CALIFORNIA ENERGY STORAGE ALLIANCE

Stakeholder Comments
CAISO Policy Initiatives Catalog
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Submitted by	Company	Date Submitted
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CESA appreciates the opportunity to comment on the CAISO's draft 2018 Policy Initiatives Catalog. CESA recognizes that CAISO has dedicated significant resources to its policy and market development and is clearly committed to improving its grid management, markets, and transmission planning roles comprehensive and transparent stakeholder-input meetings and processes.

CESA is encouraged by the stakeholder initiatives already underway in 2017 and is set to continue participation throughout 2018, including the Energy Storage & Distributed Energy Resources (ESDER) Phase 3 Initiative, the Flexible Resource Adequacy Capacity & Must-Off Obligation (FRACMOO) Phase 2 Initiative, and Frequency Response Phase 2 Initiative (if reactivated). CESA's goal with this and other participation in CAISO stakeholder processes is to support the timely development and approval of CAISO market, operational, or planning enhancements. Furthermore, as the CPUC and FERC also grapples with issues that may affect or overlap with CAISO authorities and operations, CESA recommends the CAISO maintain flexibility in its stakeholder process planning so as to address these outside developments in a timely fashion.

CESA offers the following comments on the 2018 Policy Initiatives Catalog, urging inclusion of key enhancements in the longer-term Annual Policy Initiatives Roadmap.

Potential initiatives that should be prioritized in the 2018 Policy Initiatives Catalog

Fast Frequency Response

This potential initiative aims to explore a potential separate market product for resources to provide automatic, autonomous fast frequency response – a product that will be increasingly needed as the state's changing fleet has reduced the primary frequency response (PFR) historically provided by governor controls from traditional generators. CESA has previously presented on the need for an in-market constraint or product to incent primary frequency response (PFR) capability and performance while compensating for opportunity costs. This solution would reserve PFR capabilities in the day-ahead and real-time markets, and include mechanisms for calculating how much PFR resources can provide since not all resources provide PFR equally or linearly. When dispatched, PFR resources could settle for energy similar to the settlement of Regulation resources. CESA also highlighted how energy storage is an efficient PFR provider that is autonomous and instantaneous.[1]

However, CESA understands that the Frequency Response Phase 2 Initiative is currently suspended as the CAISO awaits a FERC determination on FERC requirements before re-commencing this initiative. Before the FERC Notice of Proposed Rulemaking (NOPR) on requiring PFR capability for new interconnections (RM16-6), CESA believed this CAISO in-progress initiative was progressing toward a solution based on market constraints or products, such as one that incentivizes the provision of fast frequency response. While the CAISO has chosen to pause its Frequency Response enhancements until FERC has made a determination in RM16-6, CESA strongly recommends that the CAISO move forward with market product development in the Frequency Response Phase 2 Initiative. Reasonably, the CAISO's design would meet or exceed any FERC requirement, and the in-market solution could effectively complement with any interconnection-based requirement, as being considered by FERC.

Bid Floor

CESA continues to advocate for lowering the bid floor from its current -$150/MWh level, which would put the CAISO in-line with the bid-floors of other Independent System Operators, is supported by the Market Surveillance Committee, will provide helpful and unequivocal signaling and incentives to better address excess conditions, and will better reduce uplifts by

[1] CESA's presentation on February 9, 2017 at a CAISO working group meeting. http://www.storagealliance.org/sites/default/files/Presentations/2017-02-06%20CESA%20Energy%20Storage%20%26%20PFR%20Market%20Designs%20-%20FINAL.pdf

balancing uplifts from upward price-spikes with those of negative price-spikes. As the supply fleet evolves toward a 50% RPS, oversupply conditions will increase. A deeper pool of economic bids could enable the market to more efficiently manage oversupply conditions, but may require a bid floor such that resources are able to fully reflect the cost of not producing. The current bid floor is not sufficiently low enough to incent the procurement of downward flexible resources, including the curtailment of some renewable contracts.

Despite being considered in a 2016 initiative, the CAISO announced in October 2016 that it will not lower the negative bid floor because of a desire to monitor the markets following implementation of the Flexible Ramping Product (FRP). However, given the grid mix changes and more than a year of evaluating the performance of the FRP, CESA believes it is ripe to re-launch an initiative around lowering the bid floor.

Storage as a Transmission Facility

CESA has consistently urged the CAISO to consider energy storage and other preferred resources as an option to meet transmission reliability needs as non-wires alternatives in the annual Transmission Planning Process (TPP). CESA is encouraged to see that non-wires solutions have been highlighted as potential mitigation solutions to address several reliability issues in the 2015-2016 and 2016-2017 Transmission Plans as well as in PG&E's request window proposal submission in the 2017-2018 TPP study cycle, but has yet to see actual energy storage projects proposed as an alternative to new transmission infrastructure. It is still unclear to stakeholders how cost recovery issues for non-wires reliability alternatives will be addressed such that specific benefits and costs are allocated to determine whether partial rate recovery and/or market participation is appropriate for non-wires alternatives that may function as both a reliability solution and a market resource.

The policies, rules, and regulations are coming into place to support the launching of this type of initiative focused on energy storage as a transmission facility. In Docket No. AD16-25, FERC issued a Policy Statement (PL17-2) to clarify precedent and provide guidance regarding electric storage resources seeking cost-based rate recovery for certain services while also receiving market-based revenues for providing market-based rate services. In effect, this Policy Statement answered the key threshold question of whether electric storage resources can provide transmission and clarified that providing services at both cost- and market-based rates is permissible as a matter of policy. In the Energy Storage Track 2 proceeding at the CPUC, new rules are also being developed that would create a framework by which energy storage resources providing transmission deferral services will be also authorized to provide other grid services such as capacity, regulation, and customer/distribution services, so long as

transmission deferral is provided through a firm contractual commitment or time differentiation of the capacity commitment of a given energy storage resource. These rules are still in development, but once established, would lay the foundation for a new Storage as a Transmission Facility Initiative at the CAISO.

This type of initiative is needed to implement the multiple-use application framework for storage as transmission, but also to realize this specific multiple-use application by resolving key cost recovery and allocation issues. In addition, this initiative may also need to consider the CAISO's transmission outage procedures for non-wires alternatives providing transmission services, especially as they provide multiple-use applications (*i.e.*, grid and customer services other than the primary transmission service). In particular, if there are planned outages, then energy storage as transmission will be able to ensure the primary transmission service is provided with advanced notice, as will grid operators. Finally, this initiative should explore pathways for bulk storage resources such as pumped hydro storage and compressed air energy storage. These system-level resources are well-suited to meet transmission needs while addressing long-duration load shifting and other ancillary services. The cost allocation issues related to non-wires alternatives aligns with cost allocation issues for bulk storage resources, and thus CESA recommends an expansion of this initiative to consider bulk storage resources.

Regulation Pay-for-Performance Enhancements

CESA strongly recommends the consideration of enhancements to pay-for-performance frequency regulation given the recent reports on increasing levels of intra-hour variability and uncertainty, creating difficulties for the CAISO in controlling interconnection frequency in real-time and in meeting its Control Performance Standard (CPS) in certain hours and days of the year.[2] Other reports have indicated that the CAISO has seen increases in ancillary services event occurrences over the past two years for various reasons.[3]

Although these events are not yet occurring frequently due to overgeneration, CESA believes that these events need to continue to be tracked and future policy work may be needed to enhance the frequency regulation market design to ensure high-performing resources provide regulation and are compensated appropriately for meeting standard reliability metrics. While the FRACMOO Phase 2 Initiative includes draft concepts on potential five-minute Flex RA product ideas, an alternative and potentially more efficient pathway may be for resources to participate through an enhanced frequency regulation market participation model.

[2] CAISO Inverter-Based Generation Workshop on July 24, 2017.
[3] 2014-2016 Ancillary Service Scarcity Event Report published on May 10, 2017. http://www.caiso.com/Documents/2014-2016AncillaryServiceScarcityEventReport.pdf

Day-Ahead Flexible Reserve Product and Flexible Ramping Product Enhancements

CESA supports these two initiatives since further enhancements to the new FRP product launched on November 1, 2016 may be needed. In fact, these issues may be necessary as part of any new FRACMOO package. In its Q1 2017 Market Issues & Performance Report, the CAISO found that payments for flexible capacity have increased since implementation of the Flexible Ramping Product (FRP), but still remain low overall at less than $0.14/MWh of load. The FRP is an important market-based tool to compensate for the opportunity costs of reserving capacity for flexible ramping, and as recent market reports have highlighted, enhancements may be needed to improve the economic signal for this service.

15-Minute Day-Ahead Scheduling Granularity

CESA supports an initiative around increasing the granularity of the day-ahead market to resolve some of the real-time intra-hour challenges on the CAISO grid. Rather than relying too heavily on real-time markets to address intra-hour variability, a more granular day-ahead market may more efficiently support the commitment and positioning of resources.

Conclusion

Overall, CESA supports the new process as being more responsive to stakeholder interests, as there are opportunities to continue to bring to the CAISO's attention key topic areas that continue to be overlooked in the previous process. One area of improvement is that CESA is still unclear how the CAISO will determine the prioritization of discretionary initiatives. However, with a more stakeholder-responsive process in place, CESA strongly recommends that the highlighted potential initiatives above be considered for the 2018 Policy Initiatives Catalog.

We appreciate CAISO's consideration of CESA's comments and look forward to working with the CAISO on ongoing and upcoming stakeholder initiatives.