

**California Transmission Planning Group (CTPG)
Technical Study Team Response to
Comments of Eagle Crest Energy (ECE) on
CTPG's Proposed 2011 Work Plan**

Comment:

ECE requests that the CTPG reconsider its past position to consider only renewable-energy resources, and not the resources needed to integrate them reliably into the grid, in its transmission-planning efforts. Integration resources, like pumped storage, should be included in the CTPG's studies for the following reasons:

- The California ISO and other California Balancing Authority Areas (BAAs) will need flexible resources to manage the increasing amount of renewables on the system. Past California ISO studies have shown, and simple common sense would dictate, that the California ISO will need considerable additional flexible resources on its system to manage the large volume of expected renewable intermittent capacity, especially in light of the likely impairment or retirement of Once-Through Cooling (OTC) gas-fired plants, which provide much of the flexible generation on the California ISO system today.
- The CTPG assumptions are inconsistent with new California ISO Transmission Planning Process (TPP) provisions. New California ISO Tariff Section 24.4.4.6 ("Policy-Driven Elements") refers...specifically to consideration of the following in determining the need for "Category 1" transmission elements:

...The potential for a particular transmission element to provide access to generation and non-generation resources needed to support renewable integration (*e.g., pumped storage*)... (*emphasis added*)

The California ISO is the largest CTPG member. Inconsistencies between fundamental California ISO and CTPG assumptions would seriously impair the usefulness of the CTPG analyses and require the California ISO to perform supplemental analyses to make up for the CTPG deficiencies.

CTPG Technical Study Team Response:

The CTPG will not consider proposed energy storage technologies in its 2011 work. Energy storage is being addressed in a number of other forums, including the California Public Utilities Commission's proceeding on energy storage (R.10-12-007) as required by state Assembly Bill 2514. Before the CTPG undertakes any assessment of energy storage proposals, the information and results emanating from these other initiatives needs to be understood and digested.

The CTPG Technical Study Team agrees with ECE that recent studies by the California ISO indicate that additional sources of dispatchable generating capacity are likely to be needed in order to integrate the large amount of intermittent renewable generation that will exist at the 33-percent Renewable Portfolio Standard (RPS) level. Exactly how much new dispatchable generating capacity will be needed is uncertain and depends on a number of variables including, as ECE points out, how much of the existing fleet of fossil-fired coastal generating units using OTC technology is retired and how much is replaced or repowered.

Other initiatives may also affect the amount of new dispatchable generating capacity that will be needed. These initiatives include the CAISO's proposal to reduce its existing offer floor from -\$30 per megawatt-hour to -\$300 per megawatt-hour, the California ISO proposal to phase out the Participating Intermittent Resources Program (PIRP), the California ISO proposal to eliminate the cross-market netting of Bid Cost Recovery (BCR) uplifts, the California ISO's ongoing effort to increase the use dynamic scheduling, the Federal Energy Regulatory Commission's interest in moving to shorter intertie scheduling time-lines (*e.g.*, 15 minute scheduling) and the Western Electricity Coordinating Council's effort to develop a real-time centralized dispatch market (the proposed Efficient Dispatch Toolkit (EDT)). Implementation of certain demand response programs currently being considered may also affect the amount of new dispatchable generating capacity that will be needed.

As to ECE's statement that "inconsistencies between fundamental California ISO and CTPG assumptions would...require the California ISO to perform supplemental analyses...", the CTPG notes that the California ISO is required under its tariff to perform its own independent analysis and nothing that the CTPG does, or does not do, will "require" the California ISO to perform analysis, "supplemental" or otherwise.

Comment:

The "...failure to consider non-renewable resources (integration or other resources) in the statewide plan could significantly impact transmission available for renewable energy, and thus jeopardize attainment of a 33-percent RPS. Once transmission is constructed, it would be available for use by any generation under CAISO open-access rules.

Thus, failure to plan for upgrades to accommodate non-renewable generation now could increase congestion wherever non-renewable generation might compete for transmission capacity with renewable generation, including the transmission path that would be used for ECE's project output. At a minimum, the CTPG should run sensitivity analyses that consider large non-renewable resources in its members' interconnection queues that could significantly impact study results.

In those analyses, pumped storage resources should be studied both as generation and as load, *i.e.*, as potential temporary or permanent substitutes for transmission if they are located in renewables-heavy areas or along renewables-heavy transmission corridors. For example, ECE's project might substitute for some of the West-of-Devers upgrades for renewable-energy projects, instead of triggering more of them.

CTPG Technical Study Team Response:

The CTPG develops its conceptual transmission plan without regard to which Balancing Authority area(s) the transmission upgrades may ultimately be within. Accordingly, it may not be accurate to presume that all transmission in the CTPG's conceptual transmission plan will be available for use by any market participant "under California ISO open-access rules."

The CTPG Technical Study Team agrees with ECE that the addition of new transmission capacity should decrease the frequency and costs of congestion that would otherwise result from the competition for limited transmission access between non-renewable and renewable sources. However, the CTPG has decided that its 2011 work plan will not include the hourly economic grid simulations necessary to estimate the frequency and costs of congestion with and without the transmission infrastructure additions that will be included in the CTPG's conceptual transmission plan.

The CTPG agrees with ECE that energy storage devices can also act as alternatives to transmission infrastructure additions in areas where (i) there is more renewable generation capacity than existing transmission capacity (renewable output in excess of the existing transmission capacity can be stored and then discharged during hours when the output of the renewable resources is lower than the existing transmission capacity), and (ii) there is more demand than can be served by existing transmission and existing local generation (energy can be stored during low demand hours and then discharged when demand is at a level that exceeds the combined capability of the existing transmission and existing local generation sources).