

# Memorandum

**To:** ISO Board of Governors  
**From:** Gary DeShazo, Director of Regional Transmission North  
Armando Perez, Vice President of Planning & Infrastructure Development  
**Date:** January 18, 2008  
**Re:** *Briefing on 2008 CAISO Transmission Plan*

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*This memorandum does not require Board action.*

The purpose of this informational memorandum is to provide the Board with an overview of the 2008 CAISO Transmission Plan (Transmission Plan). The Transmission Plan consists of four major components:

- A summary of the results of various technical studies conducted during the planning cycle
- A list of the specific transmission projects with estimated capital costs of less than \$50 million approved by CAISO management to address system needs identified by the technical studies as well as a description of transmission projects with estimated capital costs of greater than \$50 that will be brought to the Board independently for consideration when the technical studies for those projects are complete
- A summary of key incidents that occurred during 2007 whose effects will be incorporated into the 2009 Transmission Plan cycle
- A summary of new initiatives included in the Transmission Plan.

The 2008 Transmission Plan represents a continuing transition to full implementation of the Transmission Planning Process described in the CAISO's recent FERC Order No. 890 compliance filing and adopted by the Board at its December 12-13, 2007 meeting. As previously noted, in the past, the planning process has been more reactive, studying projects proposed by Transmission Owners or others. The CAISO's Order No. 890 Transmission Planning Process clarifies the CAISO's authority to direct technical studies that identify system needs, to permit Transmission Owners and others to offer transmission and other solutions to satisfy those system needs, and, as necessary, for the CAISO to propose transmission projects and assign appropriate Project Sponsors.

The Transmission Plan is the product of a collaborative effort among the CAISO, Participating Transmission Owners and other stakeholders. During 2007, the CAISO sponsored three stakeholder meetings to collect input on the Transmission Plan:

- 1) The first was held on June 11, 2007. Its purpose was to finalize the overall study plan, including the unified planning assumptions that were to be used in the studies.
- 2) The second was held on November 20, 2007, where CAISO staff presented and discussed all study results and presented new transmission projects identified as appropriate solutions to system needs.

- 3) The third was held on December 19, 2007, where CAISO staff presented the Draft 2008 CAISO Transmission Plan.

Based on comments received from stakeholders at the December 19, 2007 meeting, the CAISO staff prepared a final Transmission Plan, which is attached to this memorandum. On balance, the comments received from stakeholders were positive and provided CAISO staff with valuable guidance towards refinements for next year's Transmission Plan.

The following summarizes the main findings of the technical studies and resulting approved transmission projects included in the Transmission Plan.

### **Findings and Transmission Projects**

As noted, various technical studies underlie the Transmission Plan, including the CAISO's Short Term Plan, Reliability Assessments, and Long Term Local Capacity Requirements Study. The Short Term Plan focuses on recurring real-time issues identified by CAISO operators (i.e., overloads and voltage issue) and evaluates possible modifications that, where possible, can be quickly implemented to address those issues. The Reliability Assessments ensure that the CAISO Controlled Grid during the planning horizon will satisfy all applicable NERC/WECC Planning Standards and CAISO Planning Standards. Finally, the Long Term Local Capacity Requirements Study evaluates 2010 and 2012 scenarios in order to evaluate potential longer-term changes in Local Capacity Area Resource needs. This augments the CAISO's Local Capacity Technical Study which establishes Local Capacity Area Resource requirements for the immediately following Resource Adequacy Compliance Year. Thus, the Transmission Planning Process looks out over a longer horizon to evaluate potential economic transmission solutions to reduce projected Local Capacity Area Resource needs.

The Short Term Plan identified 36 recommended upgrades or system modifications for the entire CAISO Balancing Authority Area. Some of the types of recommendations include new infrastructure, upgrades, reconductoring, or re-rates PG&E has already implemented eight of the CAISO's recommendations while others will be completed during 2008. The CAISO believes that most, if not all, of these recommendations can be implemented by 2010 with proper collaboration from the Participating Transmission Owners and that they will ultimately reduce congestion costs and minimize operational reliability concerns.

The Reliability Assessments led to 54 new transmission project proposals for CAISO approval. Fifteen of the 54 projects will require CAISO Governing Board as each project's individual estimated capital cost of completion exceeds \$50M. Of the remaining 39 new transmission project proposals, CAISO management has approved 36 of these proposals with the approximate combined construction cost of more than \$360 million. As noted, these projects have been identified as appropriate transmission solutions to ensure compliance with applicable NERC/WECC Planning Standards over the Transmission Plan's 10-year planning horizon. The three projects that were not approved require additional information in order for the CAISO to make a positive recommendation on their construction. Accordingly, such projects have not been formally rejected, but may be included in future Transmission Plans as appropriate.

The Long Term Local Capacity Requirements Study results indicated a significant decrease of Local Capacity Area Resource needs in 2012 (over 5000 MW) due to anticipated capacity additions resulting from approved transmission projects, including Sunrise, Green Path North, and Palo Verde-Devers #2. Despite the anticipated decrease in Local Capacity Area Resource needs over the next five years, the CAISO's Transmission Planning Process will continue to attempt to identify cost-effective transmission additions to reduce the overall cost of ensuring reliability in Local Capacity Areas or load pockets.