

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to consider policy and implementation refinements to the Energy Storage Procurement Framework and Design Program (D.13-10-040, D.14-10-045) and related Action Plan of the California Energy Storage Roadmap

Rulemaking 15-03-011
Filed March 26, 2015

COMMENTS OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION ON TRACK 1 ISSUES

Pursuant to the Scoping Memo and Ruling Seeking Party Comments (“Scoping Memo”) issued on June 12, 2015 by the California Public Utilities Commission (“CPUC”), the California Independent System Operator Corporation (“CAISO”) respectfully submits these comments.

COMMENTS

While the CAISO intends to participate in this proceeding, the issues where the CAISO can provide significant input generally appear in Track 2. The CAISO requested as much in its comments on the Order Instituting Rulemaking, and appreciates the CPUC’s accommodation through the Scoping Memo. The schedule of issues outlined in the Scoping Memo should allow the CAISO’s related stakeholder initiatives to progress meaningfully, which will enable the CAISO to comment in greater detail later in this proceeding.

Accordingly, the CAISO takes this opportunity to comment briefly on coordination across proceedings and agencies. Although the CPUC placed this

issue in Track 2, the Scoping Memo stated that the CPUC would appreciate initial input from the parties on ongoing processes that could impact the CPUC's role in the deployment of energy storage in California.

The CAISO currently is in the initial stages of its Energy Storage and Distributed Energy Resource Stakeholder Initiative ("ESDER Initiative").¹ Through the ESDER Initiative, the CAISO will work with stakeholders to identify and consider potential enhancements to existing requirements, rules, market products, and models for energy storage and DER market participation. The CAISO published its initial proposed scope and schedule for the ESDER Initiative on May 13, 2015, and held a stakeholder web conference on May 21, 2015. After various stakeholders commented on the CAISO's proposed scope,² the CAISO published a revised scope and schedule on June 25, 2015.³

Much like the CPUC Scoping Memo, the ESDER Initiative splits ESDER issues into two tracks: issues for potential policy resolution in 2015 and those for potential policy resolution in 2016 or beyond. The CAISO has identified the following issues for potential policy resolution in 2015:

1. Non-generator resource ("NGR") model enhancements
 - a. Update documentation on NGR to capture material and clarifications compiled for the April education forums.

¹ The ESDER Initiative is the result of a 2013-2014 stakeholder initiative clarifying interconnection rules for storage, and the 2014 CAISO/CPUC/CEC California Energy Storage Roadmap. The CAISO also held educational forums on April 16 and 23, 2015 to educate stakeholders on existing CAISO requirements, rules, market products, and models for energy storage and DER.

²http://www.caiso.com/informed/Pages/StakeholderProcesses/EnergyStorage_AggregatedDistributedEnergyResources.aspx.

³ <http://www.caiso.com/Documents/RevisedScopeSchedule-EnergyStorageDistributedEnergyResources.pdf>.

- b. Clarify how the CAISO uses state of charge in market optimization of an energy storage resource.
 - c. Evaluate the potential for initial state of charge to be a submitted parameter in the day-ahead market.
 - d. Evaluate option to not provide energy limits or have CAISO co-optimize an NGR based on state of charge.
2. Proxy Demand Resource (“PDR”) and Reliability Demand Response Resource (“RDRR”) enhancements. Evaluate inclusion of additional baseline methodologies that meet the North American Energy Standards Board (“NAESB”) measurement and validation standards. Clarify how to enable alternative baselines that meet NAESB standards and specify tariff provisions to define alternative baselines in BPMs.
3. Specify tariff provisions needed for the following two multiple-use applications:
 - a. Non-RA DER provides services to the distribution system (operational services and infrastructure deferral) and participates in wholesale market.
 - b. Non-RA behind-the-end-use customer meter DER provides services to end-use customer and participates in wholesale market.

The CAISO expects to publish an issue paper and straw proposal on these issues by July 30, 2015. The CAISO will then hold web conferences and receive stakeholder comments in iterative processes before publishing a draft final proposal. The CAISO expects to seek approval for resulting policy and tariff changes from the CAISO Board of Governors during its December 17-18, 2015 meeting.

For potential policy resolution in 2016 or beyond, the CAISO has identified the following issues:

1. Evaluate pseudo-tie or dynamic scheduling arrangements for storage resources, using available market models.
2. Additional NGR enhancements

- a. Consider a single participation agreement, rather than the current requirement that an NGR execute both a participating generator agreement (“PGA”) and a participating load agreement (“PLA”).
 - b. Evaluate interconnection requirements for non-exporting NGR.
 - c. Explore multiple configurations for a single NGR where each configuration is allowed different operating characteristics and economic bid curves based on physical constraints of the resource.
 - d. Evaluate expanding bid cost recovery for NGR to potentially cover additional resource types and configurations.
 - e. Enhance load management capability and participation under the NGR model (i.e., both increasing and decreasing consumption).
3. Additional PDR/RDRR enhancements: Explore dispatching DR to increase consumption
 4. Address remaining policy issues from the Expanding Metering and Telemetry initiative for Distributed Energy Resource Providers (“DERP”).⁴
 5. Evaluate the distinction between wholesale charging energy and station power.
 6. Consider additional multiple use applications.
 7. Examine alignment between distribution level interconnection and the CAISO New Resource Implementation (“NRI”) process.⁵
 8. Consider open policy issues from CPUC demand response working groups.

The CAISO will begin addressing these issues with stakeholders in 2016.

The CAISO expects that this schedule will align with the Scoping Memo in the instant proceeding and result in little, if any, conflict. The CAISO hopes to work with the CPUC and stakeholders in both initiatives in a complementary manner to integrate energy storage resources efficiently. The CAISO intends to coordinate with CPUC staff to proactively identify and avoid any potential

⁴ <http://www.aiso.com/informed/Pages/StakeholderProcesses/ExpandingMetering-TelemetryOptions.aspx>.

⁵ <https://www.aiso.com/participate/Pages/NewResourceImplementation/Default.aspx>.

conflicts on timing or jurisdiction, and to address any such issues in comments on a case-by-case basis as needed.

Respectfully submitted,

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