169 FERC ¶ 61,253
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Neil Chatterjee, Chairman;
Richard Glick and Bernard L. McNamee.

California Independent System Operator Corporation Docket No. ER20-273-000

ORDER ACCEPTING TARIFF REVISIONS

(Issued December 30, 2019)

1. On October 31, 2019, the California Independent System Operator Corporation (CAISO) filed, pursuant to Section 205 of the Federal Power Act (FPA),[1] tariff revisions to make permanent three previously accepted provisions intended to address the effects of natural gas system limitations on CAISO's system and market operations related to the limited operability of the Aliso Canyon natural gas storage facility (Aliso Canyon).[2] In this order, we accept CAISO's proposed tariff revisions, effective December 31, 2019, as requested.

I. Background

2. In October 2015, Aliso Canyon experienced a large natural gas leak. The facility has been a key part of the gas system serving customers in the Los Angeles basin and San Diego, California, including many gas-fired power plants. As a result of this leak, Aliso Canyon was rendered unavailable for gas storage and balancing purposes. Service at Aliso Canyon has since been partially restored; however, it is still operating only at approximately 40 percent capacity and it is expected that the Southern California natural gas system will remain constrained in the future. The Winter 2019-20 Technical Assessment, issued by Southern California Gas Company (SoCal Gas) on October 8, 2019, concludes that the Southern California gas system is insufficient to maintain natural gas reliability to electric generation customers during high demand periods. As a result, CAISO states that it will be required to coordinate closely with SoCal Gas to

[1] 16 U.S.C. § 824d (2018).

[2] CAISO requests that, if the Commission declines to accept the provisions on a permanent basis, it extends them another year, until December 31, 2020. CAISO Transmittal at 1.

ensure that electric generation resources are dispatched appropriately to maintain both gas and electric system reliability.[3]

3. On May 9, 2016, CAISO proposed tariff revisions to provide it with a set of tools, on a temporary basis, to address the reliability and market distortion risks posed by the limited operability of Aliso Canyon. In an order issued June 1, 2016, the Commission accepted the proposed revisions, subject to condition, and directed a technical conference to discuss the success of the provisions and potential longer-term solutions.[4] In an order issued on November 28, 2016, the Commission accepted a proposal to extend for an additional year a number of the Aliso Canyon-related provisions, including those at issue here.[5]

4. In 2017, the Commission initially rejected a CAISO proposal to make permanent and extend application of the maximum gas constraint and related tariff provisions to the entire Energy Imbalance Market (EIM), finding that CAISO's proposal could give EIM Entities an inappropriate advantage over other market participants.[6] The Commission later accepted a CAISO proposal to extend the rejected tariff provisions for an additional year.[7] Finally, in an order issued September 28, 2018, the Commission again accepted a one-year extension of certain Aliso Canyon-related tariff provisions, including those related to the maximum gas constraint.[8]

II. <u>CAISO Filing</u>

5. In this filing, CAISO proposes to permanently implement three measures, heretofore accepted on a temporary basis by the Commission in prior proceedings, related to CAISO's authority to enforce a maximum gas constraint. The constraint enables CAISO to operate the system reliably when faced with natural gas constraints in the southern region of the CAISO system. First, CAISO proposes to permanently incorporate tariff provisions in tariff sections 27.11 and 6.2.1.3 to implement a natural gas constraint that limits the maximum amount of natural gas that can be burned by

[3] *Id.* at 2, 7-8.

[4] *Cal. Indep. Sys. Operator Corp.*, 155 FERC ¶ 61,224, at PP 12-13, 104 (2016).

[5] *Cal. Indep. Sys. Operator Corp.*, 157 FERC ¶ 61,151 (2016).

[6] *Cal. Indep. Sys. Operator Corp.*, 161 FERC ¶ 61,232, at P 55 (2017).

[7] *Cal. Indep. Sys. Operator Corp.*, Docket No. ER18-375-000 (Dec. 5, 2017) (delegated order).

[8] *Cal. Indep. Sys. Operator Corp.*, 165 FERC ¶ 61,161 (2018).

natural gas-fired resources in the SoCal Gas and San Diego Gas & Electric Company (SDG&E) regions.[9] Second, CAISO proposes to make permanent the provision in section 39.7.2.2 of its tariff to allow CAISO to deem uncompetitive certain internal transmission constraints as part of its local power mitigation process when it enforces a natural gas constraint in the SoCal Gas and SDG&E regions.[10] Third, CAISO proposes to make permanent the provision in section 7.9.2(d) of its tariff, allowing it to suspend virtual bidding when virtual bids may detrimentally affect market efficiency due to the enforcement of a natural gas constraint.[11] CAISO asserts that use of the maximum gas constraint provides CAISO and market participants with a least cost market solution for dispatch of resources when the gas system is constrained and provides a more effective tool for managing system reliability than conducting manual exceptional dispatch.[12]

6. According to its analysis of the maximum gas constraint's performance and its impacts on the market in 2019, CAISO explains that the constraint was enforced on two occasions in February 2019 but was not binding when enforced in the real-time market. The constraint was also enforced again in mid-October 2019 due to a planned outage in the SDG&E system but was only binding for a single hour in the day-ahead market. CAISO states that use of the constraint has decreased since 2016. CAISO also explains that there was no obvious impact of the gas constraint on real-time energy or real-time congestion offset costs.[13] If the Commission grants it authority to permanently employ the maximum gas constraint in Southern California, CAISO states it will submit annual reports to the Commission that explain the impacts of using the constraint in order to provide transparency.[14]

7. CAISO notes that it intends to further improve how it sets the gas usage limits it uses in the maximum gas constraint by using a net load assessment rather than the gross load assessment it uses today for conditions of a daily limitation. CAISO states that it currently provides the details for setting these limits in its business practice manuals- not its tariff- and will continue to do so in order to preserve the flexibility to make refinements over time. CAISO states that it will conduct its normal business practice

[9] CAISO Transmittal at 15-16.

[10] *Id.* at 38-40.

[11] *Id.* at 40-41.

[12] *Id.* at 22-24, 36.

[13] *Id.* at 10-13.

[14] *Id.* at 21-22.

manual change process to make any such modifications to allow for stakeholder input on any changes.[15]

III. Notice and Responsive Pleadings

8. Notice of CAISO's filing was published in the *Federal Register*, 84 Fed. Reg. 60,077 (2019) with interventions and protests due on or before November 21, 2019. Timely motions to intervene were submitted by Southern California Edison Company; Calpine Corporation; NRG Power Marketing LLC; and Modesto Irrigation District. Timely motions to intervene and comments were filed by Pacific Gas and Electric Company (PG&E) and the CAISO Department of Market Monitoring (DMM). On November 26, 2019, the City of Santa Clara, California filed a motion to intervene out-of-time. CAISO filed an answer on December 6, 2019.

A. Comments

9. PG&E contends that, absent a full stakeholder process, making these tariff provisions permanent is premature. Specifically, PG&E asserts that the maximum gas constraint (as currently formulated) can lead to artificial binding that increases costs with no reliability benefit. Further, PG&E states that any real-time imbalance offset costs related to the constraint get allocated to all CAISO customers and argues that CAISO has not demonstrated that such a cost allocation method is appropriate. PG&E asserts that issues related to the shape of the constraint curve, the costs of using the constraint, and the allocation of such costs need to be vetted fully with stakeholders before the tariff provisions are made permanent. Finally, PG&E highlights that the final fate of Aliso Canyon is not yet known and that the California Public Utilities Commission (CPUC) is currently considering measures that would expand the use of Aliso Canyon. PG&E argues this potential for expanded use renders the need for a permanent constraint less urgent. Thus, PG&E requests that the Commission accept a one-year extension of the provisions rather than accepting them permanently.[16]

10. DMM agrees with CAISO in theory that use of a maximum gas constraint can be more effective at managing gas limitations than exceptional dispatch, but urges that further refinements are needed in how CAISO models and sets maximum gas constraints to enhance the relatively simplistic modeling approach CAISO currently employs.[17] DMM also notes its agreement with CAISO's position that the implementation details regarding the constraint need not be in the tariff and encourages CAISO to use this

---

[15] *Id.* at 28-29.

[16] PG&E Comments at 4-9.

[17] DMM Comments at 11.

flexibility to pursue enhancements such as the net load assessment discussed by CAISO in its instant proposal. However, DMM highlights additional improvements, such as a two-day ahead modeling process that may further reduce cases in which gas usage is unlimited during peak ramping hours. DMM also recommends that CAISO seek to avoid setting the gas constraints in a manner that may cause unnecessarily high real-time imbalance offset costs.[18]

B. <u>CAISO Answer</u>

11. CAISO reiterates that the gas system in Southern California will continue to be constrained for the foreseeable future and, therefore, CAISO anticipates the need to utilize the maximum gas constraint as a tool to manage its balancing authority area reliably in the upcoming years.[19] CAISO contends that PG&E provides no basis for the Commission to again extend the tariff provisions temporarily. CAISO notes that it conducted numerous stakeholder processes to discuss the impact of the constraint and its intent to proceed with requesting permanent authority to use the constraint. CAISO avers that it has continuously responded to questions such as those raised by PG&E here in its many Market Performance and Planning Forum meetings.[20]

12. Regarding PG&E's concerns about the cost of the constraint and CAISO's allocation of such costs, CAISO responds that it is not possible to isolate specifically what the costs are and what drives the higher cost of energy when the gas system is constrained - regardless of whether the constraint is used. CAISO asserts that PG&E fails to recognize that the whole system will incur higher real-time imbalance offset costs when the Southern California gas system is constrained (whether CAISO uses the constraint or exceptional dispatch) and suggests that PG&E should raise its cost allocation concerns in an upcoming stakeholder initiative in which CAISO will consider cost allocation alternatives.[21] CAISO states that it intends to refine use of the constraint and will work with DMM to consider appropriate enhancements, in addition to vetting them with stakeholders through the business practice manual change management process. However, CAISO disagrees that these changes need to occur before the Commission grants CAISO permanent authority to use the constraint.[22]

---

[18] *Id.* at 3-12.

[19] CAISO Answer at 8.

[20] *Id.* at 2-4.

[21] *Id* at 7.

[22] *Id.* at 9.

IV. Discussion

A. Procedural Matters

13. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2019), the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

14. Pursuant to Rule 214(d) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214(d) (2019), we grant the City of Santa Clara, California's late-filed motion to intervene given its interest in the proceeding, the early stage of the proceeding, and the absence of undue prejudice or delay.

15. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2019), prohibits an answer to a protest unless otherwise ordered by the decisional authority. We accept CAISO's answer because it has provided information that assisted us in our decision-making process.

B. Substantive Matters

16. As discussed below, we accept CAISO's proposal to permanently incorporate the three tariff provisions related to the enforcement of a maximum gas constraint, effective December 31, 2019, as requested. We find that allowing CAISO to permanently implement these tariff provisions will help ensure that CAISO continues to have the tools necessary to address risk associated with the potential impacts of the continued limited operability of Aliso Canyon on the reliability of CAISO's system. As CAISO explains, the Southern California gas system is likely to face continued limited operability into the future.[23] The situation does not appear to have appreciably changed over the last several years. As CAISO states, the gas burn constraint allows CAISO to more effectively manage dispatch of resources than the use manual exceptional dispatches it would otherwise need to use, by allowing operators to maximize gas usage while managing transmission constraints on a five-minute basis, and limit opportunities for operator data entry errors.[24]

17. PG&E argues that the use of the constraint generates real-time imbalance offset costs, which are allocated across CAISO's system; however, we are persuaded by

---

[23] *See* CAISO Transmittal at 2 (stating that "there is no expectation [Aliso Canyon's] operability will increase in future years"); CAISO Answer at 2 n.3 (explaining that CPUC recently opened a proceeding that could result in further limited operability or even closure of Aliso Canyon).

[24] CAISO Transmittal at 22-23;

CAISO's argument that these uplift costs are not correlated with the use of the constraint but, rather, by high gas costs in Southern California.[25] As such, the uplift costs associated with the use of the constraint on certain days do not render CAISO's proposal unjust and unreasonable. The cost allocation for CAISO's real-time imbalance offset costs is currently part of CAISO's tariff and CAISO does not propose any revisions to this provision here. Thus, we find that PG&E's comments on this issue are beyond the scope of this proceeding. Moreover, as CAISO explains in its answer, the use of exceptional dispatch, which is the alternative to using the constraint, also generates uplift costs that may extend beyond Southern California.[26]

18. We acknowledge DMM's comments regarding potential enhancements to the design and implementation of the constraint, as well as CAISO's stated commitment to exploring such enhancements. However, we agree with CAISO that these enhancements need not occur before the Commission grants authority to make these provisions permanent. For the reasons discussed above, we conclude that allowing CAISO to implement the tariff provisions permanently is a just and reasonable approach to address the ongoing risks posed by the limited operability of Aliso Canyon. Nonetheless, we note CAISO's commitment to work with DMM to consider appropriate enhancements, and to vet these enhancements with stakeholders through its business practice manual change management process to address concerns. Additionally, CAISO notes that it is considering these further enhancements regardless of whether the authority to implement the gas burn constraint is temporary or permanent. We encourage CAISO to engage with DMM and stakeholders to focus on additional refinements to the software and operational processes necessary in the design of the gas burn constraint, and to make the implementation more transparent and efficient.

19. Finally, consistent with CAISO's offer to submit annual reports, we direct CAISO to file annual informational filings,[27] beginning on June 30, 2020, through such time as CAISO publishes an equivalent analysis on its website, on the impacts of the maximum gas burn constraint on the CAISO markets when the constraint is enforced. Specifically, we direct CAISO to submit information on: (i) instances when the gas nomogram is implemented that discuss relevant market issues, such as impacts of gas nomogram implementation on real-time imbalance offset costs; (ii) gas system conditions during nomogram implementation; and (iii) inputs or information used in shaping the maximum gas burn limits under the nomogram.

---

[25] *Id.* at 32-33.

[26] CAISO Answer at 7.

[27] This report should be filed in the instant docket and will not be noticed for comment or require Commission action.

The Commission orders:

(A) CAISO's tariff revisions are hereby accepted, effective December 31, 2019, as requested, as discussed in the body of this order.

(B) CAISO is hereby directed to submit annual informational filings containing information on its usage of the maximum gas burn constraint, and its impacts on CAISO's markets, beginning on June 30, 2020, as discussed in the body of this order.

By the Commission.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

Document Content(s)

ER20-273-000.DOCX...1-8