California ISO

Stakeholder Comments Template

Transmission Capability Estimate Inputs for CPUC Integrated Resource Plan

Submitted by	Organization	Date Submitted
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First Solar appreciates the opportunity to provide comments on the CAISO's recent white paper outlining transmission capability estimates for the CPUC's Integrated Resource Plan (IRP). This white paper provides much-needed transparency on an important input to the State's long-term planning process. Understanding the trade-offs between transmission upgrades for full capacity deliverability status (FCDS) and relying upon energy only deliverability status (EODS) for incremental renewables provides the opportunity for a more thoughtful dialogue on how resources get incorporated into the grid. It is important to note that these EODS estimates are just that: estimates, which should be treated as indicative values for what could be possible.

In the white paper, the CAISO states that when calculating EODS, it is assumed that non-zero marginal cost fossil fuel resources and imports are displaced. The resulting maximum amount of incremental resources, prior to the triggering of an upgrade, determines the EODS for that portion of the transmission system. While this provides a reasonable maximum benchmark value, First Solar is concerned that it may overstate the potential for new resources to effectively take EODS service in the future. To that end, we would like the CAISO to provide additional clarity on the resources being displaced and how they fit into traditional system dispatch.

First Solar Questions

1. For the fossil fuel resources and imports being displaced, has the CAISO reviewed their operating characteristics and relative flexibility? For example, are these resources predominantly quick start, fast ramping assets, or do they include a non-trivial amount of resources that are characterized by long lead times to start/stop and slow ramping capabilities? Our concern is whether or not a significant portion of the gas generation assumed to be offline is actually needed for evening ramps, and is not capable of coming online close to the operating hour of need for that ramp. If those resources have restrictions regarding start/stop times, then they be required to be online at their Pmins during the peak

of the day, when many of the EODS projects would presumably be on the grid as well. This would result in either more curtailment than anticipated, or an overstatement of the true nameplate EODS additions that are realistically feasible. First Solar raises this question predominantly to gain a clearer understanding of whether or not system dispatch considerations are factored into these transmission capability estimates, as well as to highlight the potential importance of pursuing the major upgrades identified in Table 2-1, column B, to ensure FCDS status for the most resources possible.[1]

2. Were these specific upgrades provided as inputs to the RESOLVE model, or were just the costs and associated increases in capability associated with them provided to the CPUC?

3. How does the RESOLVE model identify the tradeoff between FCDS with additional transmission related costs versus adding EODS? If the EODS limit were reached, how would that impact the incremental cost and FCDS MW value for new transmission?

[1] It is important to note that treating incremental renewable resources as flexible for dispatch purposes is another viable alternative for this discussion to ensure a least cost dispatch of the grid.