



Stakeholder Comments
2017-2018 TPP Stakeholder Meeting
September 21-22, 2017

Submitted by	Company	Date Submitted
Jin Noh 510.665.7811 x109 jnoh@storagealliance.org	California Energy Storage Alliance ("CESA")	October 6, 2017

CESA appreciates the opportunity to comment on the 2017-2018 Transmission Planning Process ("TPP") September preliminary reliability results and special studies.

Preliminary Study Results

In the September 21-22, 2017 stakeholder meetings, CESA was encouraged to see that the California Independent System Operator ("CAISO") and the Participating Transmission Owners ("PTOs") are increasingly considering preferred resources and energy storage solutions as potential mitigation solutions to address several reliability issues. In particular, CESA was encouraged to see that Pacific Gas and Electric Company ("PG&E") submitted a request window proposal to competitively solicit preferred resources such as in-front-of-the-meter energy storage, behind-the-meter energy storage, and other distributed energy resources to address their remaining thermal overload need after the proposed substation upgrades. CESA believes that PG&E proposing an actual non-wires alternative for a transmission need represents an important advancement that other PTOs should consider and propose.

The next step for PG&E is to structure the competitive solicitation to provide clearly defined needs and data to support the consideration of non-wires alternatives over a traditional wires solution. Detailed information on the nature and timing of the thermal load will be important to help preferred resource providers the tools needed to structure a competitive bid to meet the

transmission need. This type of information is critical to allow resources to provide and be compensated for other services (*e.g.*, wholesale market revenue, retail services) to maximize the utilization and cost-effectiveness of the preferred resource while clearly setting the parameters to ensure that the transmission need is met reliably and consistently. These discussions should also address cost recovery issues for non-wires reliability alternatives.

Special Studies

CESA was encouraged to see the CAISO continue the Bulk Storage Special Study with updated 2016 Long-Term Procurement Plan (“LTPP”) assumptions and scenarios in the 2016-2017 planning cycle, which demonstrated that bulk storage resources, pumped hydro storage (“PHS”) in this particular study, reduced renewable curtailment, greenhouse gas (“GHG”) emissions, and production costs, although it did not produce sufficient net market revenue to cover its levelized annual revenue requirements and it produced reduced levels of these benefits from the 2015-2016 special study due to certain changes in assumptions.¹ Notably, rather than using a -\$300/MWh price for all renewable curtailment, the CAISO created a step function for renewable curtailment prices that “mimics the CAISO market mechanism to curtail renewable generation with economic bids and self-schedules.”²

In this 2017-2018 study update, further adjustments were made to the load forecast, availability and dispatchability of Combined Heat and Power (“CHP”), hourly profiles of energy efficiency measures, among others. Together, these changed assumptions further reduced the benefits shown in the study results, even though the overall results showed overall reductions in renewable curtailment, GHG emissions, and production costs. An additional default scenario was run with a four-tier curtailment price scale, which creates a more gradual step-down function of curtailment prices.

First, on the study approach, CESA requests clarification on the meaningfulness of the four-tier curtailment price scale. While the 2016-2017 special study justified the change for renewable curtailment prices as mimicking market mechanisms, it is unclear what this four-tier curtailment price scale is intended to simulate, and whether this is supposed to reflect real-world market operations or a potential future scenario. Furthermore, CESA notes that, while the 2016-2017 renewable curtailment price step function mimics the CAISO market mechanism, they may not necessarily reflect the actual cost of curtailment, which may be informed by the cost of avoided Renewable Energy Credits (“RECs”) and other non-market factors.

Second, on the key conclusions to be drawn from this special study, CESA suggests that the CAISO and stakeholders use caution in interpreting these study results as determining that bulk

¹ 2016-2017 ISO Transmission Plan, pp. 327-336.

² *Ibid*, p. 328.

storage systems are not cost effective to pursue further as an energy, capacity, or transmission solution. As the CAISO importantly noted previously, “developing pumped storage resources would need other sources of revenue streams, which could be developed through policy decisions.”³ CESA agrees and recommends that the CAISO, the California Public Utilities Commission (“CPUC”), and PTOs address the cost recovery issue for bulk storage resources serving as a market resource and a non-wires transmission alternative. A transparent methodology that considers specific benefits of non-wires alternatives and allocates costs accordingly is needed to determine whether partial rate recovery and/or market participation are appropriate for non-wires alternatives that may function as both a reliability solution and a market resource. Until these cost recovery issues are resolved, bulk storage resources will be unfairly evaluated in these studies and may not be submitted in actual project proposals as a result despite the significant benefits that they can provide.

Finally, CESA recommends that this special study be re-run again in the 2018-2019 TPP cycle to incorporate the latest inputs, assumptions, and scenarios from the Integrated Resources Plan (“IRP”) proceeding at the CPUC. These special studies already determined that a solar overbuild case would produce relatively more benefits in terms of reduced renewable curtailment, GHG emissions, and production costs, and therefore, in light of the Proposed Reference System Plan economically selecting more than 9,000 MW of solar and 1,100 MW of wind through 2030, there may be significant value in re-conducting this special study with updated inputs and assumptions.⁴ California likely faces a high-solar Renewable Portfolio Standard (“RPS”) future, which may be procured early before 2022 to take advantage of expiring federal tax credits, indicating a potential need for PHS and other bulk storage resources such as compressed air energy storage (“CAES”) earlier as well. Furthermore, in the aggressive 30 million metric ton (“MMT”) GHG emissions scenario by 2030, approximately 1,200 MW of PHS was economically selected as part of the optimal portfolio. The re-run of the special study in the next TPP is justified and prudent based on the combination of demonstrated benefits in previous TPP special studies of bulk storage in a high-solar RPS future with the updated inputs and results showing benefit of long-duration bulk storage in a 30 MMT future. This study re-run will greatly inform the CPUC and stakeholders on the best path forward without overlooking a potential cost-effective and diverse grid integration resource that supports the state’s GHG and renewable policy goals.

Overall, CESA commends the CAISO for continuing to study bulk storage benefits and operations. CESA appreciates the CAISO’s work on this matter.

³ *Ibid*, p. 336.

⁴ Administrative Law Judge’s Ruling Seeking Comment on Proposed Reference System Plan – Attachment A Proposed Reference System Plan, pp. 52-53.

Conclusion

We appreciate CAISO's consideration of CESA's comments and look forward to ongoing participation in the CAISO's Transmission Planning Process.