

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

Order Instituting Rulemaking to Integrate
and Refine Procurement Policies and
Consider Long-Term Procurement Plans

Rulemaking 13-12-010
Filed December 19, 2013

**REPLY COMMENTS OF THE CALIFORNIA INDEPENDENT SYSTEM
OPERATOR CORPORATION TO THE ADMINISTRATIVE LAW JUDGE'S
RULING SEEKING COMMENT ON DECEMBER 9, 2014 PROPOSAL**

Pursuant to the Administrative Law Judge's (ALJ's) December 16, 2014 Ruling Seeking Comment on the nine-point plan proposed at the December 9, 2014 status conference, the California Independent System Operator Corporation (CAISO) hereby files the following reply comments.

I. Introduction

Consistent with the ALJ's nine-point plan, the CAISO supports using Phase 1B of this proceeding to refine the deterministic and stochastic models and redefine procurement needs in the context of over-generation and capacity shortfalls. To those ends, the CAISO responds to the following issues identified in other parties' opening comments filed on January 12, 2015:

- The need for and purpose of additional studies in Phase 1B of this proceeding. In particular, the need for studies with no renewable curtailment as proposed in the CAISO's November 12, 2014 reply to the October 27, 2014 motion of the Independent Energy Producers Association (IEP);
- The need to address over-generation in Phase 1B of this proceeding;
- Whether to address southern California local capacity requirements (LCR) in this proceeding;
- and
- The prioritization of modeling refinement versus policy guidance in Phase 1B.

The CAISO believes these issues must be addressed in order to efficiently meet goals set forth in the ALJ's nine-point plan.

II. Discussion

A. Need and Purpose for Additional Studies

The CAISO is preparing to conduct additional deterministic studies with no renewable curtailment using the existing Trajectory and 40% RPS scenarios in order to enhance its own understanding of potential over-generation outcomes in 2024. The CAISO will be ready to present and file the results in Phase 1B of this proceeding, if requested. Throughout this proceeding, the CAISO has asserted that additional deterministic studies with no renewable curtailment must be conducted to determine whether a need for flexible resources exists.¹ Since those filings, the Governor announced a goal to produce 50% of electricity generation from renewable resources. This goal places an even greater importance on identifying and understanding the impacts that increased renewable generation will have on the CAISO's ability to reliably manage the transmission grid.

In light of this announcement the CAISO must conduct the additional deterministic studies to identify the other bookend on renewable generation curtailment, which are now a more likely outcome. In light of this goal, it is even more crucial that these studies also be submitted as evidence in Phase 1B of this proceeding to inform the Commission's efforts to refine modeling and provide policy guidance. The studies will illustrate the effectiveness of the deterministic modeling in isolating the impact of one particular assumption on system reliability—in this case, the expected level of renewable curtailment.² The expected increase in the presence of intermittent supply heightens the need to determine the nature and extent of need for flexible resources to address over-generation and ramping needs. The results of the CAISO studies will inform Commission policy guidance regarding solutions to over-generation concerns. The CAISO expects that the additional studies will inform the Commission of a need determination and characteristics of any need.

¹ See Phase 1.A. Direct Testimony of Dr. Karl Meeusen on behalf of the CAISO at p. 3; Phase 1.A. Stochastic Testimony of Dr. Karl Meeusen on behalf of the CAISO at p. 8; Response of the CAISO to the Motion of IEP to Modify the ALJ's Ruling and Require Additional Phase 1A Studies at p. 2.

² As noted in Office of Ratepayer Advocates' (ORA's) opening comments, system flexibility needs may be better identified by deterministic modeling. ORA Comments on ALJ's Ruling Seeking Comment on December 9, 2014 Proposal at p. 1.

Some parties suggest that solutions to over-generation should be investigated without conducting the additional deterministic studies limiting renewable curtailment.³ Over-generation presents a host of potential operational challenges that include an inability to quickly ramp up resources to meet load in the evening, an inability to ramp down resources quickly enough to offset the increases in renewable generation in the morning, or a simple inability to balance high renewable generation with low load in the midday period. The CAISO believes the additional deterministic studies are necessary to determine the most effective and least cost solutions. The studies will provide better insight into the specific nature of the problem and the potential solutions.

In order to isolate the effects of varying levels of renewable curtailment on over-generation, the additional deterministic studies will be based on the same study assumptions and methodology as the CAISO's deterministic studies served on August 13, 2014. Using the same methodology and assumptions for the new studies will preserve comparability with the initial deterministic studies in this proceeding. The CAISO notes that these studies will rely upon the assumptions for the Trajectory and 40% RPS scenarios as set forth in the 2014 Assigned Commissioner Ruling (ACR) on Assumptions & Scenarios.⁴

B. Need to Address Over-Generation in Phase 1B

The CAISO agrees with those parties asserting that issue of over-generation must be addressed in Phase 1B of this proceeding.⁵ As the CAISO stated in its opening comments, over-generation is unique in the context of long-term procurement planning and will require both Commission policy guidance and model refinements to be effectively addressed. The Commission should take steps in this proceeding to begin resolving those long-term planning challenges. For example, the Commission should address the acceptable level of renewable curtailment to be used to reduce over-generation without compromising the state's renewable policy goals or the provisions of

³ Comments of the Natural Resources Defense Council (NRDC) on ALJ's December 9, 2014 Proposal in the 2014 Long Term Procurement Plan (LTPP) at p. 5.

⁴ See the Assigned Commissioner's Ruling Technical Updates to Planning Assumptions and Scenarios for Use in the 2014 Long Term Procurement Plan and 2014-2014 CAISO TPP issued May 14, 2014.

⁵ Comments of Pacific Gas & Electric Company (PG&E) (U 39 E) on Proposed Nine-Point Plan at p 2; Comments of NRDC at pp. 4-5.

existing power purchase agreements. Likewise, the Commission should consider whether future power purchase agreements should be modified to provide additional flexibility during over-generation events.

The CAISO agrees with NRDC's statement that the fact that over-generation and renewable curtailment are occurring now is a clear signal that swift action must be taken to address the much more significant over-generation events identified in all modeling conducted in this proceeding.⁶ Curtailment is only one potential solution to over-generation, one that has potentially significant drawbacks from operational, cost-effectiveness and policy perspectives. However, a failure to proactively address over-generation could result in renewable curtailment effectively becoming the default solution in real time operations. Instead of allowing inaction to dictate future response to over-generation, Phase 1B of this proceeding should be used to begin the process of identifying and authorizing cost-effective and electrically efficient solutions.

C. Addressing Southern California LCR in this Proceeding

As stated at the December 9, 2014 status conference, the CAISO is currently in the process of studying southern California LCR needs in its 2014-2015 transmission planning process. Several parties have requested that the CAISO provide an update regarding the results of these studies in this proceeding.⁷ The CAISO does not oppose providing this update and proposes to file a letter with the Commission summarizing the results of the southern California LCR study within two weeks after CAISO Board of Governor approval of the 2014-2015 transmission plan.⁸

The CAISO notes that the LCR analyses do not determine the needs for resource flexibility. Rather, the LCR analyses are focused on capacity needs necessary to meet transmission planning contingency criteria. Preliminary results indicate that there is no additional LCR need in the southern California area if the Track 1 and Track 4 resources approved in the 2012 long-term procurement plan are fully procured and additional

⁶ Comments of NRDC at p. 4.

⁷ See Opening Comments of Southern California Edison Company (SCE) (U 338-E) on Nine-Point Implementation Plan at p. 8; Comments of Pacific Gas & Electric Company (PG&E) (U 39 E) on Proposed Nine-Point Plan at pp. 6-7.

⁸ The 2015-2015 CAISO transmission plan is currently scheduled for consideration at the March 26-27 Board of Governors meeting.

achievable energy efficiency materializes as forecast.⁹ However, in the event LCR needs are identified, procurement for these LCR capacity needs should be designed to meet the potential system flexibility needs that are likely based on the studies conducted to date. In other words, procurement for LCR should, to the extent possible, simultaneously address both system flexibility and LCR capacity needs.¹⁰

D. Prioritizing Modeling Refinements versus Policy Guidance

The CAISO agrees with those parties that emphasize the importance of model refinements in this proceeding.¹¹ Developing models and assumptions that the Commission can rely upon to make need determinations is of paramount importance in making effective long-term planning decisions. The CAISO agrees with NRG's statement that the process of refining and vetting the models should be expedited to the extent possible and that the tools developed should be used to assess need for additional procurement in 2024.¹² The Commission should proceed to make a finding of need or no-need in Phase 1B after the presentation of the additional deterministic studies referenced in these comments and the refinement of the modeling and assumptions.

The CAISO notes, however, that certain policy guidance may be needed in the development of input assumptions, most notably, the appropriate level of renewable curtailment to address over-generation. Some level of economic renewable curtailment is likely acceptable, even in light of the contractual restrictions in renewable power purchase agreements and California's clean energy goals. Setting an acceptable level of renewable curtailment is a policy decision which also has an important input into the modeling of flexibility needs. The Commission should endeavor to issue policy guidance in this proceeding to the extent it is necessary to develop planning assumptions.

⁹ See the PowerPoint presentation from the CAISO's November 19-20 Stakeholder Meeting http://www.caiso.com/Documents/Day1-November19-20_2014StakeholderMeeting.pdf, p. 118-136.

¹⁰ If flexibility needs are established, the long-term procurement planning process should also consider the extent to which Track 1 and Track 4 resources may address those needs.

¹¹ See *generally* the opening comments filed by the California Large Energy Consumers Association, IEP, Large-Scale Solar Association, NRG Energy, Inc. (NRG), ORA, PG&E, SCE and The Utility Ratepayer Network.

¹² Comments of NRG on December 9, 2014 Proposed Nine-Point Plant at p. 2.

III. Conclusion

The CAISO continues to support the nine-point plan put forth by the ALJ at the December 9, 2014 status conference. The CAISO will conduct the additional deterministic studies without renewable curtailment as soon as possible and will present the results in this proceeding at the request of the ALJ.

Respectfully submitted,

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