail and other large infrastructure projects. Results of the RFEI have shown that private sector interest

is strong and diverse; however, public support, both financial and political, is needed to generate private funding commitments.

### Background on Private Investment in Infrastructure

Historically, major transportation infrastructure projects in the United States have been funded primarily with federal funds (as much as 80 percent), with state funding comprising the remaining share. This paradigm is based substantially on the construction of the interstate highway system in the 1950s. Since that time, the increasing cost of public works projects has not been matched by the public funds available to pay for them. For example, federal shares of major infrastructure projects have decreased to approximately 30 percent for some programs, and states have had to make tough decisions to prioritize the expenditure of their funds. Increasingly, U.S. project sponsors have followed international trends and are turning to private funding sources to develop certain projects.

This trend has been intensified by the active interest of private investors, partially driven by pension funds, in the infrastructure sector. These investors have been attracted to long-term assets with stable cash flows. These tend to be 'brownfield' or developed projects with a revenue history. In the United States,

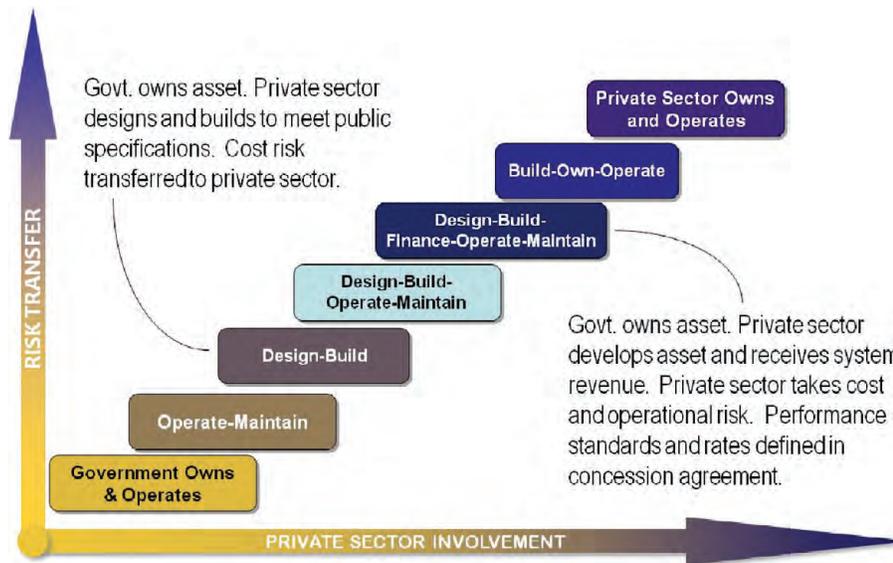
toll roads have been the major focus. Some key examples of private investment in toll roads are the long-term lease of the Chicago Skyway and the Comprehensive Development Agreement (CDA) toll roads in Texas. However, the assets of private equity funds interested in infrastructure investment far exceed the value of stable, brownfield investments available, which has encouraged these firms to invest in non-toll road infrastructure. In addition, given the large capital expenditures contemplated in many infrastructure projects, engineering and equipment firms have been willing to invest in projects to participate in project-related contracts.

The level and timing of private participation is dependent on the perceived risks associated with private investment. The main risks

associated with the high-speed train project are environmental, regulatory, legislative, construction, technological, ridership and operational. For a P3 arrangement to be successful, these risks need to be shared between the public and private sectors. In general, costs are lower when a risk is assigned to the party with the best ability to manage that specific risk. The private sector will expect to be compensated for any risks that it assumes. Therefore, the more risk that the public sector chooses to address, the higher the level of upfront private investment that can be attracted to a given project. In some cases, for example, with environmental and regulatory risks, the public sector may need to significantly mitigate the risk before the private sector will invest.

## Alternative Delivery Approaches

The Authority is considering a wide variety of project delivery approaches to optimize the allocation of risks. These approaches can range from less private participation to more private sector involvement as depicted in the figure below. Each approach is associated with a different risk allocation scheme.



Some of these project delivery methods are defined below:

**Design-Bid-Build (DBB):** In this traditional form of project delivery the design and construction of the facility are conducted by different entities. As a result, the DBB process is divided into two separate phases for design and construction.

**Design-Build (DB):** Unlike DBB, the DB approach combines design and construction phases into one fixed-fee contract.

**Design-Build-Operate-Maintain and Build-Operate-Transfer (DBOM and BOT):** Under a DBOM or BOT, the contractor is responsible for the facility's design, construction, operation, and maintenance for a defined/agreed period of time. This category includes "Availability Payments" discussed below.

**Design-Build-Finance-Operate-Maintain (DBFOM):** The DBFOM is a variation of the DBOM approach. The major difference is that, in addition to the design, construction, operation and maintenance of the project, financial risks are transferred to the private partner. While the project sponsor retains ownership of the facility, the DBFOM approach attracts private financing for the project that can be repaid with revenues generated during the facility's operation. Utilizing long-term public sources of revenue to pay down privately financed projects allows the public sector to enjoy the benefits associated with a leveraged project without issuing bonds or otherwise incurring debt on its balance sheet.

**Build Own Operate (BOO):** Under a BOO, the design, construction, operation, and maintenance of a facility are the contractor's responsibility. The major difference between BOO and other P3s is that with a BOO approach, the private partner owns the facility and is assigned all operating revenue risk and any surplus revenues for the life of the facility.

**Availability Payments (AP):** This mechanism accomplishes performance-based compensation in an asset that does not necessarily generate sufficient revenue to encourage private investment and can be used in conjunction with other P3 mechanisms where ongoing O&M responsibility exists. An AP requires private firms to accept risk related to the ongoing performance in the project's design, construction, and O&M. Concessionaires would receive periodic payments based solely on the condition and/or performance of the facility. Besides international examples, the \$1.76 billion Florida I-595 project and the recent \$1.2 billion Port of Miami Tunnel are two notable projects procured as APs and have generated intense interest among project sponsors both because it works with projects with weak revenue streams and because more controversial toll- or fare-setting and return on equity issues do not need to be considered.

## Public-Private Partnership Funding

The Authority's Financing Plan for the San Francisco-to-Anaheim system targets \$10.0 to \$12.0 billion in private sector participation. This projection is based on estimated construction and operating costs, independent ridership and revenue projections, and other available funding sources. This Financing Plan assumes normalized long-run market conditions. There are several different methods through which such investment could be obtained.

The targeted \$10.0-\$12.0 billion level of private sector investment is based largely on the amount of project-based debt (\$7.5-\$8.5 billion) the Authority believes could be supported based on future revenues. These estimated revenues were based on independent ridership forecasts available in November of 2009 and capital market conditions at that time. **Implicit in these assumptions is some form of a revenue guarantee that would guarantee to private sector participants that a minimum level of**

revenues would be received in the event that system revenues are significantly lower than forecasted. Without some form of revenue guarantee from the public sector, it is unlikely that private investment will occur at this level until demand for California's high-speed rail is proven. While capital markets have tightened since the initial projections, changes in certain variables, including increased gas prices, have resulted in higher projected ridership. P3 concessions would also benefit from depreciation tax treatment, which could also have a substantial impact on the level of private investment.

risk to the private sector entities best in the position to manage these risks. Although this may not generate up-front investment, these mechanisms can significantly reduce or eliminate the risk associated with increases in costs during construction or equipment development. Including operations and/or maintenance in a design-build contract (i.e., design-build-operate-maintain arrangements) also would allow for the transfer of operational risks associated with the project. If payment is based on performance or tied to operating revenues, such contracts provide considerable incentive for the private sector to run the facility as efficiently as possible. Private sector firms

tend to be most willing to accept risk in those areas where they hold the most experience, leading such arrangements to require a multiparty private sector consortium, in most cases.

Likely Risk Profiles for Investment in High Speed Rail				
Participant	Environmental	Construction	Ridership	Operational
Construction Firm	No	Yes	No	No
Vendor	No	No	Some	No
Operator	No	No	Some	Some
Equity Investor	No	Limited	Some	Some

In addition to considering private investment in exchange for future project revenues, there are other mechanisms for private participation that would support the project. Vendor financing is a key mechanism to consider given the equipment needs of the project. Such a mechanism would reduce the amount of up-front borrowing required and could reduce the cost of financing. Depending on the tax regulations applicable to the equipment owner, additional pricing benefits could accrue to the Authority through the vendor's capture of depreciation benefits. This technique would reduce construction costs through a small subsidy that export credit agencies could provide as part of vendor financing. Overall, this technique would allow for more substantive private participation earlier in the development of the system and it would allow the Authority to achieve a higher level of risk transfer.

Design-build contracting and other project delivery mechanisms also are vehicles that would allow the Authority to transfer significant design, construction and technical

## RFEI Process and Results

In March 2008, the Authority issued a Request for Expressions of Interest (RFEI). The intent of the RFEI was to gain a better understanding of how the Project could benefit from private sector participation and to gauge the level of private interest in the Project. The Authority received written responses from 30 private firms, including construction firms, system and equipment providers, financial institutions, and operators. These respondents included major firms in each of these categories, providing a good sample from which to draw initial conclusions about private sector experience and preferences for involvement<sup>32</sup>. Their responses supported the Financial Plan's assumption of private sector interest in a P3 arrangement for the high-speed train project. In addition, the Finance team has conducted ongoing interviews with private sector participants to address changing market conditions especially after the passage of the American Recovery and Reinvestment Act and the CA State GO bond act.

Respondents to the RFEI and subsequent telephone surveys were interested in participating through a variety of mechanisms, many of which would require integration of project components outside of their individual area(s) of expertise. Many respondents expressed concern about integration among the various project components and indicated that a design-build-finance-operate-maintain (DBFOM) or a design-build-operate-maintain (DBOM) approach could resolve these issues. Given the size of the Project, multiple project delivery mechanisms likely will be necessary, particularly for civil works contracts.

Respondents also discussed factors that would influence the level of private investment and participation. This discussion indicated that private parties are interested in investing in the project; however, the overall level of private investment and participation is highly dependent on the amount of risk to be transferred to the private sector entity. The most important factor was the level of commitment from public funding sources. Without strong state and federal support, many participants indicated they would not participate. Another critical factor was the need for a public policy mandate for the Project and clear P3 legal authorization. Many policy, legislative and state funding challenges have been addressed with the passage of the Bond Act in November 2008. In addition to the mitigation of these risks, respondents indicated that all environmental risk and right-of-way acquisition must be handled by the public sector.

Once the above factors have been addressed, the specific risks associated with individual contracts will become critical. There are a variety of issues with contracts, including, among others, performance guarantees and the timing and source of repayment. Specific concerns centered on the extent to which private investment is to be repaid through ridership revenues. Respondents perceive a high level of risk in such repayment due to the unique nature of the project and the lack of comparable modes of transport in the United States. While respondents indicated that some ridership risk

is acceptable, due to a private party's expected role in increasing revenues, there is limited appetite for investment that would be repaid largely through ridership revenues without any type of revenue guarantee or availability payments from the project sponsor at this time.

Investors' willingness to take on greater amount of ridership risk will increase as initial segments are completed and ridership meets or exceeds those projections.

Since the RFEI in 2008, the Authority has continued to reach out to the private sector to gauge interest in the Project as well as seek guidance on technical and procurement issues. In total, over 40 firms have expressed their interest in participating in the Project in their given area of expertise or as part of a bidding consortium. The Authority has also obtained memoranda of understanding from Chinese, French, German, Spanish, Japanese and Italian train manufacturers to encourage international cooperation. As the Project moves into 2010, the Authority is once again planning to consult the private sector as it moves forward with the beginnings of a procurement process. The Authority plans to give interested private firms the ability to comment on its planned Request for Qualifications (RFQ) process, before moving ahead with the formal RFQ. The Authority has begun to take this feedback and interest into account as it develops the Project in order to maximize private participation in the funding and construction of the system.

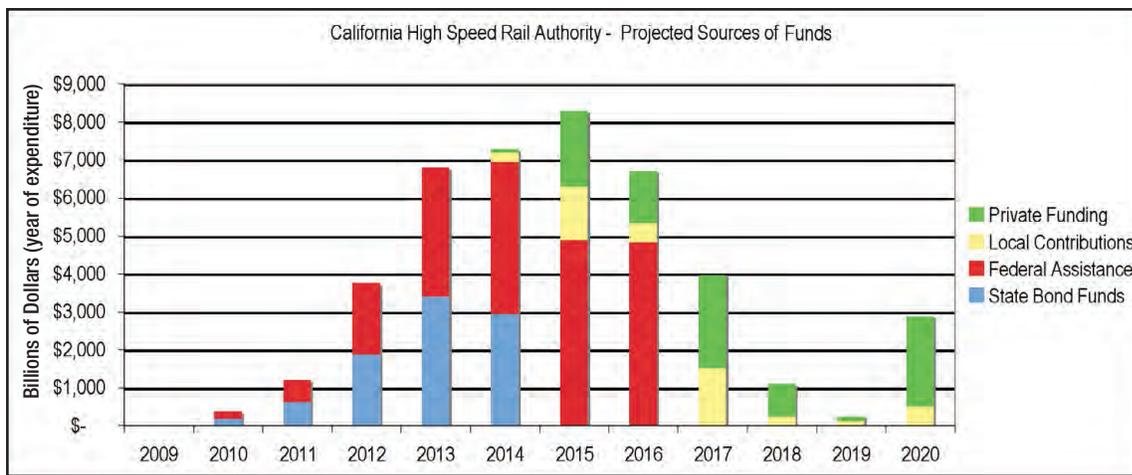
The Authority recognizes that there are a number of issues that remain to be resolved before the exact role and extent of private sector participation can be determined. However, such challenges are to be expected with a Project of this size, complexity, risk profile, and duration of development. For example, there will be risk and reward trade-offs, and various phasing and funding timing requirements, to consider before contracts for any given portion of the Project are undertaken. It is important to note, though, that the unknowns concerning private sector participation present an opportunity for the project, as the Authority can encourage competition within the private sector and

design P3 scenarios that are favorable to the project. As further information about specific Project sections is developed, the Authority will focus on designing P3 contract opportunities that achieve its goals and are attractive investments for the private sector.

## Timing and Phasing of Funds

### Introduction

The Financial Plan Team, in conjunction with the Authority’s engineering consultants, has developed estimates for sources and uses of funds for the San Francisco-to-Anaheim Project



totaling approximately \$42.6 billion (in year of expenditure dollars). The Authority expects to fund the \$42.6 billion in total cost through targets of \$17-\$19 billion in federal grants, \$9 billion in state funds, \$10.0- \$12.0 billion from public-private partnerships, and \$4.0- \$ 5.0 billion in local funding assistance and cost sharing.

### Timing and Staging of Investment for the Anaheim to San Francisco High-Speed Train System

The Authority’s Financial Plan expects initial environmental studies and right-of-way acquisition for the project to be funded with public dollars from federal, state, and local sources. Initial contracts, including those funded

through the ARRA stimulus package, would also be paid for largely with public dollars, although the Authority will leverage opportunities for private participation early in the Project through design-build contracts and other mechanisms. Although it may be feasible to achieve a partial ridership risk transfer early in the Project, it is probable that a firm or consortia accepting substantial compensation based on future operating surpluses will invest in the middle to later term of Project’s construction period.

This investment is based on ridership and will likely require some form of minimum revenue guarantee for private participants until demand for high-speed rail is proven in the United States and California. After several years of proven ridership, private participants are likely to accept a greater percentage of compensation subject to ridership risk.