

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

Order Instituting Rulemaking to Oversee
the Resource Adequacy Program, Consider
Program Reforms and Refinements, and
Establish Forward Resource Adequacy
Procurement Obligations

Rulemaking 21-10-002
(Filed October 7, 2021)

**OPENING COMMENTS ON WORKSHOP AND PROPOSALS OF THE
CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**

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I. Introduction

The California Independent System Operator Corporation (CAISO) submits comments on Resource Adequacy Phase 2 Workshop and all Party proposals (Phase 2 Proposals) as set forth by the by the December 2, 2021 *Assigned Commissioner's Scoping Memo & Ruling* (Ruling).

II. Discussion

A. Comments on Joint DER Parties Proposal

In its Phase 2 proposal, the Joint DER Parties propose the Commission adopt a qualifying capacity (QC) methodology for behind the meter (BTM) storage and hybrid resources capable of exporting to the grid. The Joint DER Parties acknowledged this proposal is incomplete, and they intend to submit a revised proposal in future.¹ The Behind-the-Meter Storage Capacity Working Group scheduled one additional workshop to further discuss open issues related to this proposal.

BTM storage and hybrid resources can provide value towards meeting reliability needs, and the CAISO supports developing a pathway for these resources to receive capacity payments commensurate with the benefits they provide. If these resources receive capacity compensation through the Commission's resource adequacy program,

¹ Commission Workshop on Proposals in Phase 2 of the Implementation Track of R.21-10-002, February 4, 2021. (Commission Workshop)

the Commission should treat them as supply-side capacity that must adhere to resource adequacy program provisions, including CAISO market obligations.

There are different compensation models outside the resource adequacy program that the Commission should further consider. For example, BTM resources can be compensated for capacity through contractual arrangements with load serving entities (LSEs) to avoid demand charges, or to help load better respond to retail rates or provide other services. This compensation should be commensurate with the benefits and costs of services provided and may need to be validated with appropriate data such as metering and telemetry.

The CAISO provides the following comments to help identify areas of the Joint DER Parties' proposal that could benefit from further discussion and development.

1. Resources Compensated for Capacity Through the Commission's Resource Adequacy Program Must Adhere to Resource Adequacy Program Provisions Including CAISO Market Obligations.

The Joint DER Parties propose the Commission adopt a qualifying capacity (QC) methodology for BTM storage and hybrid resources that can export to the grid. The Joint DER Parties propose the Commission use QC values for in front of the meter (IFOM) resources of the same configuration as the basis for deriving BTM storage and hybrid QC values.

The CAISO does not preclude BTM consumer programs from participating in its markets. However, if resources are counted as resource adequacy capacity through the Commission's resource adequacy program, these resources must adhere to specific provisions comparable to other resource adequacy resources, including CAISO market obligations. For example, resource adequacy capacity participating in the CAISO market:

- Is subject to 24x7 must offer obligations into the CAISO market;
- Provides the CAISO resource visibility through telemetry and metering requirements;
- Provides the CAISO operational control to fully dispatch these resources; and
- Allows the CAISO to settle energy and measure resource performance.

Ultimately, the CAISO must be able to rely on resource adequacy resources up to their capacity values. The Joint DER Parties acknowledged parts of their proposal require further development, but suggested the Commission establish a QC methodology for BTM resources now, while leaving other market integration issues for later development.² However, market integration elements—including visibility, operational control, and CAISO market settlement—are key factors that must inform QC values and CAISO reliance on these resources to maintain reliability.

2. Rules For Differentiating Wholesale and Retail Settlement for BTM Storage Resources Should Be Explored Further.

BTM resources generally do not participate in wholesale markets, and are therefore subject to retail rates. Wholesale participation necessitates that BTM storage resources do not charge at wholesale rates and discharge at retail rates.³ The Commission identified the differentiation of settlements for BTM storage resources between wholesale and retail as a barrier to developing a QC value for BTM storage resources.⁴

The Joint DER Parties ultimately seek a long term framework to address this barrier where “[i]n either a new phase/track of this proceeding, in another appropriate rulemaking, or through a dedicated working group process, the CPUC should direct the development of an agreed-upon accounting framework to enable wholesale-retail differentiation regarding the cost for charging energy storage resources and the payment for discharging from such resources.”⁵

In the near-term until a more robust settlement framework can be developed, the Joint DER Parties offer interim proposals to address this settlement issue.⁶ In one interim proposal, the Joint DER Parties propose “the CPUC and CAISO could establish and

² Commission Workshop

³ D.17-04-039, Decision on Track 2 Energy Storage Issues, p. 33 *et seq.* (May 8, 2017); *see also* Section 10.13.4 of the CAISO tariff (“Storage resources participating in the CAISO markets may not charge their resources pursuant to a CAISO wholesale rate except to provide Energy or Ancillary Services to the CAISO Markets upon discharge”).

⁴ D.20-06-031, Decision Adopting Local Capacity Obligations for 2021-2023 and Adopting Flexible Capacity Obligations for 2021, and Refining the Resource Adequacy Program, p. 32.(Local & Flexible Capacity Obligations 2021-2023)

<https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M342/K083/342083913.PDF>

⁵ Joint DER Parties proposal, p. 75.

⁶ Local & Flexible Capacity Obligations 2021-2023, p. 32.

<https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M342/K083/342083913.PDF>

maintain that all DERP participation should have their charging energy in response to CAISO dispatch assessed at retail rates; in addition, they could determine that any storage discharge in response to CAISO dispatch should forgo wholesale energy settlement payments in order to avoid any duplicative payment for export compensation rates established under the NEM tariff or through some other mechanism.”⁷

The Joint DER Parties acknowledge, and the CAISO agrees, that shortcomings of the proposal include eliminating resources’ exposure to wholesale market prices, limiting incentives for resources to follow CAISO dispatches and thus limiting the effectiveness of these resources to meet CAISO reliability needs. Under this proposal, BTM storage resources may instead move largely in response to retail rate incentives that may not align with the CAISO’s reliability needs. Retail rates are significantly higher than wholesale rates, and a retail signal to discharge a BTM storage resource, for example to avoid triggering demand charges for a retail consumer, will mean a lower or potentially depleted state of charge for the CAISO.⁸ If this occur when the CAISO needs the storage resource to hold its charge in preparation for offsetting load during the evening ramp, then the retail incentives effectively derate the expected QC value, potentially when the CAISO market prices are very high but not high enough to counter the retail incentives.

Furthermore, allowing BTM storage resources participating under the DERA participation model to avoid CAISO market settlement raises discrimination issues because the same treatment would not apply to other wholesale resource types. The CAISO settles all conventional, storage, and demand response resources, regardless of technology or interconnection level, based on their locational marginal price. This ensures the correct economic dispatch based on market and grid conditions. It also ensures no resource receives undue preference under the Federal Power Act and California law.⁹ Although DERAs have some distinct features, the different rate settlement may constitute an undue advantage of a retail rate over a CAISO wholesale

⁷ Joint DER Parties proposal, pp. 38 and 75.

⁸ For example, according to the U.S. Energy Information Administration, the average retail price of electricity in California in 2019 was \$168.90/MWh, compared to an average CAISO wholesale rate of about \$41/MWh. U.S. Energy Information Administration, State Electricity Profiles, <https://www.eia.gov/electricity/state/>. CAISO Department of Market Monitoring, 2019 Annual Report on Market Issues and Performance (June 2020), <http://www.caiso.com/Documents/2019AnnualReportonMarketIssuesandPerformance.pdf>.

⁹ 16 U.S.C. § 824d(b) (2018); CA PUB UTIL § 453 (2008).

rate. Wholesale and retail settlement issues for BTM storage resources should be discussed further in future working groups or workshops.

3. The CAISO Distributed Generation Deliverability (DGD) Process Allows For DER Aggregations To Attain Deliverability.

The Joint DER Parties propose “the CPUC and CAISO should collaborate in developing a process by which LSEs can proactively seek existing DGD allocations and/or request study for incremental deliverability based on their anticipated “enrollment” or “participation” of BTM hybrids and storage resources with export capacity.”¹⁰ The Joint DER Parties suggest the CAISO should develop new processes such that BTM DERs with export capability can obtain deliverability.

In the February 8 workshop, the Joint DER Parties noted the deliverability aspect of the proposal needed more review, and the Joint DER Parties sought additional feedback on this part of the proposal.¹¹ The CAISO clarifies that existing processes already allow both BTM DERs and DERAs to be studied for deliverability. This process includes both CAISO and Utility Distribution Company (UDC) interconnection processes.

Under the CAISO’s Distributed Generation Deliverability (DGD) study process, UDCs inform the CAISO of how much capacity should be reserved for distributed resources, which could include DERAs. If feasible, deliverability is held for the UDC for two years to allocate to those distributed resources. In other words, in the DGD process, the CAISO does not set aside deliverability allocations for specific resources; it merely identifies where there is or will be deliverability between the distribution grid and the transmission grid. The CAISO then allocates to the UDC deliverability to a CAISO node that represents deliverable capacity to the CAISO system at the transmission-distribution interface. The UDC may distribute its allocation to a DERA across multiple distribution points at the transmission-distribution interface.¹² In the past, this process had been coordinated with the Commission’s Long-Term Procurement Plan proceeding.¹³

¹⁰ Joint DER Parties proposal, p. 60.

¹¹ Behind-the-Meter Storage Capacity Working Group, February 8, 2022.

¹² See Section 40.4.6.3 of the CAISO tariff.

¹³ Rulemaking 12-03-014. This proceeding has been succeeded by the Integrated Resource Planning (IRP) process, Rulemaking 20-05-003.

The CAISO suggests deliverability should be a topic of discussion at a future workshop to step through the coordinated processes between the CAISO, UDCs and the Commission.

4. The CAISO Clarifies Its FERC Order No. 2222 Filing was a Compliance Filing and Not a Broad Statement About Distribution Visibility, Metering, and Telemetry for Providing Resource Adequacy.

The Joint DER Parties suggest metering, dispatch, and telemetry are no longer relevant barriers to DERA wholesale participation and cite the CAISO's Federal Energy Regulatory Commission (FERC) Order No. 2222 compliance filing as evidence that visibility issues were resolved for Distributed Energy Resource Provider (DERP) participation. The Joint DER Parties state the "CAISO attested to the sufficiency of its current metering and telemetry regulations for DERAs in its Order 2222 compliance filing to FERC. Communication between the resource and CAISO is not an issue within the CPUC's jurisdiction, and appears to have been resolved for aggregated distributed resources, to both the satisfaction of the CAISO and its regulator, FERC. Thus, as with metering in the wholesale market, the Joint DER Parties recommend that this issue be removed from the list of issues requiring resolution before establishing a QC value methodology for BTM hybrid resources."¹⁴

The CAISO clarifies that the language cited by the Joint DER Parties overstates the CAISO's representations, which pertained to one specific compliance obligation within Order No. 2222. Contrary to the Joint DER Parties' assertion, the CAISO did not make a broad statement about distribution visibility, metering, and telemetry for providing resource adequacy. Order No. 2222 did not pertain to resource adequacy eligibility and QC methodologies, and the CAISO's compliance therefore did not address them.¹⁵ The CAISO also clarifies that FERC has yet to issue any order on the CAISO's proposed compliance with Order No. 2222, so the representation to FERC's satisfaction by the Joint DER Parties is purely speculative.

¹⁴ Joint DER Parties filing, p. 27.

¹⁵ The CAISO only has noted that developers have cited that net energy metering provides potential DERAs with greater financial incentives than the wholesale markets, especially where DERAs would not receive resource adequacy revenues.

Specifically, Order No. 2222 directed each Regional System Operator and Independent System Operator (RTO/ISO) to revise its tariff to include coordination protocols and processes for the operating day that allow distribution utilities to override RTO/ISO dispatch of a distributed energy resource aggregation in circumstances where such override is needed to maintain the reliable and safe operation of the distribution system.¹⁶ In its compliance filing and subsequent letter providing additional information, the CAISO noted that UDCs can submit outages to the CAISO’s outage management system, and market participants are already familiar with these processes, obviating the need for any incremental compliance on this aspect.¹⁷

Visibility into DERAs remains critical for CAISO operations, especially for resources relied on for resource adequacy. CAISO operations and forecasting rely on accurate data on BTM resources to inform real time DER forecasts. These processes may be complicated by resources providing both wholesale and retail services. BTM resources may move in response to events on the distribution system the CAISO cannot see, or in response to retail incentives. The CAISO’s metering requirements for supply side DERAs are flexible and allow for metering that complies with standards in a UDC tariff, the relevant local regulatory authority or, in absence of those, the CAISO’s business practice manual for metering.

B. The CAISO’s Process for Developing Year 2 and Year 3 Local Resource Adequacy Requirements is Consistent with Commission Direction.

Middle River Power (MRP) questions why the Commission is using the CAISO’s non-technical Local Capacity Requirements (LCR) estimates to set the three-year forward LCR instead of the annual one-year forward and five-year forward Local Capacity Technical Studies as required by D.19-02-022.¹⁸ The CAISO clarifies that both the Commission and the CAISO are adhering to the methodology described in D.19-02-022, which was developed in coordination with the CAISO’s LCR process. Use of “non-

¹⁶ Order No. 2222, 172 FERC ¶ 61,247 at P 310

¹⁷ CAISO, Response to FERC Letter, Docket No. ER21-2455, p. 26 (Nov. 2, 2021).

¹⁸ California Public Utilities Commission, Decision Refining the Resource Adequacy Program, *Order Instituting Rulemaking to Oversee the Resource Adequacy Program, Consider Programs Refinements, and Establish Annual Local and Flexible Annual Procurement Obligations for the 2019 and 2020 Compliance Years*, R. 17-09-020, February 21, 2019.

technical” LCR values was contemplated and referred to explicitly as “engineer-managed adjustments.” Specifically, the Commission found that, “[t]he CAISO’s existing one- and five-year studies, *with the requirement to incorporate engineer-managed adjustments for CAISO-approved transmission projects*, to be a reasonable input to inform multi-year local requirements the one-year ahead study will form the basis for local requirements for years 1 and 2 and the five-year study will inform the year 3 requirements.”¹⁹

[emphasis added] Relying on both technical studies and the engineer-managed adjustments rather than requiring technical studies for all three years helps to balance workload and resource management for the CAISO with the appropriate level of guidance for LSEs as the CAISO cannot conduct more than two years’ worth of detailed LCR studies under the current timelines.

III. Conclusion

The CAISO appreciates the opportunity to comment on Resource Adequacy Phase 2 Workshop and party proposals.

Respectfully submitted

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¹⁹ *Id.*, p. 24.