

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

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

Rulemaking 19-11-009
(Filed November 7, 2019)

**NOTICE OF AVAILABILITY
CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION
2021 FINAL LOCAL CAPACITY TECHNICAL STUDY**

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I. Introduction

Pursuant to the January 22, 2020 Assigned Commissioner Scoping Memo and Ruling, the California Independent System Operator Corporation (CAISO) hereby provides notice to the service list for Rulemaking 19-11-009 that its 2021 Final Local Capacity Technical Study has been posted publicly on the CAISO's website. The Final 2021 Local Capacity Technical Study can be accessed at the following address: <http://www.caiso.com/Documents/May1-2020-Final-2021-LocalCapacityTechnicalStudyReport-R19-11-009.pdf>

In addition to providing the 2021 Final Local Capacity Technical Study, this filing also provides (1) additional details regarding the CAISO's 2019 Local Capacity Criteria Update stakeholder process, (2) the CAISO's responses to stakeholder comments on the draft local capacity requirement (LCR) results, (3) details regarding the CAISO's estimates of battery storage needs for local areas, and (4) an update regarding ongoing efforts to reduce Bay Area LCR.

II. Discussion

The CAISO provides the 2021 Final Local Capacity Technical Study as Attachment A to this filing. In addition to providing the 2021 Final Local Capacity Technical Study, this filing also provides (1) additional details regarding the CAISO's 2019 Local Capacity Criteria Update stakeholder process, (2) the CAISO's responses to stakeholder comments on the draft local capacity requirement (LCR) results, (3) details regarding the CAISO's estimates of battery storage needs for local areas, and (4) an update regarding ongoing efforts to reduce Bay Area LCR.

A. 2019 Local Capacity Criteria Update

In 2019, the CAISO conducted a stakeholder process to update the LCR criteria to reflect the current mandatory reliability standards. The updated criteria are based on mandatory requirements developed by the North American Electric Reliability Corporation (NERC), the Western Electricity Coordinating Council (WECC), and the CAISO. The CAISO held open stakeholder meetings on May 30, July 18, and September 10, 2019, which resulted in overwhelming support for aligning the LCR criteria with the current mandatory standards. The Federal Energy Regulatory Commission (FERC) approved CAISO tariff changes to align the LCR criteria with mandatory standards on January 17, 2020, with no stakeholder opposition. The updated LCR criteria are closely aligned with the prior requirements, as shown by the relatively small increase in overall local capacity requirements between the 2020 and 2021. In aggregate, 2021 LCR increased only by 517 MW, or 2.2%, from 2020 requirements. At the local area and sub-area level, results are mixed. Some local areas and sub-areas have increased requirements while others have decreased requirements, with many smaller sub-areas being eliminated.

To inform the Commission's record on the 2019 Local Capacity Criteria Update stakeholder process, the CAISO includes as Attachment B its December 9, 2019 FERC transmittal letter requesting CAISO tariff amendments to implement the updated LCR criteria. The CAISO also provides FERC's letter order approving the CAISO's 2019 Local Capacity Criteria Update as Attachment C to this filing.

B. CAISO Responses to Stakeholder Comments on the Draft LCR Results

As part of its annual Local Capacity Technical Study process, the CAISO provides an opportunity for stakeholders to provide comments on its draft LCR results prior to publishing the Final Local Capacity Technical Study. The CAISO responds to each stakeholder comment in the course of the LCR process. The CAISO provides its response to stakeholder comments as Attachment D to this filing.

In addition, the Commission provided parties an opportunity to file comments on the draft LCR results in this proceeding. The CAISO notes that several parties filed comments on the draft LCR in this proceeding, but failed to provide comments in the CAISO's stakeholder process. The CAISO includes responses to these comments in Attachment D. In the future, the

CAISO encourages parties to file any comments on the draft LCR results in the CAISO stakeholder process to ensure the CAISO has adequate opportunity to fully review and respond to the comments.

C. Estimates of Minimum Battery Storage Capabilities in Local Areas

The 2021 Final Local Capacity Technical Study provides estimates for battery storage characteristics in each local area and sub-area. These estimates provide new information to guide load-serving entity procurement of battery storage resources that can effectively meet local needs. Local areas and sub-areas have limited transmission capability and therefore rely on internal resources to be available to reliably serve local load. Battery storage can help serve local load during the discharge cycle, but it will also increase local load during the charging cycle.

Due to recent procurement activities geared toward acquiring battery storage technology, the CAISO estimated the characteristics (*i.e.*, MW, MWh, and discharge duration) required from battery storage resources to seamlessly integrate in each local area and sub-area.

The CAISO expects that for batteries displacing other local resource adequacy resources, the transmission capability under the most limiting contingency and the other local capacity resources must be sufficient to recharge the batteries in anticipation of the outage continuing through the night and into the next day's peak load period.

For each local area and sub-area, the CAISO estimated the battery storage characteristics, given each area's unique load shape, constraints, and requirements, as well as the energy characteristics of other resources in the area required to meet standards. Due to this fact, the strict addition of the sub-area battery storage characteristics (MW, MWh and duration) may not closely align with the overall local area battery storage characteristic requirements (MW, MWh and duration). Local area battery storage requirements are discussed in detail in Section 2.4 of the Final Local Capacity Technical Study and the characteristics are summarized in Table 3.1-3.

D. Efforts to Reduce Bay Area LCR

Based on comments submitted by Pacific Gas & Electric Company (PG&E), the CAISO is working to determine whether upgraded equipment ratings and/or operating procedures can reduce the 2021 Bay Area overall need while maintaining consistency with the local capacity criteria. This process is ongoing and the CAISO expects to provide a status update in its comments on the Proposed Decision adopting 2021 local capacity requirements. If the updated

equipment ratings and operating procedures can effectively reduce the 2021 Bay Area overall need, the CAISO will provide an addendum to the 2021 Final Local Capacity Technical Study to update these requirements.

III. Conclusion

The CAISO recommends that the Commission establish local resource adequacy procurement requirements consistent with the levels established in the 2021 Final Local Capacity Technical Study.

Respectfully submitted,

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ATTACHMENT A

2021 Final Local Capacity Technical Study

ATTACHMENT B

December 9, 2019

Transmittal Letter – Local Capacity Technical Study Criteria Amendment
ER20-548

ATTACHMENT C

January 17, 2020

Letter Order Accepting Tariff Revisions – Local Capacity Technical Study Criteria
ER20-548

ATTACHMENT D

Comments from Parties on April 8, 2020
CAISO Draft 2021 Local Capacity Technical Study Report
R.19-11-009