



Memorandum

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RE: California High Speed Rail: Peer Review Considerations

Enhancements to the California High Speed Rail revenue and ridership forecasting model are needed to support risk analysis. A formal peer review process will be required to evaluate and track the enhancements from proposal through to full implementation. This memorandum includes an outline of how the peer review panel will be formed and function. An expanded discussion of key topics is provided further below.

It is strongly recommended an independent peer review panel be formed at the earliest possible time in order to provide oversight on the proposed enhanced ridership and revenue model system and to meet the schedule for conducting risk analysis. Specific actions needed to implement the peer review process include:

- Designation of a qualified chairperson (or persons) to lead the peer review process.
- Once designated, the Authority, in consultation with the chairperson, would appoint four other professionals to the peer review panel. Combined, the peer review panel would have a broad range of expertise in the areas of statewide and interregional travel demand modeling, risk analysis, survey data collection, socio-economic forecasting, air passenger travel demand, and railroad operations. It may be possible, on request of the chairperson, that a further expert be called upon to support the peer review panel at any stage of the process.
- The peer review panel will convene for three to four meetings per year for a period of two years – at least three in person meetings in California and the balance via conference call. The initial meeting will examine the proposed scope of work for enhancing the existing ridership and revenue model for risk analysis, with subsequent meetings reviewing progress in data collection and model development. The last meeting would examine final model refinements and model applications, including sensitivity tests. It is anticipated these six to eight meetings will occur over a two year time frame.

- The peer review panel will be required to organize meetings, document activities and provide an assessment report upon conclusion of the fourth and last meeting. Meeting notes will be made available after each of the four panel meetings.
- Cambridge Systematics (CS), along with any subcontractors would be required to report to the peer review panel at regular intervals, but would be precluded from writing any evaluations or reports on behalf of the peer review panel.
- The Peer Review Panel will report to the CEO of the California High-Speed Rail Authority (CHSRA) through their chairperson. The CHSRA will contract and pay for the services of the Peer Review members.
- The approximate first year is the end of model development effort and the beginning of risk analysis. For this reason the peer review process will cover the first 12 month development efforts in a first phase, after which the panel may be asked to continue their work to review risk analysis during the second year period.

Independent and Scientific Peer Review Rationale

The need for a peer review panel to review and guide model development activities for risk analysis is well understood. A peer review panel is particularly important to assure the travel models represent the current state of the practice, are appropriate tools for responding to the policy questions being posed, and are supported by data elements of sufficient size and quality.

California high-speed rail modeling efforts have been and will be under great scrutiny. As such, it is not enough for a peer review to deem the model system and underlying data sufficient. There can be concern over the independence of the peer review panel, and of the potential for conflict of interest (either or real or perceived).

Specific rationale for developing a completely independent peer review panel was thus guided with input from David Valenstein of the Federal Railroad Administration (FRA), and from Dr. Mike McCoy, Director of the Urban Land Use and Transportation Center (ULTRANS) at UC Davis. Additional documentation was garnered from the FHWA Travel Model Improvement Program (TMIP), and from National Cooperative Highway Research Program (NCHRP), National Research Council (NRC) and the Federal Office of Management and Budget (OMB).

The key finding was as follows: For the process to be successful, the peer review panel must be both scientific and independent.

OMB has stated the peer review process “is a scientifically rigorous review and critique of a study’s methods, results, and findings by others in the field with requisite training and expertise. Independent, objective peer review has long been regarded as a critical element in ensuring the reliability of scientific analyses.¹”

The NRC has found, “[e]xternal experts often can be more open, frank, and challenging to the status quo than internal reviewers, who may feel constrained by organizational concerns.

¹ Federal Register / Vol. 68, No. 178 / Monday, September 15, 2003, Office of Management and Budget, Proposed Bulletin on Peer Review and Information Quality.

Evaluation by external reviewers thus can enhance the credibility of the peer review process by avoiding both the reality and the appearance of conflict of interest.²

Peer Review Panel Formation

Given the timeline for developing risk analysis forecasts, there is an almost immediate need for developing the enhanced ridership and revenue model. As such, the peer review panel needs to be formed to assess and inform the model development process from the onset. The efficacy of the peer review panel will be diminished if important irrevocable decisions are made with regards to the model development prior to formation of the peer review panel. Delays in forming the peer review panel will result in either potentially flawed model design decisions or delays in completion of risk analysis.

Who will be selected to be the chairperson (or chairpersons)?

Given the limited number of qualified independent professionals, the list of potential candidates is quite short. It is assumed that the pool of candidates will be private consultants, academics or retired professionals.

Peer Review Makeup

The peer review panel would be comprised of leaders in the fields of statewide travel demand modeling and ridership and revenue forecasting. It is envisioned the peer review panel would be comprised of five (possibly six at a later date) members from the private sector, public sector and academia. Ideally, the panel would include a variety of areas of expertise so they can review all aspects of the project. These areas of expertise include, but are not limited to model development, demand forecasting at statewide and regional levels, ridership forecasting of new modes of travel, travel survey design and analysis, railroad operations (especially for high-speed or near high-speed rail systems), revenue forecasting, demand for air travel, and socio-economic forecasting.

Peer Review Independence and Authority

CHSRA will be required to pay for the peer review panel activities. Given the need for complete independence, CHSRA staff will be excluded from any participation with the peer review panel's activities. The peer review panel will be given the authority to critique and to recommend changes in approach to model development, given clear understanding of project schedule and resource constraints.

Peer Review Panel Responsibilities

As noted above, the panel has authority to critique and to recommend changes in approach to model development. The peer review panel needs to be given the clear task of documentation. While the documentation would include a final report, the panel would also need to provide on-going communications about model development and application. Given these needs, administrative support to the panel will be required.

² National Research Council, Committee on the Department of Energy-Office of Science and Technology's Peer Review Program in Environmental Technology Development Programs, 1998.