

May 2, 2011

Mr. Roelef van Ark
Chief Executive Officer
California High-Speed Rail Authority
925 L Street
Suite 1425
Sacramento, California, CA 95814

Dear Mr. van Ark,

I wanted to extend to you the Peer Review Group's thanks for your efforts in providing a briefing to the group on April 1, 2011 on the status of the project and on your initial responses to the group's report to the Legislature transmitted on November 18, 2010. I believe these kinds of constructive meetings will be helpful to the group and to the Authority as the project develops.

The purpose of this note is to provide you with an initial response on the materials presented at the meeting in a package entitled "California High-Speed Train Project, Peer Review Group Workshop, April 01, 2011," presented by you and colleagues. Only four members of the group were able to attend (Will Kempton, John Chalker, Walter Bell and Lou Thompson), so other members (Diane Eidam and Frieder Seible) have not been able to comment. In addition, as seems to be par for our meetings, the materials to be covered far exceeded the time available, so the comments below are highly summarized and may well mis-state some of the nuances in the materials you furnished. If so, this is our responsibility, not yours. Our comments below are presented using the same structure as the briefing materials, and are intended to provide constructive input to your ongoing efforts.

I. Peer Review Group Issues.

- a. **Staffing.** Some limited progress has been made in addressing the extreme shortage of staff both in level and skills that our earlier note identified. With this said, it is clear to us that current Authority staff resources are not at all adequate for the job at hand and we conclude that, using the current approach that is under the limitations imposed by California State agencies, the Authority is only going to fall further and further behind, especially as construction commences. This cannot be rectified by hiring more consultants, as state leadership and oversight are paramount to the success of the project and it is unlikely to be much alleviated by continuing negotiations, however well intentioned, among State agencies. We will continue to urge you and the Legislature to find a way to give the Authority the flexibility to hire the people it needs without the kind of delay encountered so far. To that end, we strongly support your efforts to hire exempt employees at an appropriate salary range. Other options for accomplishing this objective might range from a State authority with blanket exemption from restrictions on positions and salary limits, to incorporation of individuals contributed by other agencies, to creation of a State-owned Public Benefit corporation that would have full authority to manage its resources within limits set by its Board of Directors. We cannot overstate the importance of this issue: the system is broken, and it needs fixing. Existing proposals, for example, moving the Authority under the umbrella of the BTH Agency, should also be evaluated against this requirement, however, only if this would lead to more flexibility and control over the project by its management.

- b. **The Business Model.** It is clear that the Authority now has a better picture of what the options are and we are encouraged to see that the issue of which business model to pursue is now receiving attention. Moreover, from our discussion, it appears that some of the more unrealistic options (fully public construction and operation and fully private construction and financing) have now been excluded and the Authority is generally focusing on an approach whereby the Authority would plan and manage construction of the infrastructure while high-speed operations would be performed by a private franchise and short-haul operations would be performed by separate public operators. We also agree with the Authority that the desired “final” arrangement is easier to visualize than the transitional organization starting from today; however, we want to underline the fact that short-term decisions by the Authority, such as the decision to award Design-Build contracts for the line in the Central Valley, may substantially reduce the future business model options available, although we do understand that under the present circumstances (e.g. availability of time sensitive ARRA funding as well as earlier pre-selection of ARRA eligible sections) you may not have many options to consider. At the same time, we want to emphasize that the business model cannot be separated from the planned sources of financing. For example, a model that looks to public financing of the infrastructure combined with private financing of rolling stock and operations will not work if the sources of public financing are neither adequate nor secure. Such a model would also require a very clear definition of the public benefits from HSR as well as the private benefits generated for riders. On the other hand, a model in which the private sector is asked to finance a significant share of infrastructure investment will not be feasible unless the private partner is given a much larger role in planning and management of the construction of the infrastructure and unless a return on that private investment is highly secure. Perhaps most important, it is not at all clear that the public at large understands the public versus private benefits and costs of HSR and why this is likely to produce a partnership in which a significant share of the financing will have to come from public sources that will not be repaid from system revenues. This highlights the extreme importance of a thorough treatment of these issues in the 2011 Business Plan, if not before.
- c. **Management of Risk and Uncertainty.** It is clear from the briefing charts and our limited discussion that the Authority is aware of the various project risks and has attempted to define them. Based on the very limited discussion we had on this subject, we are not convinced that there is yet a **system in place** in which risks, after identification, are actually managed, nor has risk management been fully considered in conjunction with the development of the business model. To some extent, this is inevitable in projects that have essentially no actual history: everything so far is based on assumptions and estimates (discussed further below under cost estimating). We urge the Authority to try to have a system in place before actual construction begins so that experience can rapidly be included within future planning for bidding and budget management.
- d. **Financial Plan/Gap.** As of today, the Authority appears to have slightly over \$3.6 billion in Federal funding available (\$400 million of which will go to the Transbay Terminal in San Francisco), and may have a good shot at some of the additional federal funding freed up by Florida’s decision to cancel their HSR project. Allowing for \$2.8 billion in Prop 1A funds and local match, the Authority now has about \$5.5 billion available to begin the project construction and \$400 million for environmental/engineering work. As mentioned in our November report, however, this still leaves a considerable gap in a \$43 billion project. Moreover, as mentioned in the meeting, private sector funding will be difficult to secure unless the public

- sector funding is available and reliable. This problem may actually be aggravated by the fact that the section now funded in the Central Valley will have low demand and thus low attraction for a private operating partner. The Authority is well aware of this issue, but will soon need assurance of more federal funding through some additional mechanism than is now available. Absent such information, it is not clear what the value of “expressions of interest” from the private sector will mean.
- e. **Demand Modeling.** We are encouraged that the Authority is continuing to improve its demand modeling, though the output of this effort is not yet available. It will be important that the improved modeling address the objections raised so far (to the extent that existing data permit this to be done) and that it show both the nominal projections along with the range of uncertainty in those forecasts (a particular point made in the Berkeley ITS analysis). In addition, as discussed above, if the eventual business model will be based on a PPP approach with significant public funding that is not repaid by the private partner (as is the case in other parts of the world), then the treatment of the value of public benefits (consumer surplus from time savings, safety, pollution, greenhouse gas emission reductions, among others) will have to be much more extensive than in prior business plans.
 - f. **Revenue/Demand Guarantee.** We agree that the initial operating years of any project built in phases, especially one in which the initial phase cannot serve the primary markets planned, will incur early operating losses. Subject to definitive legal opinion, we would argue that demanding that the system operate without “support” from the very beginning is unreasonable and beyond the prohibition of AB3034 against “operating subsidy.” At the same time, as noted in our November report, the AB3034 definition of operating subsidy is unclear and urgently needs further clarification by the Legislature. If the Legislature’s intent was that the entire project, at all stages, be **financially profitable** including payback of State bonds and all investment, then we agree with the Authority’s position that neither this project, nor any other HSR system (with the possible exception of the Tokaido Line in Japan and the Paris to Lyon TGV line) could meet this standard. On the other hand, if “no operating subsidy” is defined as the ability of the operator to cover operating costs, track maintenance costs caused by the operator’s train operations, and rolling stock and maintenance costs from passenger traffic, then there is a much greater chance that this standard could be met. Many HSR systems do so and the standard is consistent with the policy of the E.U. Commission. In this case, there might well be no need for state subsidies, initial or otherwise (local operators might need support as they do today) and no need for a revenue guarantee. This definition would also imply that two distinct demand forecasts will be needed: a public exercise for the Authority to ensure that the demand/cost balance will yield public benefits sufficient to cover public expenditures, and a totally separate private exercise (“investment grade”) that would demonstrate demand and revenues adequate to cover the private investment. These different types and objectives of the forecasts should be kept in mind in the Authority’s demand forecasting. The private operator will do its own forecasts regardless of the results of the Authority’s forecasts.
 - g. **Right-of-Way (ROW) alignment and availability.** Discussion on this topic was limited. The Authority is aware of the difficulty of ROW identification and acquisition, and the recent hiring of a ROW manager is certainly a positive step. At the same time, we emphasize that ROW issues will be encountered at the very front edge of the project and could be the ones where a lack of managerial resources will do the most harm to project timetables and cost. In addition, with designs only at the 15 percent level, budgeted ROW costs are not at all reliable and are likely to go up as the project proceeds, an issue that should be included within the risk management

system. We note also that preliminary MOUs have been negotiated with the UPRR and BNSF and urge that these be finalized as soon as possible.

- h. **Japan Earthquake Impacts on HSR Seismic design, safety and speed.** As Dr. Seible was unable to attend, we did not discuss seismic issues in detail. We assume this will be a subject in our next meeting. We do note that the northern Japanese Shinkansen (Tohoku Line) appears to have suffered quite minor damage and no passenger fatalities as a result of the recent earthquake, showing that good design can be effective in managing earthquake risks. We are encouraged that the safety issues of 220 mph operation are under constructive discussion with the Federal Railroad Administration (FRA). International experience with HSR is now well established, so we would not expect unresolvable problems, either at the federal or state level. At the same time, it bears emphasis that safety issues can always emerge unexpectedly and that the Authority will need to follow the matter closely.
- II. **Engineering/Cost estimating.** Based on our discussion, the group acknowledges the progress that has been made in updating unit costs and incorporating the procedures required for federally funded projects. We believe the Authority is increasingly aware of the challenge of accurate cost estimating. However, as the Authority stated, “[o]verall capital costs are trending upwards ... [we] plan to ‘value’ engineer major capital cost items.” The group does not yet see the establishment of a state-of-the-art cost estimating and budget management system that would permit immediate incorporation of actual experience as it emerges. Moreover, most of the designs are only at the 15 percent level; in our experience, this does not furnish a solid base for confidence in cost estimates, either for the estimated amounts or for the range of variation likely to be experienced. There may be little that can be done about the problem at this stage, but the Authority should make every effort to state and qualify its estimates accordingly so that the public will understand that the \$43 billion total is still a very preliminary estimate that could “trend upward.”
- III. **Environmental Approvals.** This is an immensely complex process involving a large number of environmental agencies, federal, state and local governments, and citizen groups, among others. As with ROW identification and acquisition, it is also a front-edge activity on which the budget and schedule of the entire future project rests. It will suffer the most damage if adequate staff resources are not available when needed. The group believes that the environmental outreach has already suffered from a lack of full involvement by the Authority that has caused more intense local reaction than might have occurred if full information and effective local representation had been readily available. The Authority now appears to be making progress, but delays in developing adequate public outreach, especially in appointing regional/local representatives, could still cause serious damage to the project.
- IV. **Focus for the coming year.** The Authority proposes to focus on four activities in the near future, as discussed below.
 - a. **Complete the Final EIR/EIS documents, achieve 15% design for selected ARRA sections, and await execution of the NOD/ROD.** We agree that this has a high priority, but it cannot realistically be done without adequate staffing resources.
 - b. **Prepare State Appropriations request and Funding Plan (pre-appropriations and pre-commitment) for the use of Prop 1A funds.** This is a logical step. The Authority should approach this carefully, since this is the first actual request for funding of the project and it will constitute a test on all levels of the justification and preparation of the project. It will trigger all of the reviews and approvals, including that of the peer review group. It is thus critical that the questions posed over the history of the project should be fully identified or addressed.

- c. **Issue a RFP to prospective D-B teams for first D-B contracts for the Central Valley.** While the cooperative agreement with the FRA for the ARRA funds has been concluded and signed, the decision that **the Authority** should begin to issue RFPs for D-B contracts will shape all of the future options for business models. In the first place, the decision implies that the Authority will be in charge of all design and build activity, which in turn implies that the Authority will have the money to do so – a position that may be partly true in the Central Valley, but is not (yet) true elsewhere. It also exacerbates the staffing issue in the short term, since the Authority certainly does not actually have on board the staff needed to plan, issue and oversee such contracts. In addition, if the Authority does the D-B contracting, then it will inherently be relieving future private partners of the responsibility and liability for the Authority's decisions, and *it may well make decisions that will limit the future value of the private partner's business activity*. We do not argue that this approach is necessarily wrong, and moving quickly into contracting may be inevitably linked to a need to spend the federal money; we do argue, though, that the full implications of this decision should be subjected to thorough public discussion.
- d. **Submit the Business Plan identifying funding and phasing options to deliver the Phase 1 HST system.** We understand that the 2011 Plan is due on October 14, 2011. It is critical that this date be met, as the approvals required for issuance of Prop 1A funding cannot be given without an acceptable Business Plan. As discussed, we recommend that the Plan include a thorough treatment of: 1) the planned business model, including details on the "Initial Operable Segment" and the path to achieve it; 2) revised demand forecasts including a clear indication of the planned fare policy and expected ridership levels as well as the confidence levels about those expected levels, and including the data needed to review all of the statewide and local ridership levels and revenues; 3) measurement of the public benefits the project will develop, including consumer surplus, reduced accidents, reduced congestion on highways and airports/airways, reduced pollution, and reduced greenhouse gas emissions, among others; 4) explicit linkage of the financial modeling, sources of investment and operating income and the related business model; 5) updated capital investment and operating cost estimates along with an indication of the confidence levels in these numbers; and, 6) the Authority's proposed approach to the "operating subsidy" issue.
- e. **"Phased implementation."** Though not raised initially in the briefing outline, the group discussed with the Authority the possibilities for "phased implementation" of the segments between San Francisco and San Jose and between Los Angeles and Anaheim. In practice, this means that the initial operations in these two areas should be based on a jointly agreed upon operating plan among the Authority and the local operators/authorities in which a limited number of HSR trains (2 to 4 per hour) would be run at more conventional speeds (around 110 mph) in conjunction with local services. This approach would have the benefit of reducing initial investment cost and the initial construction/environmental impact of the project while at the same time permitting earlier HSR operations and improving service of the local trains. It would also significantly reduce the technical and investment risks of the project in these areas and would provide a demonstrated demand base against which to develop future capacity expansion needs. Weighed against these benefits could be any added future costs if the initial construction has to be re-worked to add capacity and the fact that joint operation could raise safety issues that fully separated operation does not cause. We urge the Authority to make every effort to expedite consideration of the possibilities for such phased implementation. We also urge the Authority to work with existing passenger rail operators, including Amtrak, Metrolink

and the Coaster, to explore the possibilities for integrating the phased implementation concept with service improvements along the LOSSAN Corridor between San Diego and Los Angeles. Currently, the LOSSAN Corridor carries more than 2.7 million intercity rail passengers and 4.5 million passengers on its intercity commuter rail system, making it the second busiest rail corridor in the nation. We understand that there has been discussion of the legal and safety implications of phased implementation including some interpretations of AB3034 that might limit implementation on anything other than a complete scale. We urge the Authority to clarify this issue and if needed, seek clarification from the Legislature and/or the FRA to permit phased implementation as the benefits appear to far outweigh the potential disadvantages.

Let me again take this opportunity to thank you and the Authority staff for your efforts in scheduling meetings with the group and in providing us with the information requested. We appreciate your efforts and hope that we can continue to work constructively on the project.

Sincerely,

Will Kempton
Chairman
California High-Speed Rail Peer Review Group

cc: Hon. Jerry Brown, Governor
Hon. Bill Lockyer, Treasurer
Hon. John Chiang, Controller
Hon. Darrel Steinberg, Senate Pro Tem
Hon. John Perez, Assembly Speaker
Hon. Bob Dutton, Senate Republican Leader
Hon. Connie Conway, Assembly Republican Leader
Hon. Mark DeSaulnier, Chairman, Senate Transportation and Housing Committee
Hon. Ted Gaines, Vice Chairman, Senate Transportation and Housing Committee
Hon. Alan Lowenthal, Chairman, Senate Select Committee on High-Speed Rail
Members, Senate Select Committee on High-Speed Rail
Hon. Bonnie Lowenthal, Chairperson, Assembly Transportation Committee
Hon. Kevin Jefferies, Vice Chairman, Assembly Transportation Committee
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