

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

Order Instituting Rulemaking to Oversee the
Resource Adequacy Program, Consider
Program Refinements, and Establish Annual
Local and Flexible Procurement Obligations
for the 2019 and 2020 Compliance Years

Rulemaking 17-09-020
(Filed September 28, 2017)

**CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION
TRACK 3 PROPOSAL REPLY COMMENTS**

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I. Introduction

The California Independent System Operator Corporation (CAISO) hereby provides reply comments in response to the January 29, 2019, *Amended Scoping Memo and Ruling of Assigned Commissioner* (Scoping Memo) regarding Track 3 proposals submitted on March 4, 2019 and the Commissioner Energy Division Staff's effective load carry capability (ELCC) analysis issued in this proceeding. The CAISO appreciates this opportunity to provide reply comments.

II. Discussion

The CAISO provides reply comments on the following substantive issues:

1. Southern California Edison Company's (SCE) proposal to adopt new resource adequacy counting rules for hybrid resources;
2. Energy Division staff's ELCC proposal;
3. The CAISO's Availability-Limited Resource proposal; and
4. The Public Advocates Office's (PAO) recommendation to adjust resource adequacy penalty prices.

In addition, the CAISO provides the following procedural updates regarding its 2020 Flexible Capacity Requirements (FCR) report. Currently, the Track 3 Scoping Memo requests that the CAISO file its final 2020 Flexible Capacity Requirements (FCR) report by May 1, 2019. The Scoping Memo notes that the dates are subject to change dependent upon CAISO processes. The CAISO and the Commission's Energy Division staff have worked closely and

collaboratively on the FCR study process and have agreed that additional time is needed in the CAISO stakeholder process to review the draft results. Consequently, and as discussed with the Commission's Energy Division staff and management, the CAISO intends to complete the final 2020 FCR report and provide it to the Commission on May 15, 2019.

The CAISO understands that this impacts the remainder of the Scoping Memo schedule (*i.e.*, the May 8, 2019 and May 14, 2019 dates for comments and reply comments, respectively) and requests that the Administrative Law Judge extend the affected dates as necessary. These changes will not impact the delivery of the draft 2020 FCR report, which the CAISO will file on April 4, 2019, as requested in the original scoping memo. These changes also do not impact any of the 2020 Local Capacity Requirement (LCR) report dates. The CAISO understands that the Commission has the flexibility to issue a separate decision adopting the 2020 FCR after it issues a decision adopting the 2020 LCR.

A. The Record is Insufficient to Adopt SCE's Proposal for Counting Combined/Hybrid Resources.

In its initial comments, the CAISO recommended the Commission defer adopting SCE's proposal for new qualifying capacity counting rules for hybrid storage resources, noting that the record is insufficient to support it at this time. In opening comments, several parties supported adopting SCE's proposal, while others, such as Pacific Gas and Electric Company (PG&E), support additional workgroups to establish qualifying capacity values.¹ The CAISO agrees with the later, and recommends that the Commission and stakeholders conduct additional vetting prior to adopting new qualifying capacity counting rules for hybrid resources.

Additionally, the CAISO notes that hybrid resources will raise new operational and implementation challenges. For example, combining storage and renewable resources will have a significant effect on the CAISO's ability to accurately forecast wind and solar outputs for such hybrid resources. The CAISO currently provides forecasts for most wind and solar resources on its system. Combining storage with wind or solar resources as a single CAISO resource would degrade the CAISO's ability to accurately forecast the output for the combined resource because the storage charging and discharging cycles would not be distinguishable from the output of the underlying renewable resource. As a result, it would be more challenging to generate a reliable

¹ Comments of Pacific Gas & Electric Company (U 39 E) on Track 3 Proposals and Workshops and Energy Division's Effective Load Carrying Capacity Proposal (PG&E Opening Comments), p. 16.

forecast for the hybrid resource and the increased forecast error would degrade overall system reliability as opposed to improving it.

As a secondary issue, current resource adequacy rules do not consider how market participants or the CAISO would actually operate hybrid resources in the CAISO market. The CAISO previously noted the challenges of how to optimize multiple resources aggregated as a single CAISO resource in response to Center for Energy Efficiency and Renewable Technologies' (CEERT) local capacity proposal.² CEERT acknowledges this optimization challenge and modified its proposal in an attempt to address it. SCE's hybrid resource counting methodology does not provide details regarding how hybrid resources would be shown on resource adequacy supply plans or how the resource would be provided to the CAISO (*i.e.*, as one resource or multiple resources). If the combined resource is shown as two separate resources, the CAISO can forecast the wind or solar resources and optimally dispatch the separate storage resource to the benefit of overall system reliability. If the hybrid resource is shown as a single resource, the CAISO could not ensure the same optimization and system benefits.

In sum, the CAISO agrees that resolving hybrid resource counting rules is a high priority issue, but it is premature for the Commission to adopt a resource adequacy counting methodology for such resources at this juncture with limited input and record development.

B. Energy Division Should Provide Documented Responses to Parties' Questions and Concerns Regarding its ELCC Study Methodology Before Adopting Any New Proposal.

In comments, numerous parties, questioned the fundamental modeling inputs Energy Division used in its ELCC study methodology.³ To maintain a public and transparent process, it is critical that Energy Division respond to these requests for information and data. The CAISO requests that Energy Division provide detailed responses to all questions asked by parties prior to adopting a new ELCC methodology.

² CAISO Track 3 Proposal Comments, p. 11.

³ Comments of the Public Advocates Office on Resource Adequacy Track 3 Proposals and Energy Division's Effective Load Carrying Capability Proposal (PAO Opening Comments), p.13; Comments of the California Large Energy Consumers Association on Resource Adequacy Track 3 Proposals (CLECA Opening Comments), pp. 11-15; PG&E Opening Comments, pp. 21-22; and San Diego Gas & Electric Company (U 902 E) Opening Comments on Track 3 Proposals (SDG&E Opening Comments), p. 4.

Several parties objected to attributing the “excess ELCC” value of storage to wind and solar resources.⁴ Additionally, there is little consensus about how to best allocate “excess ELCC” across the system. These disparate opinions provide further evidence that (a) the Commission should not adopt Energy Division’s ELCC storage treatment at this time; and (b) Energy Division must provide additional detail about its ELCC modeling.

Lastly, several parties commented on how the Commission should treat behind-the-meter solar in the ELCC model and in determining resource adequacy obligations.⁵ The CAISO reiterates that Energy Division’s ELCC study methodologies should first focus on resolving behind-the-meter solar treatment before addressing the impact of solar, because these resources are much greater in magnitude than storage resources and, as a result, their ELCC treatment has a much greater impact on ELCC values overall.

C. SCE’s and the Joint Demand Response Parties’ Comments on the CAISO’s Availability-Limited Resources Proposal Misrepresent the CAISO’s Primary Concerns and the Substantive Proposal.

1. The CAISO Has Not Proposed the Commission Adopt Minimum Run-Time Duration Requirements for Availability-Limited Resources.

The CAISO notes from the outset that it has not proposed that the Commission adopt any minimum duration requirements for availability-limited resources in local capacity areas. To the contrary, the CAISO acknowledges that local capacity area requirements can be met through various resource combinations, including combined availability-limited resources that work together to satisfy the energy and capacity needs in a local area. SCE’s statement that “[t]he [CAISO’s availability-limited resource] proposal should not require the duration of availability-limited resources to be longer than four hours in order to address a deficiency with a duration of greater than four hours”⁶ is inaccurate as the CAISO has not made any such proposal. Nonetheless, the CAISO is raising the availability-limited resource concern as a critical issue the Commission must address to ensure that capacity *and energy needs* are met in local capacity

⁴ Wellhead Electric Company, Inc. Comments on Track 3 Workshop and Party Proposals, p. 4; SDG&E Opening Comments, p. 6; and Comments of Southern California Edison Company (U 338-E) on Track 3 Proposals and March 12-13, 2019 Workshop (SCE Opening Comments), pp. 13-14.

⁵ PAO Opening Comments, p. 12; CLECA Opening Comments, p. 7; SDG&E Opening Comments, p. 6; and California Wind Energy Association Comments on Track 3 Workshop and Party Proposals (CalWEA Opening Comments), at p. 3.

⁶ SCE Opening Comments, p. 12.

areas.

The CAISO is not proposing new or specific rules at this juncture, but is simply asking the Commission to acknowledge the local area capacity issue and begin vetting and developing new procurement guidelines that take into account local area load profiles and the energy-serving capabilities of local resource adequacy resources. The CAISO's Moorpark Sub-Area Local Capacity Alternative Study (Moorpark Study) shows the depth of information that can be used to guide procurement. In the Moorpark Study, the CAISO found that capacity procurement up to the minimum resource adequacy capacity requirement calculated in the CAISO's Local Capacity Technical Study would not ensure reliability if the newly procured resources were availability-limited and would only meet the Commission's currently effective four-hour minimum duration requirement.⁷ Instead, to meet local area needs, the Moorpark Study showed that SCE would need to either procure more availability-limited resources, in excess of the identified capacity need, or it would need to procure resources with run-time durations greater than four hours to serve the energy and reliability needs in the Moorpark area.⁸

Current Commission resource adequacy requirements do not guarantee that resource adequacy procurement can satisfy the energy needs in local capacity areas, and do not consider how to satisfy the energy needs in local areas. Instead the current requirements are based only on meeting a peak megawatt (MW) quantity. In other words, the resulting resource adequacy portfolio could be deficient from an energy standpoint, even though it meets the resource adequacy capacity requirement. Under the current resource adequacy rules, LSEs have no obligation to procure to meet energy duration needs. This paradigm could cause LSEs to over-rely on availability-limited resources to meet their capacity requirements, and could result in backstop procurement and additional cost. For these reasons, the CAISO believes it is timely and critical for the Commission to vet and determine new rules and requirements to ensure "energy adequacy" as part of its resource adequacy program.⁹

⁷ See CAISO Moorpark Sub-Area Local Capacity Alternative Study, August 16, 2017, http://www.caiso.com/Documents/Aug16_2017_MoorparkSub-AreaLocalCapacityRequirementStudy-PuentePowerProject_15-AFC-01.pdf.

⁸ *Id.*

⁹ As outlined in the CAISO's Resource Adequacy Enhancements stakeholder initiative, the CAISO will provide hourly load shapes and available resource data to guide resource adequacy procurement that is aligned with both capacity and energy needs. The Commission can use this information as a basis to develop future requirements for local capacity area energy needs. The CAISO's Resource Adequacy Enhancements stakeholder initiative is

2. ***The CAISO Has Not Proposed Specific Availability-Limited Procurement Requirements in this Proceeding.***

The Joint DR Parties state “[t]he Commission should not adopt CAISO’s proposal to add an energy component to the RA requirement, or further restrict availability-limited resources from eligibility to meet the local RA requirement.”¹⁰ The CAISO is not requesting the Commission adopt specific rules or requirements for availability-limited resources at this time. However, the CAISO is alerting the Commission to the growing concern and need to take action soon to address this issue. As the next step in this process, the CAISO will test the local resource adequacy portfolios to ensure they meet applicable reliability criteria during identified contingency events. This means that local resource adequacy portfolios must ensure sufficient capacity and energy. The CAISO will alert stakeholders if there is a deficiency in the ability of a local resource adequacy portfolio to serve load. Taking such a step is prudent and reflects good utility practice as the Commission considers modifications to its resource adequacy program to ensure reliability given the transforming grid.

The Joint DR Parties suggest that the Commission’s existing Maximum Cumulative Capacity (MCC) construct is sufficient to minimize reliance on availability-limited resources. Specifically, the Joint DR parties state “[t]he Commission currently limits ‘availability-limited’ resources through the [MCC] buckets. CAISO has not indicated why this limitation is inadequate.”¹¹ Put simply, the MCC construct puts no limit on the amount of demand response used to meet resource adequacy requirements and it provides no specific guidance for local area procurement.

The Commission’s own statements regarding the MCC bucket construct provides insight as to why the MCC bucket limitation is inadequate. First, the Commission’s 2019 RA Guide notes “[e]nergy Division intended to allow *all current DR programs to continue to count for [resource adequacy]*, even within the new DR bucket construct. For the 2019 RA compliance year, *there is no MCC percentage limit on the DR bucket.*”¹² (emphasis added).

available at: <http://www.caiso.com/informed/Pages/StakeholderProcesses/ResourceAdequacyEnhancements.aspx>.

¹⁰ Comments of CPower, Enel X North America, Inc., and EnergyHub (Joint DR Parties) on Track 3 Proposals and Workshop and Staff ELCC Proposal (Joint DR Parties Opening Comments), p. 4.

¹¹ *Id.*, p. 8.

¹² 2019 Filing Guide for System, Local and Flexible Resource Adequacy (RA) Compliance Filings, p. 22.

Second, Energy Division proposed eliminating the MCC buckets in 2017. Energy Division stated “[t]he original purpose of the MCC buckets was to ensure that load serving entities (LSEs) did not rely too heavily on resources with limited availability. In practice, however, the MCC buckets, as configured, do not prevent overreliance on use limited resource because they only apply to contractual provisions, not physical use limitations.”¹³

Lastly, the MCC buckets are not enforced in individual local capacity areas and sub-areas. The minimum duration requirements are most acute in local capacity areas that rely on transmission imports to maintain reliability. The amount and duration of availability-limited resources that can meet reliability needs varies in each local area. The MCC buckets are only enforced at the system level, and therefore do not inform procurement guidance for local areas.

It is clear from Energy Division’s own statements that the MCC buckets are not a solution to minimize over-reliance on use and availability-limited resources. Contrary to the Joint DR Parties perspective, the Commission must timely take up the issue to mitigate the potential for over-reliance on availability-limited resources and vet new rules and requirements to incorporate “energy adequacy” into its resource adequacy program.

D. The CAISO Is Developing Operational Solutions to Enable Most Slow Demand Response Resources to Contribute Toward Local Reliability Needs.

The Joint DR Parties state “[t]he Commission should not adopt the CAISO’s 20-minute response time proposal for availability limited resources to qualify as a local capacity requirement at this time.”¹⁴ To clarify, the CAISO is *not* proposing a strict 20-minute response time for demand response to qualify as local resource adequacy capacity. As the Commission is aware, the CAISO has been developing a new operational procedure to enable slow response demand response (*i.e.*, those resources that cannot respond with sufficient speed post-contingency to mitigate a local area reliability issues) to satisfy the essential and unique reliability requirements of each local capacity area. More specifically, in the CAISO’s resource adequacy enhancements initiative, the CAISO is outlining how the CAISO can operationalize slow response demand response resources through pre-contingency dispatch to help satisfy local

¹³ See Energy Division Staff Proposal: Elimination of MCC Buckets, Feb 7, 2017, available at: <http://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=6442452520>.

¹⁴ Joint DR Parties Opening Comments, p. 4.

capacity area needs.¹⁵

Additionally, the CAISO has developed new bidding options that will eventually allow slow response demand response resources that wish to qualify as local resource adequacy capacity to be dispatchable with a 52.5 minute advance notification in the CAISO's Hour-Ahead Scheduling Process or 22.5 minute notification in the CAISO's Fifteen Minute Market.¹⁶ These new bidding options will give these slow responding demand response resources reasonable notification time in advance of when they are actually needed, while allowing the CAISO to dispatch closer to real-time when actual operational needs are clearer. Having slow response demand response resources available closer to real-time will help minimize pre-contingency dispatches, thereby maximizing the use of these availability-limited resources. In their comments, "[t]he Joint DR Parties agree that the use of the intertie scheduling option makes the response time more implementable."¹⁷

The CAISO is finalizing its method to enable slow response demand response to be dispatched pre-contingency to address local capacity area needs. The CAISO is not requesting the Commission adopt specific resource adequacy rules and requirements for slow response demand response to qualify as local resource adequacy capacity at this time, but will continue to collaborate with the Commission on this issue.

E. The Commission should align waiver and penalty prices as recommended by the Public Advocates Office

The PAO recommends that if the Commission adopts new a waiver price for local resource adequacy, it should also modify the penalty price to mirror that waiver price. The CAISO supports this recommendation. Aligning both the penalty price and the waiver price will ensure consistent incentives when a resource is procuring resource adequacy. For example, if the penalty price is lower than the waiver price, an LSE may not attempt to procure up to the waiver price, instead, the LSE may simply accept the penalty price when the waiver is denied.

¹⁵ The CAISO's Resource Adequacy Enhancements stakeholder initiative is available at:

<http://www.caiso.com/informed/Pages/StakeholderProcesses/ResourceAdequacyEnhancements.aspx>.

¹⁶ See the CAISO's Energy Storage and Distributed Energy Resources, Phase 4, stakeholder initiative, available at: http://www.caiso.com/informed/Pages/StakeholderProcesses/EnergyStorage_DistributedEnergyResources.aspx.

¹⁷ Joint DR Parties Opening Comments, p. 4.

III. Conclusion

The CAISO appreciates the opportunity to provide reply comments regarding the Track 3 proposal and ELCC and looks forward to working with the Commission to further develop and refine Track 3 of the Resource Adequacy Proceeding.

Respectfully submitted,

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