



Memorandum

To: ISO Board of Governors
From: Anjali Sheffrin, Director of Market Analysis
Armie Perez, Director of Grid Planning
cc: ISO Officers, ISO Board Assistants
Date: May 21, 2004
Re: *CAISO Transmission Economic Assessment Methodology to be filed
at CPUC on June 2, 2004*

This is a status report only. No Board Action is required.

The CAISO is responsible for evaluating the need for all potential transmission upgrades that California ratepayers may be asked to fund.¹ As part of this responsibility, the CAISO has developed a methodology to evaluate the economic viability of proposed upgrades called the Transmission Economic Assessment Methodology (TEAM). The ISO has worked with stakeholders, the California Public Utilities Commission (CPUC), the California Energy Commission, and California utilities to formulate this methodology. The goal of TEAM is to significantly streamline, improve accuracy, and add greater predictability to the evaluations of transmission need conducted at the various agencies. To this end, the CAISO is filing this methodology with the CPUC in AB 970 (I.00-11-001) proceeding on June 2, 2004.²

During the past two years, approximately 1.1 billion dollars has been spent to upgrade the reliability of the transmission system under CAISO control. The necessity of a number of these upgrades was undisputable since they served to remedy demonstrated reliability problems that have impacted the CAISO system. Improvements or changes to the transmission network, however, can profoundly affect not only the physical delivery of power, but also the operation of the electric market and the resulting cost to consumers. Upgrades, like the one implemented on Path 15, have shown us that, besides alleviating congestion on the lines connecting Northern and Southern California, there were economic consequences to our competitive electricity market. Being able to model and predict both the physical flows and the consequences to our competitive markets is essential to the CASIO fulfilling its oversight responsibility of ensuring economic efficiency of the grid. TEAM is a key tool for us to accomplish this task.

Depending on the environmental and economic attributes of a proposed transmission project, and the identity of the project sponsor, a number of agencies can have review, oversight and approval roles. These agencies range from the CASIO, the CPUC and the CEC to the boards of municipal districts and utilities. In a number of cases, especially with respect to the issue of determining project need, the CAISO has

¹ The Legislature, pursuant to Public Utilities Code § 345, assigned the California Independent System Operator (CAISO) the responsibility of "ensur[ing] [the] efficient use and reliable operation of the transmission grid." To achieve this goal, the CAISO can compel Participating Transmission Owner's to pursue construction of transmission projects deemed needed either to "promote economic efficiency" or to "maintain system reliability."

² Phase 5 of "Order Instituting Investigation into Implementation of Assembly Bill 970 Regarding the Identification of Electric Transmission and Distribution Constraints, Actions to Resolve those Constraints, and Related Matters affecting the Reliability of Electric Supply", I.00-11-001

observed multiple reviews of the same project by various agencies seeking to carry out their mandates. Both the CEC and CPUC have recognized that this process has led to redundancies and inefficiencies.³ We believe that acceptance of the TEAM methodology as the standard for project evaluation by market participants, stakeholders, regulatory and oversight agencies will greatly facilitate reducing redundant efforts and lead to faster, less contentious and more widely supported decisions on key transmission and other resource projects.

The TEAM methodology has been molded by a public stakeholder process encompassing three public workshops and 12 technical calls. A list of participating organizations is included as Attachment A. We expressly detailed our progress, presented results, and solicited stakeholder advice and critical review. As a result, the TEAM methodology has benefited from the various viewpoints and modifications prompted by this stakeholder input.

We are continuing the process by submitting a full report on our methodology to the CPUC. It is the intent of the CPUC to evaluate, and hopefully endorse, our methodology and its economic evaluations and conclusions for future use in their regulatory approval process. The report contains a description of the methodology, the key principles behind it, the modeling and case assumptions, and the results. The report presents a illustrative case study where we applied our methods and tools to the evaluation of the economic viability of a proposed Path 26 upgrade.

We believe that our TEAM approach can achieve consensus as the standard for evaluating all future transmission system upgrades. It is comprehensive in its approach and can produce results that are valuable to all involved with the proposing and reviewing critical transmission infrastructure upgrades. There are a number of ways our method is beneficial and, hopefully will find wide acceptability:

- We use a full network model that can capture the physical constraints of the transmission grid as well as the economic impacts of a project.
- We study the impact of key uncertainties and use probabilistic techniques where appropriate. We benchmark to actual results where possible. We strive to use data and assumptions that have been agreed upon by stakeholders.
- We look at economic benefits from a number of perspectives to be sure to capture consistently the impacts of a project. We perform sensitivity analyses to ensure that we neither over- nor understate the benefits accruing to a project.
- We demonstrate the methodology using an illustrative case study of Path 26, a real world example familiar to the stakeholders from whom we seek acceptance and approval.

By using a common review process, we will be able to efficiently meet our obligation to California ratepayers while providing the CPUC the information they need for transmission project approval. In the long run, this should help to assure that the transmission proposals receive adequate review and those selected will provide both physical and economic benefits to our network.

³ See, e.g., CPUC's "Order Instituting Rulemaking on Policies and Practices for the Commission's Transmission Assessment Process," R.04-01-026; CEC's "2003 Integrated Energy Policy Report" (Nov. 12, 2003).

ATTACHMENT A

Participants in TEAM Process

- CEC
- Consulting companies
- CDWR
- CPA
- CPUC
- EOB
- Coral Power
- Independent Power Producers
- LADWP
- NCPA
- Other Municipal Utilities
- Out-of-State Utilities
- PG&E
- Renewable Producers
- SCE
- SDG&E
- SMUD
- TURN
- WAPA
- BPA