165 FERC ¶ 61,161
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Neil Chatterjee, Chairman;
Cheryl A. LaFleur and Richard Glick.

California Independent System Operator Corporation Docket No. ER18-2520-000

ORDER ON TARIFF REVISIONS

(Issued November 26, 2018)

1. On September 28, 2018, the California Independent System Operator Corporation (CAISO) filed, pursuant to Section 205 of the Federal Power Act (FPA),[1] revisions to its tariff to temporarily keep in place seven previously accepted tariff 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 gas storage facility (Aliso Canyon). In this order, we accept CAISO's proposal to temporarily extend six of its Aliso Canyon-related tariff provisions and associated tariff revisions, effective November 30, 2018, and December 16, 2018, as requested, but reject CAISO's proposal to temporarily extend the tariff revisions regarding gas price scalars, as discussed below.

I. **Background**

2. In October 2015, Southern California Gas Company's (SoCalGas) Aliso Canyon natural gas storage facility in Southern California experienced a large natural gas leak. The facility is 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, but Southern California continues to face natural gas supply shortages due to limitations on withdrawals from Aliso Canyon, continued pipeline outages on the SoCalGas system, and declines in inventory at non-Aliso Canyon storage facilities.[2] For the winter 2018-2019 period, gas

[1] 16 U.S.C. § 824d (2012).

[2] California Public Utilities Commission (CPUC), *Aliso Canyon Working Gas Inventory, Production Capacity, and Well Availability for Reliability: Summer 2018 Supplemental Report* (Jul. 2018),

system capacity conditions are expected to be virtually unchanged from winter 2017-2018 conditions, and minimum electric generation requirements are expected to be higher compared to the winter 2017-2018 conditions.[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 lessons learned during the summer of 2016 and potential longer-term solutions.[4]

4. In an order issued on November 28, 2016,[5] the Commission accepted a proposal to extend for an additional year the following provisions: (1) CAISO's provision of two-day-ahead advisory schedules to assist scheduling coordinators with gas procurement and nomination decisions; (2) CAISO's use of a more timely and accurate gas commodity price for commitment cost bid caps, default energy bids, and generated bids in the day-ahead market, based on Intercontinental Exchange (ICE) generated gas prices that CAISO will obtain between 8:00 a.m. pacific time and 9:00 a.m. pacific time; (3) CAISO's use of gas price scalars to calculate commitment cost caps and default energy bids for generators served by the affected gas systems at an amount necessary to ensure that CAISO's real-time market-clearing process can take into account the impact of gas system limitations and avoid further aggravating existing gas system constraints; (4) CAISO's use of a maximum natural gas burn constraint to limit the maximum amount of generation dispatched in a given area of the CAISO balancing authority if burning more gas might risk jeopardizing gas and electric system reliability; (5) CAISO's ability to suspend virtual bidding when it employs a maximum gas burn constraint; (6) CAISO's ability to deem certain transmission constraints uncompetitive when it employs a maximum gas burn constraint; and (7) a proposal to augment the ability of scheduling coordinators to pursue after-the-fact cost recovery of incremental fuel costs.

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http://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Content/News_Room/715Report_Summer2018_Final.pdf.

[3] CAISO Transmittal at 11-12.

[4] *Cal. Indep. Sys. Operator Corp.*, 155 FERC ¶ 61,224, at PP 12-13, 104 (2016) (Aliso Phase I Order). The Commission accepted CAISO's compliance filing in an order issued August 26, 2016. *Cal. Indep. Sys. Operator Corp.*, 156 FERC ¶ 61,135 (2016).

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

5. In an order issued on November 28, 2017,[6] the Commission accepted CAISO's proposal to temporarily extend the following tariff provisions for an additional year: (1) provisions allowing CAISO's use of a more timely and accurate gas commodity price for commitment cost bid caps, default energy bids, and generated bids in the day-ahead market, based on ICE-generated gas prices; (2) provisions allowing CAISO's use of gas price scalars to calculate commitment cost caps and default energy bids for generators served by the affected gas systems; and (3) provisions allowing scheduling coordinators to pursue after-the-fact cost recovery of incremental fuel costs. However, the Commission rejected CAISO's proposal to implement on a permanent basis the following: (1) tariff provisions granting CAISO authority to implement and enforce, throughout the CAISO balancing authority area and in the Western Energy Imbalance Market (EIM), maximum gas burn constraint limiting the dispatch of gas-fired generators; (2) tariff provisions related to CAISO's use of the natural gas constraint, specifically, its ability to suspend virtual bidding; (3) tariff provisions related to CAISO's use of the natural gas constraint, specifically, its ability to deem transmission constraints non-competitive when it enforces a maximum gas burn constraint; and (4) tariff provisions allowing CAISO to release two-day-ahead advisory schedules to certain scheduling coordinators. In rejecting CAISO's permanent proposals, the Commission found that CAISO's proposed extension of the use of maximum gas constraint to the EIM had not been shown to be just and reasonable and not unduly discriminatory. The Commission stated that rejection of the permanent tariff provisions was not meant to foreclose CAISO from proposing to extend the tariff provisions for an additional year.

6. Finally, on December 15, 2017, CAISO's proposal to reinstate, for a year: (1) its authority to implement the natural gas constraint it developed in response to the limited operability of Aliso Canyon; (2) provisions related to its use of the natural gas constraint, specifically, its ability to suspend virtual bidding; (3) provisions related to its use of the natural gas constraint, specifically, its ability to deem certain transmission constraints non-competitive when it enforces a maximum gas burn constraint; and (4) tariff provisions allowing CAISO to release two-day-ahead advisory schedules to certain scheduling coordinators, was accepted by delegated letter order.[7]

II. <u>Filing</u>

7. In the instant filing, CAISO proposes to extend until December 31, 2019, with no modification, the effectiveness of seven existing, previously accepted temporary tariff

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[6] *Cal. Indep. Sys. Operator Corp.*, 161 FERC ¶ 61,232 (2017) (Aliso Phase III Order).

[7] *Cal. Indep. Sys. Operator Corp.*, Docket No. ER18-375-000 (December 15, 2017) (Aliso Phase IV delegated order).

provisions that address the limited operability of Aliso Canyon, and that will otherwise expire on November 30, 2018, and December 16, 2018. According to CAISO, the seven tariff provisions allow it to continue to manage its system reliably when faced with gas constraints posed by the limited operability of Aliso Canyon and known outages on the Southern California gas pipeline system. CAISO notes that, although the seven tariff provisions are related, they are not interdependent and are discrete and severable.

8. CAISO states that the first three tariff provisions that it proposes to extend, effective November 30, 2018, would allow CAISO to provide market participants greater bidding flexibility to better reflect their fuel costs in their commitment costs and default energy bids. CAISO indicates that these are the same provisions the Commission previously extended for 12 months in the Aliso Phase III Order without modification:[8] (1) CAISO's use of ICE gas indices based on trades for next-day gas executed the morning of the day ahead market to calculate commitment cost bid caps, default energy bids, and generated bids in the day-ahead market;[9] (2) CAISO's use of gas price scalars to calculate commitment cost caps and default energy bids for generators served by the affected gas systems; and (3) provisions allowing scheduling coordinators to pursue after-the-fact cost recovery. CAISO asserts that continued effectiveness of these three tariff provisions will only be necessary until CAISO implements more permanent measures that arise from its Commitment Cost and Default Energy Bid Enhancements stakeholder initiative.[10]

9. CAISO states that the remaining four tariff provisions that it proposes to extend, effective December 16, 2018, consist of three tariff provisions that would enable CAISO to implement a maximum gas burn constraint, and one tariff provision regarding pre-day-ahead information. According to CAISO, these are the exact same provisions that the Commission previously re-approved on a temporary basis in the Aliso Phase IV Order:[11]

[8] CAISO Transmittal at 2-3. These previously accepted tariff provisions are set to expire on November 30, 2018.

[9] CAISO states that, because ICE ceased publishing its gas price index on December 31, 2017, it is necessary to maintain the interim procedure to allow CAISO to continue to calculate day-ahead gas price indices based on price information released on the morning of the day-ahead market run. *Id.* at 18.

[10] CAISO notes that it has completed the Commitment Cost and Default Energy Bid Enhancements stakeholder initiative, but cannot implement these changes until the end of 2019. *Id.* at 3, 13.

[11] These previously accepted tariff provisions are set to expire on December 16, 2018.

(1) tariff provisions granting CAISO authority to implement and enforce maximum gas burn constraint limiting the dispatch of gas-fired generators; (2) tariff provisions enabling CAISO to override manually the dynamic competitive path assessment to determine whether CAISO should deem transmission constraints non-competitive when it employs a maximum gas burn constraint; (3) tariff provisions related to CAISO's ability to suspend virtual bidding when it enforces a maximum gas burn constraint; and (4) tariff provisions allowing CAISO to release two-day-ahead advisory schedules to certain scheduling coordinators. CAISO states that it will seek appropriate relief if it determines it will need these four tariff provisions beyond December 31, 2019.

10. CAISO proposes that the instant revisions will expire on December 31, 2019, and will be superseded by the tariff provisions in effect prior to June 1, 2016, if the Commission does not take action to extend them beyond that date.[12] To implement this approach, CAISO submitted two sets of tariff records – one set that contains the proposed tariff revisions with effective dates of November 30, 2018 and December 16, 2018, and a second set that reverts back to the original tariff language to remove the Aliso-Canyon related tariff provisions effective December 31, 2019.

III. <u>Notice and Responsive Pleadings</u>

11. Notice of CAISO's filing was published in the *Federal Register*, 83 Fed. Reg. 50,358 (2018), with interventions and protests due on or before October 19, 2018. Timely motions to intervene were filed by NRG Power Marketing LLC (NRG), the Cities of Anaheim, Azusa, Banning, Colton, Pasadena, and Riverside, California, Modesto Irrigation District, Powerex Corp., the City of Santa Clara, California, and Southern California Edison Company. Timely motions to intervene and comments were filed by the CAISO Department of Market Monitoring (DMM) and Pacific Gas and Electric Company (PG&E). CPUC filed a timely notice of intervention. NRG filed an out-of-time limited protest. CAISO filed an answer.

IV. <u>Discussion</u>

A. <u>Procedural Matters</u>

12. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2018), the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

13. Pursuant to Rule 214(d) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214(d) (2018), the Commission accepts NRG's late-filed limited protest

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[12] CAISO Transmittal at 46.

given its interest in the proceeding, the early stage of the proceeding, and the absence of undue prejudice or delay.

14. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2018), 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

15. CAISO proposes to extend temporarily, until December 31, 2019, the same seven tariff provisions that the Commission accepted on a temporary basis in prior proceedings, which are set to automatically expire on November 30, 2018, and December 16, 2018. CAISO states that extending these seven tariff provisions will ensure that CAISO can continue to manage its system reliably when faced with gas constraints posed by the limited operability of Aliso Canyon and known outages on the Southern California gas pipeline system.[13] As discussed below, we accept CAISO's proposal to temporarily extend six of these tariff provisions and associated tariff revisions, effective November 30, 2018, and December 16, 2018, as requested, but reject CAISO's proposal to extend tariff revisions regarding gas price scalars.

1. Day-Ahead Market Gas Price Index

a. CAISO Proposal

16. CAISO proposes to maintain until no later than December 31, 2019, the temporary tariff provisions in Sections 39.7.1.1.1.3, 6.5.2.3.4, and 6.5.4.2.3. of the CAISO Tariff to improve the accuracy of the gas commodity price indices used in the day-ahead market by reflecting the most recent gas commodity price information.[14] Specifically, these tariff provisions state that CAISO will use a volume-weighted average price reported between 8:00 a.m. pacific time and 9:00 a.m. pacific time, that ICE calculates based on trades transacted on ICE the morning of CAISO's day-ahead market. If that price is not available from ICE, CAISO states that it will use the most recently calculated price indices.[15]

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[13] CAISO Transmittal at 13.

[14] *Id*. at 15.

[15] *Id*. at 15-16.

17. According to CAISO, continuing to use the proposed procedure will improve resources' ability to reflect their actual costs when they purchase gas for the operating day.[16] Citing market data from November 2017 through September 2018, CAISO asserts that using information that more accurately reflects prevailing gas commodity costs enhances the day-ahead market's ability to dispatch resources efficiently, ensure resources will be compensated based on accurate fuel prices, and reflect constrained gas conditions in the region. CAISO also notes that absent these tariff provisions, the otherwise applicable manual process would be infeasible because ICE ceased publishing its gas price index on December 31, 2017.[17]

b. NRG Comments

18. NRG recommends that CAISO change the ICE gas index it uses to run its day-ahead market for Monday from the weekend gas package index (which trades on Friday, but covers gas deliveries for the Saturday, Sunday and Monday power day) to the Monday-only gas index (which trades on Friday, but covers gas deliveries for Monday's power day only). NRG explains that the intra-day gas on Monday often trade at a significant premium to the weekend package price, and as a result, NRG's plants can receive day-ahead schedules for Mondays that are based on the weekend package gas price, but for which NRG ends up procuring same-day gas at a significant premium.[18] NRG asserts that using the Monday-only price would help limit the need for extraordinary cost recovery filings and ensure that the dispatch of gas-fired generation reflects market fundamentals and not an artificially low weekend gas package price. NRG notes that this is a limited and targeted modification to the tariff provisions that allow CAISO to update the gas price index it uses in the day-ahead market;[19] however, NRG acknowledges that CAISO's filing does not address this change.[20]

c. CAISO Answer

19. CAISO agrees with NRG that the Monday-only gas index might allow market participants to use the most up-to-date index published by ICE, and therefore does not object to having the flexibility to use the Monday-only gas price index, as recommended

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[16] *Id*. at 17.

[17] *Id*. at 18.

[18] NRG Limited Protest at 3-4.

[19] *Id.* at 4.

[20] *Id.* at 1.

by NRG.[21] However, CAISO notes that the currently effective language in tariff Section 39.7.1.1.1.3(b) restricts its ability to use the Monday-only gas index. CAISO offers modifications to incorporate this flexibility to its tariff Section 39.7.1.1.1.3(b).[22] CAISO states that it can address this tariff revision in compliance with the Commission's order in this proceeding, or in a subsequent tariff clarification.[23]

2. Adjustments to Commitment Cost Caps and Default Energy Bids through Gas Price Scalars

a. CAISO Proposal

20. CAISO proposes to maintain until no later than December 31, 2019, the tariff provision in Section 39.7.1.1.1.3(d) of the CAISO Tariff that allows CAISO to increase or decrease the gas commodity price it uses to calculate commitment cost caps and default energy bids in the real-time market by applying gas price scalars. According to CAISO, applying the gas price scalars to increase commitment cost caps and default energy bids for the affected gas-fired resources in Southern California ensures that the real-time market appropriately recognizes the gas constraints applicable to these resources and enables the real-time market to limit the dispatch of these resources only for local electrical needs.[24] In addition, CAISO notes that the Commission previously found that this tariff provision may allow resources to manage gas balancing requirements under tightened balancing tolerance bands and improve a generator's ability to recover fuel costs during this interim period of potential gas price volatility.

21. CAISO acknowledges that it could be argued that the existing separation of gas prices between Southern California and the rest of the system reduces the need for the gas price scalars; however, CAISO argues that to judge the need for the gas price scalars on this basis ignores the reason for these scalars in the first place, as described above. CAISO explains that it evaluated the performance of these gas price scalars when they were activated at the end of 2017 and the beginning of 2018, and identified two

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[21] CAISO Answer at 18-19.

[22] *Id*. at 21.

[23] *Id.*

[24] Specifically, the proposal gives CAISO the ability to increase the gas commodity price used in deriving commitment costs and CAISO-generated bids by 75 percent, and to decrease or increase this value by an amount not to exceed $2.50 per therm plus two times the next-day gas price. For default energy bids, the initial increase would remain 25 percent, and the gas commodity price cap would be 100 percent. CAISO Transmittal at 21-22.

challenges with using them: (1) inherent delay in actual application of gas price scalars, which may result in days when the gas price scalars could have worked but CAISO could not have activated them in time to capture the increased gas costs in Southern California; and (2) an inability to switch the gas price scalars on and off dynamically, which limits how quickly CAISO can adjust the gas price scalars to capture the changing conditions. However, CAISO concludes that the gas price scalars provided the ability to recover costs needed when they were activated in the two events since December 2017.

22. CAISO anticipates that, absent extending the tariff provision, current commitment costs, generated bids, and default energy bids may not fully account for the prospect of Aliso Canyon's limited operability, decreased intra-day gas availability, and tightened gas balancing requirements. CAISO argues that because it currently calculates gas prices based on trading for next-day delivery and because it does not currently include information about intra-day markets, CAISO's calculated gas price may not fully capture real-time gas prices on all days.

23. CAISO further explains that the limited operability of Aliso Canyon and continued gas pipeline outages may result in a limited ability for SoCalGas and San Diego Gas & Electric Company (SDG&E) to support large increases of gas demand on their systems relative to scheduled capacity or to deliver these increased amounts of gas to generators. CAISO argues that it would be better for its real-time market to dispatch generators on these constrained systems to meet only local electrical needs and to dispatch non-constrained resources to meet system needs. CAISO therefore argues that failure to retain the tariff provision could result in commitment cost bid caps, generated bids, and default energy bids that are too low to reflect gas system limitations, but the higher commitment cost and energy bids allowed by the use of gas price scalars will tend to prevent such situations from arising.

24. CAISO states that, during the stakeholder process for the Aliso Phase III proceeding, DMM requested that CAISO assess whether the current level of gas price scalars for resources supplied by Aliso Canyon is appropriate or should be reduced or set to zero. CAISO states that in response to DMM's comments, it reevaluated the setting of the gas price scalars and concluded that the gas price scalars should remain at the original levels of 175 percent and 125 percent. CAISO agrees with DMM's assessment that CAISO should increase and decrease the gas price scalars based on need, and only activated the gas price scalars on an as-needed basis as of August 1, 2017. CAISO states that it has developed procedures to expeditiously facilitate this process and commits to continue evaluating the market. CAISO states that it would discuss any modifications to the gas price scalars with DMM, and, pursuant to the proposed tariff provisions, issue a market notice specifying the amount of any subsequent changes to the gas commodity price.

b. DMM Comments

25. DMM does not support CAISO's proposal to extend the tariff provisions related to the gas price scalars. DMM argues that gas price scalars have not been useful tools for CAISO in managing high gas price conditions. First, DMM states that CAISO is often not able to activate the gas price scalars in time to capture gas price conditions.[25] DMM states that it often observes that, in response to high and volatile next day gas prices, on the following day CAISO will implement the real-time market gas price scalars only to have intra-day gas prices on that flow date return to at or below the normal 25 percent and 10 percent headroom incorporated in commitment cost bid caps and default energy bids.[26]

26. Second, DMM observes that the gas price scalars have not been effective in altering the merit order of dispatch away from gas plants in constrained areas as they are intended to do.[27] DMM provides merit order data for all the days the gas scalars were in effect for spring 2018. DMM states that the data shows that the gas price scalars had little effect on merit order during this period. DMM notes that, while some generators took advantage of the gas price scalars, these generators were already high in the merit order without the assistance of the gas price scalars.

27. Third, DMM notes that other tools enable participants to reflect gas costs, without the need for gas price scalars. DMM points to the strong relationship between the gas prices used in the real-time market and CAISO's calculated day-ahead gas index, which is used in the calculation of commitment costs and default energy bids. DMM also notes that commitment costs and default energy bids are already afforded 10-25 percent adder (or "scalar") above calculated costs. DMM states that CAISO's filing does not demonstrate any difference in market performance related to default energy bids and

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[25] DMM Comments at 5.

[26] *Id.* at 4. DMM cites prior comments to the Commission and a quarterly market performance report where it detailed incidences of this trend. *See* Dep't of Mkt. Monitoring, Comments, Docket No. ER17-2568-000, at 8-12 (filed Oct. 26, 2017); Dep't of Mkt. Monitoring, *Q1 2018 Report on Market Issues and Performance* 53-55 (Jul. 10, 2018), http://www.caiso.com/Documents/2018FirstQuarterReportonMarketIssuesandPerformance.pdf (Q1 2018 Report).

[27] DMM Comments at 21.

commitment cost bid caps during the 72 days when the gas price scalars were in effect compared to the 232 days when they were not in effect.[28]

28. DMM further contends that the gas price scalars impose costs on consumers. DMM estimates that generators received an additional $7 million in bid cost recovery payments as a result of the gas price scalars.[29] DMM further argues that the gas price scalars can weaken market power mitigation by increasing the default energy bids.[30]

29. DMM also notes that the final Commitment Cost and Default Energy Bid Enhancements stakeholder initiative proposal approved by the CAISO Board in March 2018 does not contain measures that would address the gas price issues that CAISO currently cites as justification for an extension of the gas price scalars. DMM cites as an example the proposal to continue to use 110 percent and 125 percent adders, which it states CAISO claims will negate the need for the adders of 125 percent and 175 percent proposed herein. DMM states that it is illogical for the lower adders to address whatever need there may be for the higher adders, and also notes that the lower adders will apply to all CAISO resources, whereas the instant proposal applies only to resources in the SoCalGas area. Further, DMM notes that CAISO has delayed filing the Commitment Cost and Default Energy Bid Enhancements proposal in order to start a new stakeholder process in which it will consider updating real-time gas price indices with actual same day trading prices, something DMM states it advocates for; DMM continues that this proposal is not slated to go to the CAISO Board until at least March 2019.[31] DMM believes that with CAISO's current approach, there is a significant chance that the changes CAISO feels are needed to replace the gas price scalars may not be implemented in fall 2019. Thus, DMM recommends that CAISO address the Aliso Canyon gas issue by placing a priority on implementing the ability to adjust bid caps in the real-time market based on conditions in the same-day gas market.[32]

c. <u>CAISO Answer</u>

30. CAISO states that, until it has more flexible methods of capturing increases in intra-day gas price increases, the gas price scalars are the only market measures it can

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[28] *Id.* at 14.

[29] *Id.* at 22.

[30] *Id.*

[31] *Id* at 9-11.

[32] *Id*. at 26-27.

adopt quickly to ensure the resources in Southern California can reflect the higher costs of gas due to the limited operability of Aliso Canyon.[33]

31. CAISO asserts that, although it understands DMM's concerns regarding the crudeness of the gas price scalars, it disagrees that this means that CAISO should not have the authority to use them.[34] CAISO explains that this "crudeness" arises from change in CAISO's practice of having the gas price scalars in place all the time to its current practice of having them in place only when warranted by system conditions. CAISO notes that this change has occurred after DMM expressed concerns about having them in place at all times,[35] and states that it is working to improve its processes to activate the gas price scalars in a timelier manner, in an effort to more readily reflect increases in gas costs in the real-time market.

32. CAISO contends that judging CAISO's need for the gas price scalars going forward based on historical pricing patterns is misleading.[36] CAISO argues that DMM's concern that in some cases the gas price scalars were too high to mitigate for market power based on what the prices actually amounted to ignores that the gas price scalars adjust the commitment cost bid cap and are intended to be in place to capture the possibility of prices increasing based on gas constraints in Southern California.

33. CAISO disputes DMM's comment that CAISO is likely to further delay implementation of the Commitment Cost and Default Energy Bid Enhancements proposal, and states that CAISO is on track to file it with the Commission by the end of April 2019.[37]

3. <u>After-the-Fact Fuel Cost Recovery</u>

34. CAISO proposes to maintain until December 31, 2019 the tariff provisions in Sections 30.12, 39.7.1.7, and 40.6.8.1.6 that allow scheduling coordinators to seek after-the-fact recovery of incremental fuel costs associated with default energy bids and

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[33] CAISO Answer at 7.

[34] *Id*. at 4-5.

[35] *Id*. at 5.

[36] *Id*. at 6-7.

[37] *Id*. at 12.

generated bids by submitting an FPA section 205 filing to the Commission.[38] According to CAISO, these tariff provisions address the possibility that fuel costs may exceed the amounts recoverable under CAISO's normal cost recovery provisions due to the uncertainty and potential price volatility that result from Aliso Canyon's limited operability. CAISO states that the Commission recognized that allowing this type of section 205 filing is a reasonable interim solution to ensure reliable operation of the grid at just and reasonable rates.[39] CAISO anticipates that scheduling coordinators will, in almost all circumstances, be able to recover their fuel-related costs pursuant to the normal cost recovery tariff provisions and will not need to submit these types of FPA section 205 filings.[40]

4. Maximum Gas Burn Constraint

a. CAISO Proposal

35. CAISO also proposes to temporarily extend the tariff provisions in 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 natural gas-fired resources in the SoCalGas and SDG&E gas regions.[41] CAISO states that these tariff provisions allow CAISO to optimize the dispatch of generation in Southern California considering any gas burn limitations. CAISO states that it has enforced the maximum gas burn constraint since Aliso Phase IV, after SoCalGas informed CAISO of concerns about the gas supply in Southern California due to cold weather, gas pipeline limitations, and storage availability. CAISO states that the maximum gas burn constraint has been the most effective tool available to CAISO to limit the gas burn in areas affected by the gas limitations.[42]

36. According to its analysis of the performance of the maximum gas burn constraint and its impact in the markets, CAISO states that the majority of the impact occurred during the first four days of incidents that trigger the use of the maximum burn constraint, as gas prices in Southern California were the highest and a maximum gas burn constraint

[38] CAISO Transmittal at 26.

[39] *Id*.

[40] *Id*. at 26-27.

[41] *Id*. at 27.

[42] *Id*. at 37.

was enforced.[43] CAISO finds that, although high congestion rents and offsets observed on these four days coincided with its enforcement of the maximum gas burn constraint, not all of these costs were due to the enforcement of the maximum gas burn constraint, as high gas prices and transmission constraints were also contributing factors in CAISO's footprint during this time. CAISO states that, while the maximum gas burn constraint was in place, day-ahead congestion rents were higher than normal for some days but lower than normal on other days.

b. DMM Comments

37. While DMM supports a temporary extension of CAISO's ability to enforce a maximum gas constraint for groups of units in the SoCalGas system, DMM recommends that CAISO refine how it utilizes the maximum gas burn constraint and improve how maximum gas burn constraint limits are set and adjusted in real-time.[44] DMM states that market performance during the limited times CAISO has utilized maximum gas burn constraint shows that this tariff provision can increase market costs significantly and should be more effectively designed and implemented to ensure that it is an effective tool for helping to ensure reliability. DMM also recommends that any further modifications to the formulation of the maximum gas burn constraint be more clearly explained and documented for DMM and stakeholders in a timely manner.[45]

c. PG&E Comments

38. PG&E supports CAISO's filing, but seeks additional transparency. Specifically, PG&E requests that the Commission direct CAISO to take expedited action to: (1) provide, within three months, further analysis and evaluation of the historic use of the interim gas constraints; (2) produce analysis providing transparency regarding the use of the interim gas constraints in the future within three months after activating them in the day-ahead or real-time markets, and to share the results of this analysis, as well as a transparent evaluation of the costs and the benefits of applying the constraints, with the public; and (3) engage stakeholders in a process to work on a longer-term, more robust solution, over the next year.[46]

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[43] *Id*.

[44] DMM Comments at 27.

[45] *Id.* at 23-26.

[46] PG&E Comments at 2-3.

d. CAISO Answer

39. CAISO states that the Commission does not need to direct CAISO to provide additional transparency on the costs of using this temporary tariff provision because CAISO plans to do so through its stakeholder process which will evaluate the use of this tariff provision on a long-term basis. CAISO also notes that it already provides information on the impact of the temporary tariff provisions in its market performance and planning forum meetings, and openly discusses with stakeholders the conditions under which and impacts of when these temporary tariff provisions were used. CAISO states that it is also committed to working with PG&E and other stakeholders to determine what additional information is needed that CAISO can provide. CAISO notes that it will continue to provide any new information through the market performance and planning forum meetings, which, according to CAISO, are well attended by all stakeholders.[47]

40. CAISO asserts that it will continue to improve its usage of the maximum gas burn constraint as it employs and observes its effectiveness and impact. CAISO states that it will continue to work with DMM as it makes adjustments, and discuss its findings with stakeholders during the market performance and planning forum meetings.[48] CAISO also states that it will be conducting a stakeholder process next year to consider the use of the temporary tariff provision on a permanent basis and will discuss performance of the constraint further during those meetings.

5. Competitive Path Assessment

41. CAISO also proposes to extend the provision in Section 39.7.2.2 of its Tariff that allows CAISO to deem uncompetitive certain internal transmission constraints as part of its local market power mitigation process when it enforces a natural gas constraint.[49] The criteria provides that, notwithstanding application of the dynamic competitive path assessment, when the CAISO enforces the maximum natural gas constraint, it may deem selected internal constraints to be non-competitive for specific days or hours based on its determination that actual electric supply conditions may be non-competitive due to anticipated electric supply conditions in the SoCalGas and SDG&E gas regions.

42. CAISO states that it has used this tariff provision on a limited basis since Aliso Phase IV, and does not anticipate using it frequently. CAISO clarifies that it requests

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[47] CAISO Answer at 13.

[48] *Id*. at 16-17.

[49] CAISO Transmittal at 42.

authority to extend the tariff provision for use only in the southern part of its system, as it has before.[50]

6. Virtual Bidding

43. CAISO also proposes to extend the provision in Section 7.9.2(d) of its Tariff, which allows it to suspend virtual bidding when virtual bids may detrimentally affect market efficiency due to the enforcement of a natural gas constraint.[51] CAISO states that there may be times when the price convergence promoted by virtual bidding runs contrary to market efficiency, and sustained differences in prices between locations and between the day-ahead and real-time markets could be exploited by virtual bidders without yielding any market benefits. CAISO states that one result of the enforcement of a gas constraint may be the persistent divergence of day-ahead and real time prices, which virtual bidders could use to make profits at little or no risk.

7. Pre-Day-Ahead Information

44. Finally, CAISO proposes to temporarily extend the tariff provision in Section 6.5.2.2.3 of its Tariff that allows CAISO to provide scheduling coordinators with advisory day-ahead commitment schedules produced in the residual unit commitment process on a two-day-ahead basis. CAISO states that the Commission found this advisory information can help scheduling coordinators make more informed gas procurement decisions and more closely match their gas procurement with their potential gas consumption. CAISO also notes that the Commission previously found that the information could help reduce gas and electric reliability risks, and that the proposal was just and reasonable in the interim period where there was uncertainty about Aliso Canyon's operation and its impact on gas and electric reliability.[52]

8. Commission Determination

45. We accept in part and reject in part CAISO's proposed tariff revisions. Specifically, we accept CAISO's proposal to temporarily extend six of its Aliso Canyon-related tariff revisions, effective November 30, 2018, and December 16, 2018, as requested, but reject CAISO's request to extend the tariff revisions in

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[50] *Id*. at 43.

[51] *Id*.

[52] *Id*. at 44-45.

Section 39.7.1.1.1.3(d) of the CAISO Tariff related to gas price scalars.[53] We find that the temporary extension of the tariff provisions regarding use of the day-ahead gas market index,[54] after-the-fact fuel cost recovery,[55] maximum gas burn constraint,[56] competitive path assessment,[57] virtual bidding,[58] and pre-day-ahead information[59] will ensure that CAISO continues to have the measures and tools it needs to address risks associated with the limited operability of Aliso Canyon. We also note that the revisions accepted here will expire on December 31, 2019, as proposed.[60]

46. We conclude that allowing CAISO to maintain the tariff provisions accepted on a temporary basis in the prior Aliso Canyon proceedings, except the provision related to gas price scalars, is a just and reasonable approach to addressing the ongoing risks posed by the limited operability of Aliso Canyon. As CAISO reports, Southern California will likely continue to face limited operability of Aliso Canyon through the winter 2018-2019 period, which presents the risk of curtailments to gas-fired generators and, potentially, the

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[53] As discussed above, CAISO made clear in its filing that while the seven tariff provisions it proposes to extend are related, they are not interdependent and are severable, and the Commission's rejection of one tariff provision does not affect the others. *Id.* at 2, 14.

[54] CAISO, CAISO eTariff, 39.7.1 Calculation of Default Energy Bids (24.0.0), § 39.7.1.1.1.3; *id.* 6.5.2 Communications Prior to the Day-Ahead Market (16.0.0), § 6.5.2.3.4; *id.* 6.5.4 RTM Communications Before the Trading Hour (11.0.0), § 6.5.4.2.3.

[55] *Id.* 30.12 Eligibility to Submit Filing Recover Marginal Fuel-Relate Cost (4.0.0); *id.* 39.7.1 Calculation of Default Energy Bids (24.0.0), § 39.7.1.7; *id.* 40.6.8 Use of Generated Bids (18.0.0), § 40.6.8.1.6.

[56] *Id.* 27.11 Natural Gas Constraint (6.0.0); *id.* 6.2.1 Scheduling Coordinators (7.0.0), § 6.2.1.3.

[57] *Id.* 39.7.2 Competitive Path Designation (14.0.0), § 39.7.2.2.

[58] *Id.* 7.9.2 Reasons for Suspension or Limitation (9.0.0), § 7.9.2(d).

[59] *Id.* 6.5.2 Communications Prior to the Day-Ahead Market (16.0.0), § 6.5.2.2.3.

[60] CAISO filed two sets of eTariff records. One set that implements the proposed tariff revisions effective November 30, 2018 and December 16, 2018, and a second set that effectively reverts back to the original tariff language to remove the Aliso-Canyon related tariff provisions effective December 31, 2019. CAISO Transmittal at 46.

interruption of service to load.[61] We find that continuation of the temporary measures, except for the provision related to gas price scalars, for the requested periods[62] should improve scheduling coordinators' ability to manage their gas procurement and enhance their ability to recover gas procurement costs, while also providing CAISO with tools to maintain reliability and avoid adverse market outcomes related to the limited operability of Aliso Canyon.

47. We find, however, that CAISO has not demonstrated that the proposed extension of the gas price scalars is just and reasonable. The record illustrates CAISO's experience using the real-time gas price scalars since July 2016, including its experience since last winter when CAISO refined its use of the gas price scalars. Notably, DMM provided data showing that CAISO's use of the gas price scalars over the past year were not effective and adversely affected the market through weakened market power mitigation and increased bid cost recovery for the period that they were active.[63] We find DMM's analysis regarding the market impacts of the gas price scalars to be persuasive.

48. According to DMM, the gas price scalars do not realize the theoretical market efficiency benefits postulated by CAISO because they are seldom put into effect and when they are used, they take effect after the purported need. DMM asserts that, on the days CAISO used the gas price scalars between December 2017 and September 2018, the scalars were unnecessary because the large majority of gas trade prices could have been incorporated into bids within the existing thresholds, which allow 125 percent headroom. DMM also argues that the scalars were not effective because some gas trade prices were well above the level that could be incorporated in bids with the 200 percent headroom allowed when the scalars are in effect, calling into question the precision of the scalars.[64] DMM explains that comparable gas market conditions occurred on days when CAISO did activate the scalars and did not activate the scalars, and CAISO showed no evidence of different market performance.[65] Furthermore, according to DMM, only a limited

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[61] *Id.* at 13.

[62] From November 30, 2018 to December 31, 2019 for tariff provisions regarding use of the day-ahead gas market index and after-the-fact fuel cost recovery; and from December 16, 2018 to December 31, 2019 for tariff provisions regarding maximum gas burn constraint, competitive path assessment, virtual bidding, and pre-day-ahead information, as requested. *Id.* at 2-4.

[63] DMM Comments at 22-23.

[64] *Id*. at 13-14, Figures 1 and 2.

[65] *Id*. at 13-14.

number of market participants have taken advantage of the increased commitment cost bid cap.[66]

49. DMM's analysis further demonstrates that the gas price scalars are often not in effect during tight gas conditions when they would be useful and are sometimes in place during normal conditions when they are inappropriate.[67] Meanwhile, DMM's analysis also shows that the gas price scalars impose costs on consumers. Specifically, DMM estimates that generators received an additional $7 million in bid cost recovery payments as a result of the gas price scalars. Additionally, as DMM argues, the gas price scalars can weaken market power mitigation by increasing default energy bids. Accordingly, we find that, based on the record in this proceeding, CAISO has not shown that these gas price scalars provide sufficient benefits to market efficiency during times of high gas prices or gas supply limitations to justify additional costs on consumers through the weakening of market power mitigation and the increase in bid cost recovery.

50. We recognize that the Commission previously found that the gas price scalars were just and reasonable as a temporary measure. In light of the extraordinary conditions present at the time of the Aliso Phase I Order, the Commission found that CAISO's rationale for implementing gas price scalars was sound and that it was a just and reasonable proposal.[68] However, the Commission accepted that proposal on a temporary basis to address extraordinary system conditions.[69] As discussed above, in light of new data provided by DMM in this proceeding regarding the actual impacts of the measure as it has been implemented by CAISO and used by market participants, we conclude that the proposed extension of the tariff provision providing for the use of gas price scalars in Section 39.7.1.1.1.3(d) of the CAISO Tariff has not been shown by CAISO to be just and

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[66] *Id*. at 17 (citing Q1 2018 Report at 53-55). In its Q1 2018 Report, DMM reports that approximately 83 percent of capacity did not use the scalar when available to it during the first quarter of 2018.

[67] For instance, as CAISO itself states, when it detects conditions that warrant activation of the gas price scalars early in the morning, CAISO must activate them manually as part of the scheduled calculation that takes place at the end of the day each night. The gas price scalars then become effective on the next trade date. CAISO explains that due to this inherent delay in applying the gas price scalars, there may be days when they could have worked but CAISO could not have activated them in time. CAISO also explains that because it cannot switch the gas price scalars on and off dynamically, once it puts them on it may have to leave them on for some time if CAISO believes conditions may warrant their use. CAISO Transmittal at 24.

[68] Aliso Phase I Order, 155 FERC ¶ 61,224 at P 29.

[69] *Id*. P 2.

reasonable, and we therefore reject CAISO's request to extend it. In doing so, we note that CAISO still has many tools at its disposal, including the six other tariff provisions it seeks to extend the usage of through the instant proceeding, to manage gas supply limitations and ensure that generators have an opportunity to be compensated for their gas costs.

51. CAISO has stated that the gas price scalars are important tools to manage the abnormal gas conditions created by Aliso Canyon. Conversely, DMM's analysis shows that CAISO has been able to manage tight gas conditions with no noticeable detriment to market performance without employing a scalar. Further, in supporting its need for the use of a scalar, CAISO has presented evidence that is limited to a few isolated circumstances, while the body of evidence presented by DMM shows that the scalar has been largely unhelpful in most of the circumstances in which it has been used. Accordingly, we direct CAISO to submit a compliance filing, within 30 days of the date of this order, to remove the gas price scalar proposal in Section 39.7.1.1.1.3(d) of the CAISO Tariff.

52. While we find that there is merit to DMM's suggestion that the maximum gas burn constraint could be improved through additional refinement in how it is set and managed, such a proposal is not before us. As discussed above, we find that the maximum gas burn constraint in Sections 27.11 and 6.2.1.3 of the CAISO Tariff continues to be just and reasonable as a temporary measure to maintain reliability and avoid adverse market outcomes related to the limited operability of Aliso Canyon. Since CAISO has met its burden to show that its proposal to extend the maximum gas burn constraint is just and reasonable, we need not consider alternative proposals that may also be just and reasonable.[70] However, we encourage CAISO to work towards additional refinement of the software and operational process through which the maximum gas burn constraint is implemented.

53. Similarly, we deny NRG's request that we require CAISO to change the gas price it uses to run its Monday day-ahead market from the weekend gas package price to the Monday-only gas price. While this proposal could limit the need for extraordinary cost recovery filings, the ability of market participants to submit such filings ensures that NRG and other generators are able to recover any costs incurred as a result of the difference between the weekend gas package price and the Monday-only gas price. As NRG acknowledges, this proposal is not before us, and it does not render CAISO's proposal unjust and unreasonable. CAISO may make a separate section 205 filing if it

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[70] *See, e.g.*, *City of Bethany v. FERC*, 727 F.2d 1131, 1136 (D.C. Cir. 1984) (when determining whether a proposed rate was "just and reasonable," as required by the FPA, the Commission properly did not consider "whether a proposed rate schedule is more or less reasonable than alternative rate designs").

wishes to propose the tariff revisions it included in its answer in response to NRG's filing.

54. Finally, we decline PG&E's request that the Commission direct CAISO to submit reports. We find that such reporting requirements are not necessary because CAISO already releases a significant amount of information about its implementation of these tariff provisions to stakeholders, such as through the market performance and planning forum meetings. Moreover, we note that CAISO proposed to extend temporarily, until December 31, 2019, these tariff provisions, and we expect CAISO to provide an analysis of the expected impact of any permanent measures it proposes to replace these temporary measures once they expire.

The Commission orders:

(A) CAISO's tariff revisions are hereby accepted in part and rejected in part, effective November 30, 2018, and December 16, 2018, as requested, as discussed in the body of this order.

(B) CAISO is hereby directed to submit a compliance filing within 30 days of the date of this order, as discussed in the body of this order.

By the Commission. Commissioner McIntyre is not voting on this order.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.