

Western Power Trading Forum

Track 1 Resource Adequacy Proposals

California Public Utilities Commission

RA Workshop

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WPTF Proposal #1:

Multi-Year Forward RA Requirements WITH
Associated Capacity Market
and Hedging Mechanisms

- The Commission should establish 3-5 year forward capacity procurement obligations, including system, local, and when necessary, flexible capacity procurement obligations.
 - Approve IOU participation in the RA capacity market including the extent of bilateral contracting outside the market.
 - Approve the multi-year forward RA capacity market procurement obligations for CPUC-jurisdictional LSEs, similar to the current approval of local requirements.
 - Determine to what extent jurisdictional LSEs may count EE and DR to satisfy forward capacity procurement obligations.
 - Establish a reliability standard on which capacity market procurement obligations are based, e.g., 1 day-in-10 year loss of load for system requirements.

- CAISO would develop and administer forward RA capacity and reconfiguration auctions to account for all supply necessary to meet forward capacity obligations:
 - Administer a capacity market including determination of clearing prices and settlements that result from the auction.
 - Include, for each delivery year, a 3 to 5-year forward base auction and incremental auctions to account for changes in load forecasts and expectations about the likelihood that resources will perform in the delivery year.
 - Establish RA capacity market procurement obligations for system, local, and flexible capacity.
 - Determine how resources count towards system, local and flexible capacity requirements.

- LSEs may rely on self-supply, bilateral contracts, and/or the CAISO capacity auction to fulfill forward RA obligations
- Forward system and local requirements will be allocated to LSEs in the same manner as year-ahead system and local requirements are currently allocated.
- The auction will include constraints that the entire portfolio of capacity must satisfy—such as an aggregate ramping capability—potentially resulting in premia for certain operating characteristics, e.g., ramp rates
 - Well-functioning day-ahead and real-time markets should send meaningful price signals to inform forward procurement decisions that satisfy flexibility and other constraints on RA procurement.

- The auction should determine clearing prices for forward-year capacity in different locations and, potentially, premia for various types of flexibility.
- Settlement occurs in the delivery year and reflects an LSE's load in the delivery year.
- The CAISO capacity auction ultimately should encourage the development of new resources, sustain needed existing resources, and diminish the need for procurement of new resources through the LTPP process.
- The auction will include appropriate demand and supply market-power mitigation measures.

Proposal #1 Conclusion

The Commission should adopt in its June decision the concept of forward capacity obligations with a capacity clearing market that provides for:

- Risk management
- Price transparency
- Transactional ease

Track 2 should then move forward with the development of detailed rules and requirements.

WPTF Proposal #2:

Effective Load Carrying Capacity

- ELCC is an issue long overdue for Commission resolution
- R.14-10-010 proposals identified how behind-the-meter solar photovoltaics (BTM PV) significantly affect ELCC
- The current practice significantly increases the ELCC ascribed to solar resources
 - Significant negative implications for CPUC energy policy and system reliability
 - Inflates the capacity value of solar

- The Commission should direct that BTM PV should be expressly modeled as a supply resource
 - Last year's ELCC estimates did not include it, as shown by the August result
 - Although initial Energy Division estimate for solar ELCC approximated 30% of nameplate capacity (including BTM PV), final results backed out BTM PV, increasing the solar ELCC to about 40% of nameplate capacity
- While it can be argued that this is justified by the fact BTM PV is not explicitly counted in RA requirements, this ignores the facts that:
 - Resulting reduced peak load forecasts affect RA requirements; and
 - Pushing the potential for load loss later in the day to a time when less solar is available means the solar contribution to reliability is diminished.

- Energy Division's February 24, 2017, proposal explained:
 - *“The effect that BTM PV has on overall solar ELCC stems from the fact that as solar penetration increases, peak load net of solar generation shifts further into the evening when solar generators cease generating. This shift in load hours affects average solar ELCC. While it may not be the time to give RA value to BTM PV, the large quantity of BTM PV generating electricity in California makes its effect on ELCC important to quantify.”*
- If the Commission continues not to expressly model BTM PV, the impact will be seen in ELCC calculations that do not accurately reflect the extent to which this resource can provide the resources necessary for a reliable grid.

Proposal #2 Conclusion

The Commission should direct that BTM PV is to be expressly modeled as a supply resource so that the ELCC estimates adopted for next year include it.

If BTM PV is not expressly modeled as a supply resource, the effects of BTM solar should be accurately represented in the load forecasts used.