

**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 2016 and 2017 Compliance Years

Rulemaking 14-10-010
(Filed October 16, 2014)

**CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION
OPENING COMMENTS ON PROPOSED DECISION**

I. Introduction

Pursuant to Rule 14.3 of the Commission’s Rules of Practice and Procedure, the California Independent System Operator Corporation (CAISO) submits these comments on the *Proposed Decision Adopting Local and Flexible Capacity Obligations for 2018 and Refining the Resource Adequacy Program* (Proposed Decision). The Proposed Decision adopts the CAISO’s annual local capacity requirement (LCR) and Flexible Capacity Requirement (FCR) and, as a result, is a reasonable means of ensuring resource adequacy for 2018. The Proposed Decision also refines the resource adequacy program by adopting an effective load carrying capacity (ELCC) methodology to set qualifying capacity values for wind and solar resources. The CAISO agrees with the Commission’s efforts to move toward an ELCC methodology, but does not believe that a transition period is warranted and cautions that the Qualifying Capacity values derived from the ELCC will increase local capacity requirements in the combined Imperial Valley/San Diego area.

II. Discussion

A. 2018 LCR and FCR

The Proposed Decision adopts the LCR and FCR establishing local and flexible resource adequacy requirements, respectively. The CAISO agrees with this determination and notes that very few parties raised substantive issues regarding the LCR and FCR studies, despite the fact that there were multiple opportunities to comment on the studies in both the CAISO’s stakeholder processes and this proceeding.

The Proposed Decision raises concerns regarding the timing of the CAISO’s LCR and FCR studies. The CAISO agrees that the current schedule has created concerns that require the CAISO, the Commission, and the California Energy Commission to address in a coordinated and transparent manner. In developing the 2018 LCR study, the CAISO responded to similar concerns from

Commission's Energy Division staff regarding timing. In response to those concerns the CAISO noted that

the resource adequacy process was originally established in 2005-06 timeframe. At that time a common process timeline was established between the [CA]ISO, CEC and [Commission] on a common process timeline, which the [CA]ISO enshrined – in varying degrees of detail – in the CAISO's tariff and relevant business practice manual.¹

Prior to Commission Decision (D.) 16-06-045, the CAISO aimed to complete its LCR study by May 1 of each year, which is a full month in advance of the latest date required in that schedule.² The CAISO acknowledged the Commission's request in D.16-06-045 and looked to provide the 2018 LCR and FCR studies by April 15, subject to receiving the necessary study inputs in a timely manner. Unfortunately, the CAISO did not receive the study inputs in time to complete the study by April 15. The 2018 FCR study timing suffered from similar issues. The FCR study process assumes that study inputs will be available in early January, but the necessary inputs were not available until late March.

The CAISO is open to revisiting the framework for developing the LCR and FCR studies, but recognizes that other state agencies must be involved to ensure that study inputs are developed in a timely manner. Without timely inputs, the CAISO cannot expedite its study timeline. Given these circumstances, the CAISO requests that the Commission remove the language on page 14 of the Proposed Decision regarding the CAISO's possible "refusal" to meet the Commission's schedule for completion of the LCR and FCR studies.

B. Timing of Capacity Lists

The Proposed Decision encourages the Commission's Energy Division and the CAISO to work cooperatively to provide timely Qualifying Capacity, Net Qualifying Capacity, and Effective Flexible Capacity lists. The CAISO supports a cooperative effort in this matter. The CAISO Business Practice Manuals indicate that the CAISO will issue draft Net Qualifying Capacity and Effective Flexible Capacity lists by the second week in August, assuming the CAISO receives the Qualifying Capacity list by June 1 and can complete its deliverability studies in a timely manner. The CAISO currently holds contracts with third parties that are structured to enable the CAISO to complete deliverability studies by

¹ See CAISO Responses on Draft 2018 and 2022 Local Capacity Technical Study Stakeholder Meeting, p. 2 (<http://www.aiso.com/Documents/CommentMatrix-ISOResponsesonDraft2018and2022LocalCapacityTechnicalStudyStakeholderMeeting-March92017.pdf>).

² See CAISO Reliability Requirements Business Practice Manual, p. 188 (CAISO to publish final study report no later than end of June) (https://bpmcm.aiso.com/BPM%20Document%20Library/Reliability%20Requirements/Reliability%20Requirements%20BPM%20Version_32_redline.pdf).

the end of July. These deliverability studies must then be organized and reviewed by the CAISO to develop the NQC and EFC lists. As a result of this timeline, the CAISO cannot provide NQC and EFC lists by July 1 as requested in the Proposed Decision. However, the CAISO commits to working with the Energy Division to meet dates specified in the CAISO's Business Practice Manual and to explore efficiencies where practical.

C. Multi-year Resource Adequacy

The CAISO continues to support the Independent Energy Producers (IEP) Association's request to establish multi-year resource adequacy reporting requirements. Energy Division staff's periodic reports on the multi-year contracted capacity provide a unique window into forward contracting needs. This information can be helpful in identifying potential future reliability issues before they become acute. In its comments on the Proposed Decision, IEP proposes to establish a new phase of this rulemaking—to conclude by December 31, 2017—to consider adopting a multi-year resource adequacy requirement for Commission jurisdictional load-serving entities. The CAISO supports IEP's proposal to begin a targeted, short-term proceeding to consider adopting a multi-year resource adequacy requirement. The CAISO believes a proceeding that is limited in both scope and time may help crystallize the relevant issues while not distracting parties from other resource adequacy issues.

D. Effective Load Carrying Capability

- i. The Commission Should Adopt the ELCC Methodology That Most Accurately Values Resource Adequacy Resources, Regardless of the Impact on NQC values.*

The Commission has made considerable efforts over the past few years to develop an ELCC methodology that appropriately sets resource adequacy values for wind and solar resources. The CAISO agrees that the ELCC methodologies put forth by Energy Division staff (*i.e.*, Energy Division's primary proposal) and Calpine Corporation (Calpine) are robust, well-tested, more accurate than the existing counting methodology, have significant support, and have been validated. Accordingly, the Commission should use resource adequacy values based one of these ELCC methodologies going forward. However, the Proposed Decision adopts a methodology that likely overstates the ELCC of solar resources. In making this determination, the Proposed Decision states that a full transition to an ELCC-based qualifying capacity value for solar "could result in an overly abrupt and significant change in the [resource adequacy] value of solar resources in particular, and would be unnecessarily disruptive."³

³ Proposed Decision, p. 21.

The potential that transitioning to ELCC could abruptly and significantly change resource adequacy values is not a legitimate reason to adopt an inaccurate counting methodology or require a transition period. It demonstrates a serious disconnect between the qualifying capacity values under the current exceedance methodology and their actual resource adequacy values. Continuing this disconnect by adopting Energy Division's second proposal or a transition period will only jeopardize system reliability and force the CAISO to rely on backstop capacity procurement under its capacity procurement mechanism (CPM). As a result, the CAISO recommends that the Commission adopt either the Energy Division primary proposal or Calpine's proposal without a transition period.

ii. *The Commission Should Be Aware of ELCC Impacts on Local Resource Adequacy Requirements.*

The ELCC methodology impacts local resource adequacy requirements, particularly in the Imperial Valley/San Diego local area. The CAISO performed its 2018 Local Capacity Technical Analysis based on the exceedance methodology for Qualifying Capacity. The ELCC methodology produces lower Qualifying Capacity values for solar resources in the Imperial Valley area in particular, directly increasing the need for other resources to meet local capacity requirements in the combined Imperial Valley/San Diego area. This shift to other resources must be filled by less effective San Diego area resources (because additional resources in Imperial Valley are not available). As demonstrated in the CAISO's solar sensitivity study the CAISO provided in the Local Capacity Technical Analysis, because less electrically effective resources in the San Diego area will be required to mitigate the critical constraint, greater overall capacity will be necessary to meet Imperial Valley/San Diego local capacity requirements.

The CAISO's solar sensitivity study provides indicative results. In the solar sensitivity study, Imperial Valley solar dispatch was reduced from its exceedance methodology qualifying value (647.9 MW) down to zero. As a result, less effective gas-fired generation was dispatched to meet local capacity requirements. Because the gas-fired generation was less effective at mitigating the critical constraint, more than 647.9 MW of generation was required to meet local capacity requirements. In the solar sensitivity study, a change in dispatch required an incremental 110 MW increase in local capacity requirement in the combined Imperial Valley/San Diego area and a 79 MW increase in the LA basin area.

Because the ELCC results were not known at the time the CAISO conducted the 2018 Local Capacity Technical Analysis, the CAISO could not study the specific methodologies and ELCC qualifying capacity numbers to determine the precise impacts on local capacity requirements, but the

CAISO expects that the reduction in Qualifying Capacity values for solar resources in Imperial Valley will have an impact that is similar in nature to the CAISO's solar sensitivity study. These impacts will be assessed when the CAISO validates load-serving entity resource adequacy showings in the fall, but it would be more efficient to study the impacts in the Local Capacity Technical Analysis. Going forward, the Commission should clarify which ELCC methodology it intends to use so the CAISO can incorporate that methodology into its Local Capacity Technical Analysis and determine the quantity of capacity necessary to meet local area reliability needs.

iii. The Commission Should Adopt an "After the Showing" Assessment of Resource Adequacy Resources.

The CAISO considers adopting an ELCC methodology to be a positive step towards correctly valuing wind and solar resources, but it remains concerned at the lack of an "after the showing" assessment to determine if the actual resource adequacy showings achieve the same loss of load probability as the ELCC study. Although some parties opposed the CAISO's request for an after-the-fact assessment, the CAISO believes failing to do so is inconsistent with the fundamental theoretical underpinnings of an ELCC study. An ELCC study relies on a specific loss of load probability, which in turn is determined based on the entire portfolio of resources modeled. For example, wind and solar resources could jointly provide significant system reliability benefits. However, those benefits, including any diversity benefits, can only be achieved if both resources are shown as resource adequacy resources. A similar argument can be made for thermal resources. For example, if a fast ramping resource is modeled as part of the ELCC study, but not shown as a resource adequacy resource, system reliability may be compromised. Therefore, the CAISO recommends that the Commission direct Energy Division staff to assess actual resource showings to determine the loss of load probability of the procured resources.

E. Other Issues

The Proposed Decision also addresses eight other issues. The Proposed Decision provides specific direction on four of these issues (Fast Dispatch of Slow Response Resources; Clarify the Definition of "Dispatchable;" Maximum Cumulative Capacity (MCC) Buckets; and Local Resource Counting Issues) and directs the formation of four working groups to address the remaining four issues (Removal of the Path 26 Constraint; Weather Sensitive Demand Response; Existing Demand Side Load Impacts; and Seasonal Local Resource Adequacy). The CAISO supports the Proposed Decision's determination to defer creating new MCC buckets for two-hour capacity and maintain the existing MCC buckets. With respect to Local Resource Counting Issues, the Proposed Decision states that "Energy

Division will make clear that resources physically located in an identified locally constrained area count as local [resource adequacy] capacity.”⁴ The CAISO takes no position on this item at this time. The CAISO supports the joint Commission-CAISO workshop to further define the term “dispatchable.” Finally, the CAISO reiterates its commitment to resolving the outstanding issues regarding Fast Dispatch of Slow Response Resources.

The CAISO believes the Commission should defer the identified working groups subject to a complete review of the resource adequacy program. The CAISO understands the potential benefits of utilizing working groups to resolve the four remaining issues. However, the CAISO is concerned that the formation of four working groups will only serve to perpetuate a cycle that significantly impairs the ability of the Commission and parties to undertake a comprehensive and probing review of the existing resource adequacy structure, a necessary undertaking given the rapidly transforming grid. The current process for resource adequacy proceedings allows only six to seven months for parties to propose and for the Commission to consider changes to the resource adequacy program. As a result, the process typically focuses only on and produces only incremental solutions that generally complicate resource adequacy procurement. The process does not allow for more holistic revisions to the basic underlying framework. For example, adoption of an ELCC counting methodology shows that the previous resource adequacy counting rules for wind and solar resources did not reflect their actual contribution to system reliability. However, even the ELCC methodology may not capture the benefits that wind and solar resources could have on a specific local area.

Historically, the resource adequacy structure has excelled at providing adequate capacity to ensure the CAISO can reliably operate the grid. However, since the resource adequacy program was originally adopted, California’s energy landscape has undergone fundamental changes. Evidence of this change is reflected in renewable portfolio standard targets being established and then increased to 50% (and potentially beyond), the significant increase in variable energy and energy limited resources, growth of community choice aggregation, and numerous other changes. The CAISO believes it is time for a comprehensive assessment of the resource adequacy structure to determine its durability and need for redesign. As such, the CAISO recommends that Commission modify the Proposed Decision to (1) require a comprehensive review of the resource adequacy program, and (2) only after conducting that review determine what working groups are needed.

⁴ Proposed Decision, p. 28.

To facilitate this review, the CAISO recommends the Commission use the next resource adequacy cycle solely for administrative purposes and limit scope to adopting the LCR and FCR allocations along with any updates that have been pre-established in either this or previous resource adequacy decisions. This would enable parties to focus their efforts on the processes proposed by IEP for multiyear resource and undertake a top-to-bottom review of the future of resource adequacy and its alignment with IRP. This comprehensive review of resource adequacy should commence immediately and not wait for the annual resource adequacy process to begin to ensure sufficient time is dedicated to this effort.

Respectfully submitted,

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