

**California Transmission Planning Group (CTPG)
Technical Study Team Response to
Comments of Eagle Crest Energy (ECE)
on CTPG's draft Phase 4 Study Report and draft Statewide Transmission Plan**

Comment:

Eagle Crest Energy ("ECE") supports the inclusion of three "high-potential" 500-kV transmission upgrades included in the Phase 4 Results: (1) Red Bluff-Devers #1 and #2; and (2) Devers-Valley #2. ECE believes that these upgrades would be "no regrets" lines, because they could serve both renewable generation and integration resources, and ECE strongly urges the CTPG to retain them in the final Phase 4 documents.

CTPG Technical Study Team Response:

As described in Appendix C to the CTPG's Final Phase 3 Study Report, Southern California Edison's ("SoCalEdison's") proposed 500-kV Colorado River-Devers-Valley #2 line and SoCalEdison's proposed Red Bluff substation have been designated by the CTPG as "high potential" upgrades. SoCalEdison's Red Bluff substation will be looped into the existing 500-kV Palo Verde-Devers #1 line, enhancing the *existing* 500-kV Red Bluff-Devers #1 line. SoCalEdison's Red Bluff substation will also be looped into SoCalEdison's proposed 500-kV Colorado River-Devers-Valley #2 line, creating a *new* 500-kV Red Bluff-Devers #2 line. Accordingly, because the 500-kV Red Bluff-Devers #1 line is an existing line, the CTPG has not identified this line as one of the "upgrades", therefore, it is not listed as such in Appendix C. ECE correctly identifies SoCalEdison's 500-kV Red Bluff-Devers #2 line and SoCalEdison's 500-kV Devers-Valley #2 line as "high potential" transmission upgrades and these two lines are listed in Appendix C.

With respect to the two new 500-kV lines proposed by 21st Century Transmission between SoCalEdison's Red Bluff substation and SoCalEdison's Devers substation, the CTPG addressed these proposed lines in Section 8.9 of the CTPG's Final Phase 3 Study Report, which is posted to the CTPG website at www.ctpg.us.

Comment:

ECE's prior comments in the CTPG stakeholder process urged the CTPG to consider "integration resources" like pumped storage in its analysis and planning efforts, and not just renewable resources, for the following reasons.

The California ISO and other California balancing authority areas 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 expected in the future. The need for such resources will be especially critical in light of the significant additional operational challenges likely to be presented by the impairment or removal of service of Once-Through Cooling (OTC) fossil-fuel resources, which provide much of the flexible generation on the California ISO system today.

Failure to consider non-renewable resources in the statewide conceptual plan could significantly impact the transmission available for renewable energy, and thus jeopardize attainment of a 33-percent Renewable Portfolio Standard. Once transmission is constructed, it would be available for use by any generation under California ISO open-access rules. 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.

The CTPG assumptions are inconsistent with the California ISO RTPP proposal. 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)..."

Consistency between the CTPG Conceptual Plan and the California ISO Tariff is critical, since the California ISO is the largest CTPG member. Inconsistencies in these key assumptions between the two would force the California ISO to make significant modifications to the CTPG analyses and plan, causing unnecessary work and rendering the CTPG a less-relevant planning tool overall.

CTPG Technical Study Team Response:

Initial results from the California ISO's 33-percent renewable integration studies are suggesting the need for 4,350 megawatts of "flexible resources" above the level that may be provided by California load-serving entities to meet applicable planning reserve margins ("PRM"). (See, for example, slide 29 of the California ISO's November 30, 2010, presentation entitled "*ISO Study of Operational Requirements and Market Impacts at 33% RPS*".) These results are based on operational studies that make certain assumptions about the retirement and refurbishment of coastal generating units using Once-Through Cooling (OTC) technology.

Exactly which non-renewable (and potentially renewable) resources are likely to be built to provide the needed operational flexibility has not been determined. These determinations may depend on balancing authority rules and/or regulatory orders that require certain load serving entities to add specific amounts and types of dispatchable generation. They may also depend on commercial assessments made by independent power producers as to the expected profitability of building such generation and selling their operational services to load serving entities on a bilateral basis or through the California ISO's ancillary service markets. Determining which dispatchable generators make sense to build, and the location of those generators, requires consideration of the estimated costs and benefits of the various technologies, including any transmission costs that may be associated with specific generators.

Associated transmission costs will be a function of the frequency of expected congestion and the economic impact of such congestion relative to different alternatives for managing such congestion. To date, the CTPG has not undertaken congestion studies to determine which solutions (*e.g.*, new transmission infrastructure or redispatching existing generation) would be expected to be most economical for consumers.

While eligible "Category 1" transmission projects in the California ISO's Revised Transmission Planning Process (RTPP) may "provide access to generation and non-generation resources needed to support renewable integration (*e.g.*, pumped storage)," the CTPG is not aware that the California ISO has made any determination that the proposed 500-kV Red Bluff-Devers #1 and #2 lines are *necessary* to provide such access.

The CTPG is unclear as to what "inconsistencies" ECE is concerned may exist between the CTPG's draft statewide conceptual transmission plan and the California ISO tariff. In any event, the CTPG notes that the CAISO does not have the unilateral ability, for any reason, to "make significant modifications to the CTPG analyses and plan." The CTPG's activities are conducted on a consensus basis among all of the CTPG

members. Under the RTPP tariffs, the California ISO considers the CTPG study results as an input to the ISO's Annual Transmission Planning Process, and adopts its own Annual Transmission Plan for its balancing authority area. This would constitute an independent action of the California ISO and does not necessarily require that the planning assumptions used by the California ISO and the CTPG be identical. Any differences and the reasons for those differences would be identified in the study plans and separate plans of both entities.

Comment:

New transmission lines in Phase 4 Results: ECE realizes that the CTPG did not accept ECE's proposals to consider integration resources in the CTPG's 2010 planning efforts and hopes that it will reconsider this concept for the CTPG's 2011 work.

However, with respect to the Phase 4 Results, ECE notes that the CTPG has identified the Red Bluff-Devers #1 and #2 lines and the Devers-Valley #2 line as "high-potential" upgrades to serve renewable-energy projects. These lines are also capable of serving ECE's pumped-storage project, greatly increasing the probability that the lines will be used and that they thus would be "no-regrets" investments. Therefore, retaining them in the final Phase 4 documents would be prudent and sensible.

CTPG Technical Study Team Response:

As discussed above, the CTPG did not identify the 500-kV Red Bluff-Devers #1 line as a high potential transmission upgrade; this line already exists.

Comment:

Consistent with ECE's prior comments, ECE believes that the CTPG should also consider, in the final Phase 4 documents or in its 2011 work, the possibility of an additional Red Bluff-Valley 500-kV line. The three high-potential lines would likely be insufficient to accommodate both ECE's project and the expected renewable resources that could use that transmission path.

This possibility of course supports ECE's position that both renewable and integration resources should be considered in the CTPG planning activities. Otherwise, the latter could potential crowd out the former, causing unnecessary congestion that could cause renewable-resource curtailment, either directly or due to insufficient supply of integration services.

CTPG Technical Study Team Response:

The CTPG will take under advisement ECE's suggestion to consider, in the CTPG's future work, a third 500-kV line between the Red Bluff and Valley substations. ECE does not indicate whether it proposes that this line be looped into Devers substation.

As noted above, the CTPG is currently considering whether its future work will include congestion studies that could be used to address ECE's concern that the combination of new renewable resources and new integration resources competing for access to the transmission grid would result in "unnecessary congestion". Regardless of what the CTPG ultimately decides to do, it would be helpful to the CTPG if ECE would explain and define the term "unnecessary congestion" as that term is used in the ECE's comments.

Comment:

Need for new transmission to achieve 33-percent RPS: ECE found the CTPG transmission analysis showing that the currently approved transmission projects and the high-potential projects identified in the CTPG studies would only be sufficient to support a 22-24 percent RPS to be particularly interesting, since it appears to contradict recent California ISO findings that already-approved lines by themselves could be sufficient to reach a 33-percent RPS.

As ECE stated in the California ISO transmission-planning stakeholder process, ECE strongly believes that more transmission is needed, for access to both additional high-potential and economic renewable-energy areas (both in- and out-of-state) and integration resources like ECE's project. Viable supply competition between renewable-energy projects and areas will require some amount of 'slack' transmission capacity, as will uncertainties about where generation projects will develop. The Phase 4 Results, while not explicitly considering these other factors, at least finds that additional transmission is needed that could serve these purposes."

CTPG Technical Study Team Response:

The CTPG Technical Study Team appreciates ECE's views on the need for "slack" transmission capacity. It would be helpful if ECE provided the CTPG with the basis for ECE's belief that "more transmission is needed," specifically economic studies that indicate building more transmission is better for consumers than other alternatives for meeting California's 33-percent RPS and emission reduction goals.