May 18, 2012

The Honorable Darrell Steinberg
Senate President Pro Tem
State Capitol Building
Room 205
Sacramento, California 95814

The Honorable John Perez
Speaker of the Assembly
State Capitol Building
Room 219
Sacramento, California 95814

The Honorable Bob Huff
Senate Republican - Leader
State Capitol Building
Room 305
Sacramento, California 95814

The Honorable Connie Conway
Assembly Republican Leader
State Capitol Building
Room 3104
Sacramento, California 95814

COMMENTS ON REVISED BUSINESS PLAN

Dear Honorable Members:

Comments of the Peer Review Group on the Revised 2012 Business Plan

The Peer Review Group (Group) has now reviewed the Revised 2012 Business Plan (Revised Plan) approved on April 13, 2012 by the California High-Speed Rail Authority (Authority). Our comments on the Revised Plan follow comments on the Funding Plan dated Jan 3, 2012 and on the Draft 2012 Business Plan dated March 21, 2012.[1] These reports follow a number of earlier reports by the Group dealing with issues that have developed in the course of our analysis of the plans and programs of the Authority. All of the reports may be found on the Group's website at www.cahsrprg.com.

We are pleased to announce the addition to the Group of Stacey Mortensen, Executive Director of the Altamont Commuter Express. She completes the requirement for the Group to include

[1] Comments were delayed at the request of the Authority

[2] Revised Business Plan, Page 7 -15

two expert representatives from agencies providing intercity or commuter passenger train services in California. The Group now has seven members, with one appointment remaining open.

In making our comments, we would like to begin by acknowledging the positive efforts by the Authority to improve communications with the Group. Subsequent to our comments on the Funding Plan on January 3rd, the Group and Authority have held a number of meetings to discuss the Group's comments and the Authority's responses. We believe there is now a much better understanding of issues on both sides and this is reflected in our comments on the Revised Plan.

Summary

As a result of public input, the Revised Plan has been modified from the original Draft 2012 Business Plan. In a number of significant ways the Revised Plan has been measurably improved, including: a clearer vision of HSR within California's overall transportation system; a better approach to the phasing of the project; early attention to the "Bookends" of the system (Sylmar - Los Angeles/Anaheim, and San Jose - San Francisco) so that benefits will be generated much earlier and stranded investment risk will be reduced; a more realistic business model; and, clarification of employment and equivalent capacity issues, both of which had led to potential misunderstanding of the actual benefits of the system.

Some concerns from earlier reports by this Group remain. There is still no source of federal or private funding to finance construction beyond the work in the Central Valley, although the Brown Administration has offered the potential of state-level options such as cap-and-trade revenues in amounts sufficient to finance the gap if other sources do not materialize. The Group also strongly believes that management resources are inadequate to the immense task ahead and that the Authority will have difficulty in meeting that challenge within current State bureaucratic limitations. Capital costs in the Central Valley appear to be reasonably estimated, but costs outside the Valley are still in earlier stages of development and are based on assumptions of availability of funding that are not settled. The Authority has included contingencies in its estimates, but potential schedule slippages could put pressure on the contingency allowances. Demand forecasts have again been lowered and are supported by professional peer review; however, we believe that the forecasts continue to be subject to a broad range of potential outcomes. Operating and Maintenance (O&M) Costs are based on a relatively simple model that should be improved in order to yield better forecasts of cash flow generation and thus a better picture of the prospects for private investment beyond the Initial Operating Section (IOS) stage. We also recommend that the Benefit-Cost analysis be further strengthened.

Improvements in the Plan

Clearer Vision. There are a number of themes in the Revised Plan that enhance the overall vision for the program. The concept of HSR as an integrated part of California's broader transportation network has been much more clearly articulated and gives a better picture not only of HSR but also of its linkages to conventional intercity rail and to commuter rail, mass transit and bus services. This in turn has led the Authority to emphasize the phasing of the building of the HSR system in conjunction with a plan for improving the linked conventional services so that Sacramento and San Diego, for example, will see better service sooner than previously planned. Equally important, the concept of early investment in the Bookends, long advocated by the Group and others, has now been adopted. As a result, services currently carrying the most passengers will be improved at the outset, maximizing the overall benefits of the project. The Authority has also elected to build the IOS on the southern part of the network (formerly called IOS South) first, reflecting the fact that no workable connection at all now exists to complete the link between Bakersfield and Palmdale. The broad vision of the project is much improved and, if implemented, this approach goes a long way toward addressing concerns over the stranded investment issue and of the need to produce immediate benefits from the project.

Better Business Model. The business model for the project has been the subject of considerable attention by the Group in earlier reports. The business model described in the Revised Plan is clearer and, as we have suggested in earlier reports, is probably the only choice available at this point. The implications of the business model need to be clearly stated because they highlight a theme that will run throughout this report: **the need for a clear understanding and acceptance of the risks that remain even though the Authority has taken reasonable measures to contain them.**

In brief, the business model has the Authority in charge of planning and initial design of the project, which means that the entire capital cost risk against budget lies with the Authority. When the construction is awarded to Design-Build contractors, some cost and schedule risk will be transferred, but the exposure for later changes and cost overruns cannot now be known and some risk will remain with the Authority. In an indirect way, the Authority has acknowledged this risk by clearly stating that the initial (Madera to Bakersfield) set of projects in the IOS is defined by budget rather than scope; they will complete whatever they can for the money available.

The utility of the work in the Central Valley from Madera to Bakersfield, without adequate connections either to the south or to the north, is essentially limited to improvements in San Joaquin service between Sacramento and Bakersfield. The first real, higher-speed improvement in the system would come with completion of the high-speed connection beyond Bakersfield to the San Fernando Valley, which would have to be fully funded through construction by the Authority's funds – as the Revised Plan foresees. This means that the financial risk of completing the construction of at least the IOS is entirely dependent on the ability of the Authority to obtain federal funding (or added State funding) in the amounts and times required. The private sector will not be prepared to participate in financing any portion of the IOS or beyond until results of completion of the IOS are known.

The Authority's business model looks to a management contract for the first few years of operation on the IOS until actual demand and operations and maintenance costs have been demonstrated. Thus, the Authority will retain the risk for demand and at least some risk of operating costs through the period of the management contract. Moreover, a contract operator with a short-term management contract is unlikely to assume any of the design or investment risk for the rolling stock (the cost of which is included in the Authority's plans), so capital risk for at least the initial order of rolling stock will remain with the Authority. At the end of the management contract, the Authority plans to offer a more comprehensive longer-term concession for which some ensuing demand and investment risk may be taken by the concessionaire if demand and cost have been proven at the levels foreseen by the Authority. If demand and cost levels do not meet forecasts, the contribution of the private sector will be less than expected, and the contribution from public funding will rise accordingly.

The Authority tentatively plans to award and manage a contract for track maintenance and charge the operator(s) a fee to cover costs. Finally, the active role of the Authority in system design and procurement, rolling stock design and procurement, and system maintenance and management will necessarily expose the Authority to various types of liability in the event of accidents. This liability is acknowledged in the estimate of $25 million annually for liability insurance.

None of the above is meant to be critical. Rather, it underlines the inevitable consequence of the business model available to the Authority. In our July 1, 2011 letter, we said "There are no risk free 'mega-projects.' None." Our concern was, and is, that "…when risks are not fully understood and discussed at the outset, some (or all) of the parties involved will feel deceived when the inevitable problems emerge, eroding the trust and commitment that is always needed to finish a project of this size when problems are encountered." We concluded that "[**w**]**hatever else is accomplished before construction commitments begin, it is essential that major risks be defined, clarified, understood, allocated and accepted to the degree possible**." [emphasis in original] We believe that the revised business model will be a good framework for defining the remaining risks: it will be for the Legislature to decide whether the remaining risks as defined are acceptable or need further clarification or reduction.

The Group's Continuing Concerns

Financing the Project. In our report on the Funding Plan issued by the Authority, we noted that there were no existing, significant sources of funding at the federal level beyond the ARRA program and related federal appropriations. Since federal grant funding is expected to be $20.3 billion (80 percent of the total $25.3 billion cost) to complete the IOS beyond the Madera to Bakersfield section in the Central Valley,[2] this would require the creation of a new federal program to support a national HSR program along with a reliable funding source for that program of which California's share would have to be around $2.9 billion annually beginning in 2015. Enactment of such a program will clearly be a challenge in today's constrained budget climate.

In the absence of actual new federal programs, 80 percent of the funding of the IOS and, depending on the role of the private sector, 50 to 75 percent of the remainder of the funding for the program, is in question. It has been proposed that the revenues from the California carbon emission cap-and-trade program could be allocated to fund HSR, but the prospects for implementation of the program, for funds generation and for allocation of a high percentage of revenues to HSR are not for us to judge. The price of carbon emission permits will have to be high to generate resources on the scale required even if wholly dedicated to HSR.[3] Nonetheless,

[2] Revised Business Plan, Page 7 -15

[3] See LAO, "The 2012-2013 Budget: Cap-and-Trade Auction Revenues," February 16, 2012

the Group has discussed the availability of these funds with Director of Finance Ana Matosantos, and she maintains that funds will be available if needed. In any event, if the program is to proceed beyond the Madera to Bakersfield section, the Governor and Legislature are inherently assuming that a workable financing solution will be found

Project Management. The Group has repeatedly and forcefully argued that the management capability of the Authority is not up to the immense challenge of managing a construction program of the proposed size and complexity of the HSR project. The Authority has long had a shortage of staff to supervise its contractors and this has, at times, forced contractors to take on roles or make decisions that are more appropriate for Authority employees. The Authority has had continuing problems obtaining skilled people, and uncertainty about the future of the program has compounded the problem. The Authority highlights this issue as one of the major risks of the program, and we agree. The Revised Plan discusses the progress the Authority has made in increasing the number of slots available (not all are currently filled, including the CEO) and in working with Caltrans and other agencies to obtain people on a transfer or reimbursable basis.

These are all positive developments, but we continue to believe that management resources at the Authority are inadequate to supervise the enormous contracting effort now in prospect, that bureaucratic restrictions on slots and salaries will continue to hinder the Authority's ability to manage, and that attempts to launch a massive construction program in response to federal completion deadlines will only make the problem worse. To put this in perspective, the current Caltrans annual capital budget is approximately $4 billion[4] whereas the Authority's spending plans look to annual construction commitments of over $4 billion by 2015 and over $5 billion by 2021[5]. Thus, as we have stated earlier, the Authority proposes to ramp-up almost immediately to a construction supervision burden that equals or exceeds that of Caltrans. This will be a real challenge.

We strongly urge the Legislature and the Governor to work with the Authority to ensure that management skills and resource requirements will be met and that the flexibility to employ and terminate personnel as needed is in place. We believe the project should not proceed until a plan for resolving this challenge is prepared, and until support by the Authority's Board and the Administration is secured.

Capital Cost Estimates. Our review of the capital cost estimates for the Central Valley part of the project suggests that the estimating work is in accord with professional standards and that the estimates and contingencies used for the individual construction packages are within expected limits. Further changes will not emerge until competitive contracts are awarded and until the design-build contractors take the designs from today's 25 percent level to final design and are well along in construction. The Authority believes that significant construction cost risk will be mitigated through the use of design-build contracting. Design-build, whereby significant design responsibility is shifted to the constructor, can be an important tool for controlling cost and

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[4] Excel spreadsheet of Caltrans capital spending provided on Caltrans website at http://www.dot.ca.gov/

[5] Revised Business Plan, Page 7-7

schedule risk. However, design-build contracts must be managed effectively. Simply attempting to shift all risk to the contractor will result in dramatic increases in the bid prices for the project.

Managing design-build contracts will require individuals with specific experience and expertise in the area. We suggest that the contractor be awarded a specific contract that allows mobilization of the management and key elements of the engineering team three to six months prior to the planned start of construction. This will permit working jointly with the client's team, so the contractor can review and possibly improve the designs from the standpoint of experience in construction methodologies. In addition the contractor and the Authority can sort out any contractual and administrative issues prior to start of work and develop a close sense of partnering, all in the hope of achieving the best possible outcome for the project with a minimum of friction during the execution of the work.

Cost estimating outside the Valley remains less certain because the scope and alignment are still in flux. As the project confronts the detailed problems of selecting alignments in urban areas and in mountainous topography, experience thus far has shown that cost estimates tend to grow. There is certainly a possibility that this trend will continue.

A significant concern emerging from our review is that project scheduling is currently based on the assumption that ROW availability and financing will not be constraints: that is, construction is being planned on the most efficient and intensive basis without regard to the timing of funding and of ROW availability. Basing the overall project costs and expected construction times on these optimal assumptions entails risk. If these assumptions turn out to be false, capital costs and construction times will increase due to schedule changes alone.

A related concern is our impression that a lack of appropriate decision-making by the Authority, due to a shortage of supervisory staff, is forcing contractors to make decisions that should be made by the Authority. As we have discussed in the management section above, this is not a criticism of the contractors or, indeed, of the Authority staff; it is simply an observation of the supervisory challenge faced by the Authority – one that we believe will get worse without effective action to increase resources.

Finally, we believe that the service implications of the low and high cost options should be clearly identified. We recommend that the Legislature request the Authority to issue a better and more detailed description of the two options including a clear statement of the proposed schedules and trip times from San Francisco to Los Angeles under the blended service plan so that the Authority's plans can be shown to be consistent with the legal requirements in Prop 1A.

Demand Forecasts. We have had a number of discussions with the Authority and their demand forecasting peer review panel about the demand forecasts. The Revised Plan has again modified the demand forecasts somewhat downward, along with the associated revenue.

As we have acknowledged in earlier reports, the demand forecasts have been prepared by professionals in the field and appear to be within the state of the art. The analyses of the models, including various sensitivity tests and comparisons with the Northeast Corridor, show that the models function as expected: HSR demand goes up if prices go down, HSR demand falls as auto costs or air fares fall, etc. The Authority's peer review panel has stated that their analysis of the demand modeling work and related sensitivity checks indicate that the demand models produce reasonable, even conservative results. With due respect to the experts, given the international experience with demand forecasting experience for HSR, we remain cautious.

HSR in California will be a "greenfield" system: that is, neither HSR nor adequate intercity rail service on any significant scale exists in California today. Most HSR systems in other countries were based on improvements (often significant) on existing services so that the forecasting challenge was closer to extrapolation than sophisticated forecasting. Even so, virtually all initial rail passenger forecasts, including HSR, have turned out to be optimistic, with actual demand averaging about 60 percent of forecast and an unusually wide range of errors from projections.[6]

This is relevant as there has been no experience in California with HSR and only limited experience with existing intercity rail passenger services between the state's major markets. As a result, the HSR demand models are necessarily based on "stated preference" studies in which various segments of the potential market are asked what they would do if offered a completely new and different service at various qualities and prices. This yields estimates with a larger range of potential error than estimates based on actual experience with existing services where quality and price have been changed and reactions observed ("revealed preference"). Given the enormous investment involved, the private sector is rightly unwilling to take any significant demand risk based on demand forecasts at this stage, but will wait until demand has actually been demonstrated on the IOS before considering significant investment based on its own forecasts.

The Authority notes that it attempted to take into account the key factors identified in the Flyvbjerg book (footnoted below) and argues that this provides a buffer against optimism bias. To mitigate the demand forecast risks described in the book, particularly regarding the market estimating issues, the Authority has made use of more conservative input data in its more recent forecasts, including: 1) post-recession socioeconomic forecasts (population and employment) significantly lower than that used by the California Department of Finance; 2) more recent and conservative trip survey data for use in trip generation; 3) up-to-date Energy Information Agency forecasts for the price of gasoline in 2030 including a very low forecast of $2.24/gallon (2009$) in the low scenario; 4) Corporate Average Fuel Economy standards for fuel efficiency in calculating automobile operating costs; and 5) ticket prices of competing modes (air and conventional rail) maintained at their lowest level to make their competitive response as strong as possible. As a result, the Authority notes that the forecasts used for the Revised Plan are only 63% of the August 2011 forecasts (72% for the medium case). In addition, the low/high range increased from a 40 percent interval to a 60 percent interval, which may give a better measure of the potential variability in the results.

Operations and Maintenance (O&M) Cost Model. We are concerned about the current stage of development of the O&M cost model, because the results of the O&M model are a critical determinant of the ability of the system to generate positive cash flow for use in financing future parts of the system beyond the IOS. Our experience with HSR elsewhere and our review of the demand and cost sensitivity analyses performed by the Authority indicate that the HSR operator

[6] Flyvbjerg, et al, "Megaprojects and Risk: An Anatomy of Ambition," pg. 26

should be able to cover operating costs from revenues and thus not need a subsidy as defined in Prop 1A. Performance beyond the break-even point is less clear.

The existing model is relatively simple and does not reflect the relationship between costs and the level of operations as well as it could. The checks we have been able to perform on the elements of the O&M model do not reveal major errors in the individual components, but the overall results of the model appear optimistic by comparison with readily available data on the closest comparable U.S. HSR operations (Amtrak's operations in the Northeast Corridor). The Authority's comparisons with international operators tend to support the Authority's position, but the data are not fully subject to detailed verification and, in any event, there is no experience anywhere with the extremely high speeds that the Authority plans to operate. If the Authority's model is optimistic, the private sector will be less able to augment public investment in the Bay-to-Bay and Phase I Blended stages of the project. The Authority did perform a series of sensitivity tests at the request of the Group. These tests suggest that the financial performance of the project is robust over a reasonable range of assumptions; but, again, there is no fully comparable and documented experience available to resolve the issue.

Benefit-Cost Analysis. The Revised Business Plan includes significant improvements from the Draft Plan, but does not fully document the basis for the changes through more detailed, supplementary reports. We are told that the Benefit-Cost studies have been subjected to thorough review, but there is no single and authoritative evaluation of the results. We therefore believe that the results should still be viewed as needing further confirmation and refinement.

A Summary Observation. Aside from being critical to the eventual project, the time and effort in completion of the Madera to Bakersfield segment and the Bookends will offer some important learning opportunities. While the Revised Plan is a good initial step in integrating the HSR system into the state's overall transportation network, including local transit and conventional rail services, it is critical that much better analysis of the state's transportation needs be undertaken by the State in parallel with the initial set of projects in the Valley and on the Bookends so that any decision to proceed beyond this investment can be based on a firmer understanding than exists today of overall and long-range needs. Among other things, this should lead to a strengthening of public transportation systems providing access to HSR stations (e.g. extension of BART's planned East Bay line through to the HSR San Jose station and rail improvements scheduled for the Los Angeles metropolitan area). We also stress, though, that the Authority must take advantage of the time available during initial construction to improve the validity of the Authority's demand modeling, its O&M Cost modeling and its Benefit-Cost evaluations. Before proceeding beyond the Central Valley and the Bookends to build the IOS, the Authority should conduct a thorough and detailed evaluation of its demand modeling and its O&M Cost models to ensure that planning for the IOS and beyond is sound and based on the latest and best available information. It has been frustrating to try to analyze these issues against the compressed time-frame required by the ARRA money; it would be highly unfortunate to have the same issues arise at the end of the initial projects if the improved evaluation work is not done in the meantime. We note that the Authority's own peer review panel has recommended a series of improvements in the demand models and we urge the Authority to take these recommendations into account in future demand modeling work.

Worst-Case Scenario

It may be useful to the Legislature to discuss the implications of a decision to allow use of Prop 1A funding for the more immediate appropriation decisions to be made – initiating construction in the Central Valley and on the Bookends. What would be the worst case outcome?

As a “worst case scenario,” the Group assumes that up to 130 miles of the Central Valley segment is completed, that the majority of projects listed in the Bay Area and Southern California Memorandums of Understanding (the Bookends) are funded and completed, and that no further federal, state or private sector funding is available to expand the initial HSR segment in the Central Valley or the rail improvements made in the Bay Area and Southern California regions. This scenario, which assumes that any legal and environmental challenges are successfully overcome, nonetheless provides a major and substantial upgrade to intercity passenger rail service with substantial independent utility realized in some of the most heavily populated and congested regions in the state. Completion of the initial segment, in spite of limited independent utility, would provide valuable design and construction experience, including real construction cost data that would form the basis for future capital cost estimates. Additionally, completion of the Central Valley segment and the Bookend improvements would also serve as an appropriate decision point, a “go” or “no go” decision point for continuation of the HSR program. This same “go” or “no go” decision point could be revisited upon completion of the IOS should a decision be made to complete the Bakersfield to Palmdale rail gap.

Beyond the worst case scenario, what is an unacceptable risk in the Central Valley projects and the Bookends? At worst, the work could become so snarled in litigation or cost overruns that it would never be completed. As we have stated in other reports, we are not qualified to assess litigation risks, but we do believe that the current state of construction planning gives some confidence that a significant part (if not all) of the 130 mile section can be completed and used for the San Joaquin services. If so, and if the project ends at this point, the state would be responsible for repaying $2.7 billion in Prop 1A bonds on a segment that may not serve as a test segment for 220 mph service and that could clearly carry fewer passengers than originally planned. It would be a poor use of resources and an embarrassment, but not a financial disaster for the state.

Major Risks in the Central Valley Segment and the Bookends

The Central Valley section from Madera to Bakersfield does pose a number of risks that can be clearly delineated. Three of these are common to many projects, while the fourth is unique to the HSR project: 1) the bids may come in above estimates; 2) projects, once awarded, may face substantial cost increases due to change claims or delays not caused by the contractor (environmental or other litigation, availability of ROW, changes in alignment after award); 3) contractors may prove incapable of doing the work, or may go bankrupt; or 4) the Authority, due to lack of management resources, may be incapable of overseeing the work and lose control over the project.

For the Bookends, which we believe are an essential part of the overall project, the actual risks are of less concern. The work planned is clearly needed to support eventual HSR services and full funding is either currently available or has high likelihood of availability within existing funding sources. The planning and construction will be managed by local authorities with full experience in improving their own facilities (which will relieve the managerial burden and reduce some of the cost risk on the Authority), and the work can be fully integrated with local operational requirements, both during construction and in later operations. Cost sharing with the local authorities will ensure their commitment to project completion on time and within budget. The Authority will also be able to learn from the experience on these projects. Perhaps most important, the vast majority of existing rail passenger traffic is on the Bookends, so the benefit will be immediate and permanent even if, for whatever reason, the remainder of the project is not successful. Overall, we believe the Bookend risks are minimal and the benefits substantial.

The net result of these factors is that there will be a number of go/no go checkpoints, both in the Central Valley and in the Bookends, against which performance can be measured and at which the project could be stopped if it appears to be seriously off track. The Legislature can and should require full and timely reporting against these checkpoints. In the process, the Authority will have the opportunity to show that it is (or is not) up to the job, while experience and better engineering will yield a clearer understanding of the costs of the IOS and of the feasibility of new sources of funding such as cap-and-trade at the state level, or new sources at the federal level can be identified or validated.

Conclusions

The Revised 2012 Business Plan represents a substantial improvement in the implementation strategy for high speed rail in California. The Peer Review Group finds that the Revised Business Plan, while still involving some significant risks, is considerably more reasonable and realistic than earlier proposals. Our previously identified concerns regarding the independent utility of the initial proposed investment have been substantially addressed by the Authority's early focus on the IOS, to include completion of a connection between Bakersfield and the San Fernando Valley, as well as the proposed initial service concept for Northern California. This emphasis on connectivity reduces the concerns about a stranded initial investment and responds to our questions about the system benefits of the Madera to Bakersfield segment. Any investment in the Bookends will also not be lost, and the public will benefit from these improvements regardless of the future of the high speed rail program. While we remain apprehensive regarding the availability of long-term financing, the potential application of AB 32 funding through a cap-and-trade program offers some possible relief for capital funding if other state or federal money is not forthcoming.

Because the utility of the system will be enormously enhanced by going beyond the Central Valley to completion of the IOS, we believe that the ability of the cap-and-trade program, or some other source of reliable financing, to support the IOS completion is critically important. We urge that the Legislature, working with the Administration, assure itself that the fledgling cap-and-trade program is a viable source of funding for high speed rail capital improvements in the event that no other state or federal money is identified for the program in the near-term. This assurance should also include a determination that these funds will be available in the appropriate amount and as needed to complete at least the initial connected system (and Bookends) proposed in the Revised Business Plan.

Based on this new approach to providing an initial connected system of improvements and the focus on early investments that will provide long-term benefits to the public with or without a fully complete system, the Peer Review Group recommends that any legislative appropriation of Proposition 1A bond funds be subject to the following conditions:

1) That the Authority present an approved action plan to the Legislature for obtaining adequate management resources to effectively conduct a program of this magnitude. This plan should fully describe the program management concept proposed by the Authority and include a discussion of staff position priorities and a timeline for bringing these resources on board. The Legislature will need to be comfortable with this management approach prior to the appropriation of funds.
2) That the Legislature be fully informed of the risks associated with the development of a high speed rail system for California as outlined in this report and input from other sources, including those risks that accompany the development of the initial connected system, and that any legislative action with respect to high speed rail be based on a full knowledge of those risks. In addition, the Legislature should require appropriate progress reports from the Authority so that interim results and go/no go points can be assessed in a timely way.
3) That the Authority be required in its 2014 Business Plan to: a) substantially upgrade its demand modeling through better input data on sources of demand, updated socioeconomic data, and wider sensitivity analysis with particular attention to the issues associated with extension to the San Fernando Valley; b) develop a more capable and credible O&M Cost model based on extensive interviews with existing HSR operators and network agencies and apply this model to the issues of extension to the full IOS; and, c) based on better demand and operating cost information, revise the Benefit-Cost analysis and subject it to full, external academic peer review.

There are two issues the Group has not addressed in our comments on the Revised Plan. First, we recognize that there are broader policy determinations to be made regarding statewide budgetary priorities, and responsibility for those decisions lies appropriately with the Legislature and the Administration. Further, the Group does not possess the legal capabilities to assess whether the proposed program meets the requirements of Proposition 1A. We can say, however, that mega-projects by their nature are typically constructed incrementally over an extended period of time. The important challenge for program managers is to continue to focus on the ultimate vision of a completed system and to build toward that vision as financing becomes available.

The Revised Business Plan is not perfect, but it appears that the proposed early investments (Madera-Bakersfield and the Bookends) and completion of an IOS (through cap-and-trade financing) could be achievable in spite of the political and economic constraints facing the larger program. Our concerns for the longer-term are more serious, particularly with respect to the magnitude of additional funding that will be required for proceeding beyond the initial system connections.

Sincerely,

Will Kempton
Chairman
California High-Speed Rail Peer Review Group

c: Hon. Mark DeSaulnier, Chair, Senate Transportation and Housing Committee
Hon. Ted Gaines, Vice Chair, Senate Transportation and Housing Committee
Hon. Alan Lowenthal, Chair, Senate Select Committee on High Speed Rail
Hon. Bonnie Lowenthal, Chair, Assembly Transportation Committee
Hon. Kevin Jeffries, Vice Chair, Assembly Transportation Committee
Hon. Cathleen Galgiani, Chair, Assembly Select Committee on High-Speed Rail for California
Hon. Bill Lockyer, State Treasurer
Hon. John Chiang, State Controller
Mac Taylor, State Legislative Analyst
Ken Alex, Director, Governor's Office of Planning and Research
Ana Matosantos, Director, Department of Finance
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Dan Richard, Chair, California High Speed Rail Authority
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