

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

Order Instituting Investigation pursuant to Senate Bill 380 to determine the feasibility of minimizing or eliminating the use of the Aliso Canyon natural gas storage facility located in the County of Los Angeles while still maintaining energy and electric reliability for the region.

Investigation 17-02-002
(Filed February 9, 2017)

**REPLY COMMENTS OF THE CALIFORNIA INDEPENDENT SYSTEM
OPERATOR CORPORATION**

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Pursuant to the schedule set forth in the Administrative Law Judge’s September 14, 2018 Ruling, the California Independent System Operator Corporation (CAISO) provides reply comments on Commission’s Scenarios Framework: I.17-02-002 (Scenarios Framework) developed by Energy Division staff. The Scenarios Framework will inform this investigation, and will help to determine whether use of the Aliso Canyon natural gas storage facility (Aliso) can be minimized or eliminated while maintaining energy and electric reliability in the region.

I. Discussion

In its opening comments, Southern California Gas Corporation (SoCalGas) recommends that Phase 2 “involve further explanation and efforts to maximize transparency of the CAISO and LADWP Power flow modeling.”¹ In these comments, the CAISO clarifies that it intends to use its existing Local Capacity Technical Study (LCT Study) process to determine minimum electric generation levels in its Southern California balancing area. The CAISO conducts the LCT Study on an annual basis and the Commission uses the results of the study set local resource adequacy requirements. The study assumptions are vetted through a CAISO stakeholder effort and the reliability levels are set based on transparent North American Electric Reliability Corporation (NERC) and CAISO-specific reliability criteria. In the subsections below, the CAISO explains the LCT Study results and process in more detail.

A. Minimum Generation Levels

SoCalGas specifically requests that the minimum electric generation requirement “be sufficient for planning purposes and able to be used to assess the reliability of the system –

¹ SoCalGas Opening Comments, p. 31.

including, among other considerations, extreme weather events and the potential for reduced import capabilities.”² The CAISO agrees that the minimum generation requirement should be sufficient for planning purposes. The CAISO will rely on its existing LCT Study process to develop minimum generation requirements for gas-fired facilities in its balancing area. To plan for grid reliability, the LCT Study determines the minimum necessary capacity in each transmission-constrained “load pocket” or Local Capacity Area. For purposes of providing inputs into the Aliso analysis, the CAISO will provide minimum generation requirements for the overall LA Basin and San Diego-Imperial Valley Local Capacity Areas, as Aliso’s reduced operability impacts generation requirements in both Local Capacity Areas. The minimum generation requirements determined from the LCT Study will be provided to the Commission as inputs to the production cost model.

The CAISO notes that its LCT Study identifies local capacity requirements that are necessary under stressed system conditions and under multiple contingency scenarios. Specifically, the LCT Study analyzes generation needs under 1-in-10 year peak load conditions. The LCT Study then identifies the necessary generation to maintain local reliability in the event of most critical contingency event (*i.e.*, the loss of transmission lines, substations, or generation facilities). This analysis sets a baseline minimum generation level that ensures reliability while allowing for planned and unplanned transmission system outages.

B. Reliability Standards

SoCalGas states that “for a scenario to be acceptable, it appears that the power flow model must be capable of meeting NERC reliability standards, but specifics are not provided. The Commission should clarify what NERC reliability standards must be achieved.”³

The CAISO’s LCT Study is specifically designed to meet NERC and CAISO planning standards. The CAISO is under both statutory and regulatory obligations to ensure efficient use and reliable operation of the transmission grid consistent with achievement of the NERC Planning Standards.⁴ The CAISO tariff and FERC-approved Transmission Control Agreement also require the CAISO to comply with all applicable reliability criteria, which include the NERC Planning Standards, as well as Local Reliability Criteria. The Local Reliability Criteria

² SoCalGas opening comments, p. 32.

³ SoCalGas opening comments, p. 32.

⁴ Pub. Utilities Code § 345

reflects the criteria unique to the transmission systems of Participating Transmission Owners (PTOs) that have given the CAISO operational control over their transmission facilities. Specifically, NERC Standard TPL-001-4, Transmission System Planning Performance Requirements,⁵ establishes transmission system planning performance requirements. This mandatory planning standard requires the CAISO study specific contingency events (*i.e.*, the loss of transmission system elements) and plan the transmission system to provide specified levels of reliability (*i.e.*, to avoid non-consequential loss of load) under such contingency events.

Pursuant to its tariff authority, the CAISO, in consultation with the PTOs and other stakeholders, has adopted CAISO Grid Planning Standards intended to, among other things, interpret NERC Planning Standards and identify circumstances in which the CAISO should apply standards more stringent than those adopted by NERC. The full CAISO Planning Standards can be accessed at <http://www.aiso.com/Documents/ISOPlanningStandards-September62018.pdf>. CAISO Tariff Section 40.3.1.1 provides additional local capacity technical study criteria.⁶

C. Assumptions

In its opening comments, SoCalGas requests more detail regarding the assumptions that will be used in the power flow modeling. Specifically, SoCalGas requests that the Commission provide an explanation for the databases and assumptions used as part of the power flow models.⁷ As the CAISO explained above, the CAISO's LCT Study will be used to determine the minimum electric generation requirement for facilities in the CAISO balancing authority area. The LCT Study assumptions are vetted in an open stakeholder process and are well documented on the CAISO public website. The Commission and parties can access the CAISO's most recent LCT Study assumptions on the CAISO's website.⁸ The LCT Study assumptions for the 2020

⁵ NERC Standard TPL-001-4 can be found at <https://www.nerc.com/layouts/15/PrintStandard.aspx?standardnumber=TPL-001-4&title=Transmission%20System%20Planning%20Performance%20Requirements&jurisdiction=United%20States>

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http://www.aiso.com/Documents/Section40_ResourceAdequacyDemonstration_SCs_CAISOBAA_asof_May1_2018.pdf

⁷ SoCalGas Opening Comments, p. 32.

⁸ 2019 LCT Study assumptions can be found at: <http://www.aiso.com/Documents/2019LocalCapacityRequirementsFinalStudyManualdocx.pdf>; Long-term study assumptions can be found at: <http://www.aiso.com/Documents/Final2023Long-TermLocalCapacityTechnicalReport.pdf>.

Local Capacity Technical Analysis will be vetted in the fourth quarter of 2018 and will available before year end.

D. Modeling Responsibility and Coordination with LADWP

Finally, SoCalGas notes that, “the Scenarios Framework does not include sufficient details on how the power flow modeling will occur. Whether the modeling will be done independently or in coordination – either between LADWP and CAISO or between LADWP, CAISO, and the Commission.”⁹ The CAISO will determine minimum generation requirements only for those Local Capacity Areas that are within the CAISO’s balancing authority area. Specifically, the CAISO will provide analysis for the Los Angeles Basin and San Diego-Imperial Valley Local Capacity Areas. The CAISO does not have the ability nor the authority to determine the LADWP’s minimum generation requirements within LADWP balancing authority area.

II. Conclusion

The CAISO appreciates this opportunity to comment on the Scenarios Framework and looks forward to cooperating with the Commission going forward in this proceeding.

Respectfully submitted,

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