175 FERC ¶ 61,160
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Richard Glick, Chairman;
James P. Danly, Allison Clements, and
Mark C. Christie.

California Independent System Operator Corporation — Docket No. ER21-1536-000

ORDER ACCEPTING TARIFF REVISIONS

(Issued May 25, 2021)

1. On March 26, 2021, the California Independent System Operator Corporation (CAISO) filed, pursuant to section 205 of the Federal Power Act,[1] proposed revisions to its Open Access Transmission Tariff (Tariff) to ensure CAISO has the appropriate operational tools and market rules to address tight supply conditions. In this order, we accept the revisions to be effective no later than June 15, 2021, as requested, subject to CAISO notifying the Commission of the actual effective date of the Tariff revisions within five business days of their implementation.

I. Background

2. During August 2020, California experienced extreme heat conditions that resulted in CAISO instituting rolling electricity outages on August 14 and 15. On August 14, CAISO ordered two phases of controlled load shed of 500 MW each, based on *pro rata* share across the CAISO footprint for distribution utility companies. On August 15, CAISO ordered distribution utility operators to execute about 500 MW of controlled load shed. The forecast for extreme heat continued through August 19, with the most critical days being August 17 and 18, and CAISO declared Stage 2 emergencies for both days but avoided load shed through, among other actions, conservation efforts.[2]

3. Following these events, CAISO, CPUC, and CEC undertook a root cause analysis to determine the factors contributing to the outages. The Final Root Cause Analysis[3]

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[1] 16 U.S.C. § 824d.

[2] CAISO Transmittal at 5-6.

[3] CAISO, California Public Utilities Commission (CPUC), and California Energy Commission (CEC), *Final Root Cause Analysis Mid-August 2020 Extreme Heat Wave*,

identified three major causal factors contributing to the August outages – extreme weather, resource adequacy and planning processes, and market practices. The market practices identified by the Final Root Cause Analysis as impairments to CAISO's ability to relieve the strained conditions on the CAISO grid on August 14 and 15 included under-scheduling of demand in the day-ahead market by load-serving entities or their scheduling coordinators, and convergence bidding, a form of financial energy trading used to converge day-ahead and real-time pricing.[4] In addition, the Final Root Cause Analysis found that a combination of existing real-time scheduling priorities and a previously implemented market enhancements inadvertently caused CAISO's markets to fail to account for the obscuring effects of under-scheduling and convergence bidding.[5]

4. Following the August 2020 heat events, CAISO undertook an expedited stakeholder process to consider market rule and practice changes for implementation in summer 2021 that ensure CAISO's market mechanisms accurately reflect the actual balance of supply and demand during stressed operational conditions. As a result of that stakeholder initiative, CAISO proposes Tariff revisions that will better position CAISO to maintain reliable grid operations this summer and beyond.[6]

II. CAISO Proposal

5. CAISO proposes five categories of Tariff revisions. First, CAISO proposes to provide bid cost make whole payments for hourly intertie block schedules issued through the hour-ahead scheduling process that provide energy during tight system conditions. CAISO asserts that these revisions seek to incentivize incremental imports during narrowly defined operating conditions.[7]

6. Second, CAISO proposes Tariff revisions to improve the bidding, dispatch, and pricing of reliability demand response resources (RDRR) in order to help RDRRs participate more effectively in CAISO's real-time markets, thereby improving dispatch

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January 13, 2021, http://www.caiso.com/Documents/Final-Root-Cause-Analysis-Mid-August-2020-Extreme-Heat-Wave.pdf.

[4] Final Root Cause Analysis at 5.

[5] CAISO Transmittal at 6-9.

[6] *Id.* at 8-9.

[7] *Id.* at 3.

efficiency and avoiding the need for CAISO to rely on manual dispatch of these resources.[8]

7. Third, CAISO proposes two revisions to improve energy imbalance market (EIM) operations and coordination: (1) the addition of an uncertainty requirement to the capacity test portion of the EIM resource sufficiency evaluation that captures a balancing authority area's net load variability; and (2) a requirement to use an automated market feature that updates the EIM Entity balancing authority area's (BAA) "mirror resource" schedule when the market awards an import at a CAISO intertie scheduling point sourced from the EIM BAA. CAISO asserts that these changes will better ensure that each BAA brings sufficient resources into the real-time market and improve operational coordination between EIM BAAs.[9]

8. Fourth, CAISO proposes to revise the pricing of operating reserves when dispatched to provide energy in a system emergency in order to avoid deflating real-time prices during tight system conditions and to help attract additional supply when most needed.[10]

9. Fifth, CAISO proposes two improvements to the independent study interconnection process to address limitations on an independent study interconnection customer's ability to create and deliver capacity that load-serving entities can procure this summer: (1) elimination of the cap from behind-the-meter expansion process; and (2) authorization to award available interim deliverability on a temporary basis.[11] Each of these proposed revisions will be discussed in greater detail in Section IV.B. below.

10. CAISO states that, from a substantive perspective, these categories of revisions are separate and discrete from each other and, as such, requests that the Commission evaluate the justness and reasonableness of each proposed Tariff revision on its own merits.[12]

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[8] Resources may provide load curtailment in CAISO's markets through two demand respond models: proxy demand resources or reliability demand response resources. A proxy demand resource is an economically dispatched demand response resource, and an RDRR is dispatched only when CAISO's system is near or in a system emergency. *Id.* at 22.

[9] *Id.* at 3-4.

[10] *Id.* at 5.

[11] *Id.* at 3-5.

[12] *Id.* at 2.

11. CAISO emphasizes that the proposed Tariff revisions must be implemented by the start of this summer when high loads can occur. Therefore, CAISO requests that the Commission issue an order by May 25, 2021, with an effective date of not later than June 15, 2021. CAISO states that this will provide CAISO and market participants sufficient time to implement these changes. CAISO also requests authorization to notify market participants of the effective date of the Tariff changes at least five days before implementation.[13]

III. Notice of Filing and Responsive Pleadings

12. Notice of CAISO's filing was published in the *Federal Register*, 86 Fed. Reg. 17,379 (Apr. 2, 2021), with interventions and protests due on or before April 16, 2021. Timely motions to intervene were filed by the City of Redding, California; Brookfield Renewable Trading and Marketing LP; PacifiCorp; Salt River Project Agricultural Improvement and Power District; Alliance for Retail Energy Markets; Vistra Energy Corp. and Dynegy Marketing and Trade, LLC (jointly); Balancing Authority of Northern California; California Municipal Utilities Association; California Energy Storage Alliance; Imperial Irrigation District; Modesto Irrigation District; California Department of Water Resources State Water Project; and Northern California Power Agency. California Public Utilities Commission filed a timely notice of intervention. Timely motions to intervene and comments were filed by Calpine Corporation (Calpine); the Cities of Anaheim, Azusa, Banning, Colton, Riverside, and Pasadena, California (Six Cities); Southern California Edison Company (SoCal Edison); the Bonneville Power Administration (Bonneville); the Department of Market Monitoring of the California Independent System Operator Corporation (DMM); the EIM Parties;[14] Pacific Gas and Electric Company (PG&E); San Diego Gas & Electric Company (SDG&E), and Powerex Corporation (Powerex). On April 26, 2021, CAISO filed an answer.

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 (2020), the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

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[13] *Id.*

[14] For purposes of this proceeding, the EIM Parties are Arizona Public Service Company, Idaho Power Company, Portland General Electric, Salt River Project Agricultural Improvement and Power District, and Tucson Electric Power.

14. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2020), 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

1. General Matters

a. Comments

15. Six Cities, Powerex, SoCal Edison, and SDG&E[15] support the package of Tariff revisions proposed here as a modest, incremental step towards enhancing reliability for summer 2021 and urge the Commission to accept these revisions, but emphasize the need for continued efforts to more fully address the challenges experienced by CAISO during the August 2020 heat events.[16] PG&E states that it generally supports CAISO's filing, but nonetheless offers comments and recommendations to ensure California customer rates remain just and reasonable. In addition, PG&E expresses concern about the expedited timeline for developing and implementing these revisions and, therefore, requests that the Commission require CAISO to include a sunset date of May 31, 2022 for these Tariff provisions and require DMM to conduct ongoing monitoring on the performance and effectiveness of these Tariff revisions.[17]

b. CAISO Answer

16. CAISO asserts that PG&E offers no explanation about why it is appropriate to limit CAISO's proposal to one year. According to CAISO, PG&E does not explain why the proposed tariff revisions may be just and reasonable this summer, but will no longer be just and reasonable after May 2022. CAISO argues that the Commission should

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[15] We note that SDG&E states that it has concerns regarding CAISO's proposal related to the priority of wheeling transactions. SDG&E Comments at 2-3. However, we will not address these comments here, as CAISO did not propose such revisions in the instant filing. Proposed revisions to CAISO's Tariff rules pertaining to wheeling transactions are currently pending before the Commission in Docket No. ER21-1790-000.

[16] Six Cities Comments at 2-3; Powerex Comments at 2-3; SDG&E Comments at 2-3; SoCal Edison Comments at 2.

[17] PG&E Comments at 3-5.

disregard PG&E's arguments and approve CAISO's proposal as just and reasonable without modification or sunset.[18]

c. Determination

17. We find CAISO's proposed Tariff revisions to be just and reasonable and not unduly discriminatory or preferential and therefore accept them, to be effective no later than June 15, 2021, as requested, subject to CAISO notifying the Commission of the actual effective date of the Tariff revisions within five business days of their implementation. In particular, we find that CAISO's proposed Tariff revisions are just and reasonable measures that should improve CAISO's ability to manage potentially tight system conditions and constitute improvements for each of the specified areas that can be reasonably implemented in time for summer 2021. We deny PG&E's request that the Commission require CAISO to include a sunset date for the Tariff provisions. Although we agree with commenters that more comprehensive reform may be beneficial, we find that CAISO's proposal is just and reasonable and thus do not find that a sunset date is warranted. Finally, as discussed in more detail below, we decline to require DMM to conduct additional monitoring on the performance and effectiveness of these Tariff revisions.

2. Make Whole Payments for Hourly Block Economic Imports

a. CAISO Proposal

18. CAISO proposes to provide bid cost make whole payments for hourly block intertie schedules issued through the hour-ahead scheduling process that provide incremental energy during tight system conditions. CAISO states that, under the existing Tariff, the hour-ahead scheduling process produces operationally binding hourly block energy schedules for imports and exports, but CAISO settles these block intertie schedules at prices generated by its 15-minute market. CAISO explains that it established this pricing rule when it introduced its 15-minute market to reduce real-time imbalance energy offset charges. CAISO states that, although implementation of the 15-minute market enables the alignment of prices for intertie transactions, internal generation, and load, it continued to utilize the hour-ahead scheduling process to clear hourly block intertie schedules based on advisory locational marginal prices due to hourly scheduling practices throughout the Western Interconnection. In addition to settling these schedules at the 15-minute market price, CAISO states that it has also adopted a rule

[18] *Id.* at 19-20.

making hourly block intertie schedules ineligible for bid cost recovery in order to encourage economic bids at the interties.[19]

19. CAISO asserts that the current rules may create disincentives for suppliers to offer incremental imports into the real-time market. CAISO explains that, during stressed grid conditions, the risk of receiving a payment less than bid price can increase, in part, because CAISO may take out-of-market actions before the 15-minute market that result in 15-minute prices clearing at amounts below an hour-ahead intertie block bid price. As a result, suppliers in the hour-ahead scheduling process may face a charge as opposed to a payment to deliver needed imports.[20]

20. To address this disincentive, CAISO proposes to add Tariff provisions for an hourly bid cost make whole payment for real-time hourly block intertie schedules that provide energy during tight system conditions. CAISO asserts that this proposal will ensure that scheduling coordinators receive payments at least equal to their bid price during these limited trading hours. CAISO states that the make whole payment would reflect the positive difference between a scheduling coordinator's bid price and the hourly average 15-minute market locational marginal price for each of the hours in which CAISO identifies tight system conditions exist.[21] CAISO states that eligibility for this make whole payment will only occur during hours in which CAISO has issued a notice that it anticipates or is experiencing an operating reserve shortage. Further, CAISO states that the make whole payment will apply only to 15-minute market optimal energy provided by the hour-ahead scheduling process that is either incremental to any day-ahead market energy schedule or decremental to a day-ahead export schedule. CAISO notes that the make whole payment will not be available to any intertie resources subject to the hour-ahead scheduling process reversal rule[22] or intertie schedule deviation rules[23] during the applicable operating hour, or to wheeling through schedules because the intent

[19] CAISO Transmittal at 13-15.

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

[21] *Id.* at 19.

[22] The hour-ahead scheduling process reversal rule is a charge for a schedule that clears the day-ahead market at the interties, but is wholly or partially reversed through a 15-minute market schedule. CAISO Tariff, § 11.32.

[23] The intertie schedule deviation rules provide for the assessment of an over- or under-delivery charge to a scheduling coordinator with an intertie transaction if the intertie resource supporting that transaction deviates from the awarded schedule. CAISO Tariff, § 11.31.

of the proposal is to obtain incremental import supply when system conditions reflect an operating reserve shortage.[24]

21. CAISO proposes to allocate uplift costs from the make whole payments to scheduling coordinators for measured demand. CAISO argues that the proposed cost allocation methodology is consistent with cost causation principles and is also similar to how CAISO currently allocates the costs for real-time market bid cost recovery payments and the costs of operating reserves themselves.[25]

22. Finally, CAISO proposes Tariff authority to suspend the proposed make whole payment rule if it concludes that the payment provision is not resulting in incremental supply. For example, CAISO explains that scheduling coordinators could submit offsetting export and import bids that could have different real-time settlements to earn positive revenue in the form of the make whole payment whenever the hour-ahead scheduling process or the 15-minute market settle the transactions at different prices, but CAISO would not be receiving any incremental supply in the real-time market. Given the limited trading hours in which the make whole payment will apply, CAISO states that it does not believe such bidding practices are likely, but asserts that the Commission should authorize CAISO to prevent adverse market outcomes if it detects such behavior. CAISO notes that the proposed suspension authority is severable from the remainder of these proposed revisions.[26]

b. <u>Comments</u>

23. DMM asserts that the proposal removes the risk that imports could get paid below their offer price in any given hour during tight system conditions and, therefore, the Commission should accept CAISO's proposal to eliminate this potential disincentive to submit offers for hourly block imports to CAISO during tight system conditions.[27]

24. PG&E states that it supports the make whole payment proposal as a reasonable short-term measure but raises concerns that it could be subject to gaming opportunities and could result in unjustified uplift costs. First, PG&E states that it is concerned that shifting the compensation risks associated with hourly block schedules from resource owners to CAISO load could result in an increase in their use over other, more granular

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[24] CAISO Transmittal at 16-18.

[25] *Id.* at 20-21.

[26] *Id.* at 18.

[27] DMM Comments at 2-3.

or flexible bidding options that Order No. 764[28] encouraged but remain significantly underused in CAISO's markets today. Second, PG&E notes that the Commission previously approved CAISO's proposal to make hourly intertie bids ineligible for bid cost recovery because of concerns about gaming opportunities and uplift costs, which, according to PG&E, points to the risk of strategic bidding behavior and unjust and unreasonable outcomes that can result from additional payments for hourly block imports.[29] However, PG&E acknowledges that the instant proposal differs from previous settlement rules and appropriately limits eligibility for make whole payments to emergency conditions. For these reasons, PG&E requests that the Commission approve the proposed suspension authority but also require ongoing monitoring and an after-the-fact cost-benefit analysis of the use of the make whole payment by CAISO and the DMM.[30]

c. CAISO Answer

25. CAISO asks that the Commission reject PG&E's request for ongoing monitoring and evaluation as unnecessary. CAISO highlights that it has already committed to monitor bidding activity associated with the periods in which the make whole payment rule is in effect. CAISO also states that it publishes monthly market results and analysis that it makes available to its stakeholders through its Market Performance and Planning Forum. Further, CAISO notes that DMM already prepares comprehensive reports that assess market outcomes and provide detailed analysis on at least a quarterly basis.[31]

d. Determination

26. We accept CAISO's proposal to allow hourly bid cost make whole payments for real-time hourly block intertie schedules that provide energy during periods of actual or anticipated operating reserve shortages as a just and reasonable approach to eliminating disincentives for import suppliers to provide incremental energy during tight system conditions. In addition, we find that CAISO has provided adequate specification of the circumstances under which it may suspend these make whole payments, as summarized

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[28] *Integration of Variable Energy Resources*, Order No. 764, 139 FERC ¶ 61,246, *order on reh'g and clarification*, Order No. 764-A, 141 FERC ¶ 61,232 (2012), *order on clarification and reh'g*, Order No. 764-B, 144 FERC ¶ 61,222 (2013).

[29] PG&E Comments at 6 (citing *Cal. Indep. Sys. Operator Corp*., 146 FERC ¶ 61,204 (2014)).

[30] *Id.* at 5-7.

[31] CAISO Answer at 6-7.

above.[32] Thus, we find that CAISO's proposed suspension authority is a reasonable measure for guarding against unintended consequences, particularly given the expedited nature of the stakeholder initiative that resulted in this proposal.

27. We will not require an ex post cost-benefit analysis, as requested by PG&E. We find that this provision is not likely to result in significant uplift because (1) this new make whole payment will apply only during very limited operating hours, and (2) CAISO states that it will closely monitor the bidding activity associated with the periods in which this make whole payment rule is in effect and will suspend the make whole payment provision if it is not resulting in incremental supply. Further, we find that the limited applicability of the rule, combined with CAISO's suspension authority if it concludes that the rule is not resulting in incremental supply, should sufficiently guard against adverse market outcomes. Moreover, CAISO and DMM already perform monitoring and analysis of market results, and we expect that these analyses would include the use and impact of this payment rule.

3. Dispatch of Reliability Demand Response Resources

a. CAISO Proposal

28. CAISO proposes to extend its hourly block and 15-minute bidding options to RDRRs. Specifically, CAISO proposes to allow scheduling coordinators to specify in the Master File whether the RDRR can be dispatched in the real-time market in hourly, 15, or five-minute intervals based on its operational and technical constraints. If RDRRs do not make an election, CAISO proposes to use five-minute intervals as the default. CAISO states that it initially designed the hourly block bid and 15-minute bid options for intertie resources that frequently require additional time to secure transmission rights across BAAs, and subsequently expanded them to proxy demand resources due to their constraints. CAISO proposes to further extend these bidding options to RDRRs to allow them to better reflect their resources' characteristics.[33]

29. CAISO explains that its current rules do not recognize RDRRs' specific characteristics, which limits the effectiveness of their participation in the markets and can ultimately lead to price suppression. For instance, CAISO states that current rules fail to recognize that RDRRs are large load resources that may be incapable of responding to five-minute dispatches without more notice, or which cannot move dynamically within

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[32] The Commission previously accepted CAISO's proposal for Tariff authority to suspend convergence bidding on the basis that CAISO specified in its Tariff the conditions under which it would suspend such bidding. *Cal. Indep. Sys. Operator Corp.*, 130 FERC ¶ 61,122, at P 88 (2010).

[33] CAISO Transmittal at 25.

the hour. CAISO asserts that during the August heat events, it observed that RDRR dispatch likely contributed to real-time price suppression because the real-time market optimization failed to capture RDRRs' resource-specific characteristics by only considering RDRRs in the five-minute dispatch, which has an advisory run of 65 minutes. CAISO explains that RDRRs' start-up and run times often extend beyond the optimization horizon, which can lead to non-optimal schedules. Because of this, CAISO asserts that it often resorts to manually dispatching RDRRs, which results in the market optimization seeing a drop in demand leading to price suppression.[34]

30. CAISO explains that its proposal will enable it to notify scheduling coordinators further in advance of dispatch than under current rules. CAISO states that scheduling coordinators that submit hourly block bids for RDRRs will receive notification between 45 and 60 minutes before the trading hour of their binding schedules with the same MWh award for each of the four 15-minute intervals within the hour.[35] CAISO states that scheduling coordinators electing to submit 15-minute block bids will receive binding schedules in CAISO's 15-minute market and advisory schedules through the hour ahead scheduling process. CAISO states that more flexible but constrained resources could elect to be dispatched on a 15-minute basis, while the most flexible resources can continue to use the five-minute market. CAISO asserts that these proposed revisions leverage existing market functionalities for resources that face similar constraints and will improve the dispatch of RDRRs.[36]

b. <u>Comments</u>

31. DMM states that it supports the proposed RDRR enhancements, asserting that these revisions should increase efficiency of the real-time market's solutions and help prevent inappropriate price suppression.[37]

32. Calpine states that it supports much of CAISO's proposal to incorporate RDRRs into the market processes as a positive step in correcting price suppressive impacts, but contends that it is important for CAISO to closely monitor RDRR elections to participate in the hourly market to ensure that broadened market participation does not perversely suppress market clearing prices. Calpine explains that it does not object to CAISO's

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[34] *Id.* at 24.

[35] CAISO notes that RDRRs making the hourly election will not be eligible for bid cost recovery, consistent with its rules that intertie resources and proxy demand resources electing to use hourly block bids are ineligible for bid cost recovery. *Id.* at 25.

[36] *Id.* at 26.

[37] DMM Comments at 4.

proposal to expand participation; however, Calpine requests that the Commission direct CAISO to submit an informational filing reporting on the migration of RDRRs to hourly markets and any resulting price-suppressive effects. In addition, Calpine recommends that CAISO should be required to consider modeling any hourly discrete RDRR resources in a manner similar to continuous peaker pricing, which would allow them to set marginal prices in sequential markets.[38]

c. <u>CAISO Answer</u>

33. CAISO contends that the migration of RDRRs to the hourly markets, as speculated by Calpine, is improbable. CAISO notes that it previously extended the hourly and 15-minute options to proxy demand response resources and the majority of those resources have elected to be 15- or five-minute dispatchable resources. CAISO asserts that there is no reason to expect RDRRs to differ. Also, CAISO argues that the hourly option is no more attractive to RDRRs than the 15- or five-minute options unless the RDRRs have operational limitations that warrant hourly bids and schedules, in which case their schedules would be subject to price fluctuations within the hour and ineligible for bid cost recovery. Moreover, CAISO asserts that the fact that hourly RDRRs would not set the price in the 15-minute market or real-time dispatch is an intended outcome of the market design and, therefore, does not constitute undesirable price suppression. Finally, CAISO argues that Calpine's proposal would cause price inflation because RDRRs must bid above 95% of the energy bid cap and, therefore, forcing more RDRRs into the 15- and five-minute markets could result in price increases.[39]

34. CAISO contends that requiring it to report the number of RDRRs that elect to use the hourly option is unnecessary and would not likely lead to any further action. CAISO notes that RDRRs are demand response resources consisting of air conditioner cycling programs, industrial load centers, and other retail end users and, as such, it would be unreasonable to expect them all to be 15- or five-minute dispatchable and would also lead to price distortions. Further, CAISO states that it and DMM consistently monitor and audit demand response providers to verify accurate bidding and settlement, making the reporting requested by Calpine unnecessary.[40]

d. <u>Determination</u>

35. We find that CAISO's proposal to expand RDRR participation in its markets, by adding hourly and 15-minute dispatching options for RDRRs, is a just and reasonable

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[38] Calpine Comments at 3-4.

[39] CAISO Answer at 8-9.

[40] *Id.* at 10.

measure that will improve dispatch efficacy and the pricing of RDRRs. Providing RDRRs more flexibility with these enhanced bidding and dispatch options will help ensure that RDRRs can better reflect the characteristics of their resources in the CAISO markets. By including RDRRs in the market optimization and pricing them accordingly, this revision, along with others in this filing, should help avoid manual dispatch of these resources and promote more accurate price signals when system conditions are tight.

36. Finally, we decline Calpine's request that the Commission direct CAISO to submit an informational filing on the issue of RDRR migration to the hourly block bid option. As CAISO notes, both it and DMM consistently monitor and audit demand response providers,[41] and CAISO also regularly discusses market performance issues with its stakeholders. Further, having found CAISO's RDRR proposal to be just and reasonable, as discussed herein, we need not address Calpine's request to require CAISO to consider alternate modeling options for RDRRs.[42]

4. <u>Energy Imbalance Market Operations</u>

a. <u>CAISO Proposal</u>

37. CAISO proposes to include net load uncertainty in the capacity test within the EIM resource sufficiency evaluation, which is used to validate each EIM entity BAA has sufficient capacity to meet its load and export obligations prior to the EIM. CAISO states that a net load uncertainty requirement would account for the net load forecast error between the 15-minute and five-minute real-time market dispatch, adjusted for the EIM diversity benefit.[43] CAISO explains that the capacity test, which applies to all EIM BAAs at T-40 minutes to the hour, ensures that a BAA possesses sufficient capacity to meet its load and export obligations prior to the EIM. If a BAA fails the capacity test portion of the resource sufficiency evaluation, CAISO limits the EIM energy transfers into the BAA to the transfer level in the interval the BAA most recently passed the test.[44]

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[41] *Id.*

[42] *See, e.g., Oxy USA, Inc. v. FERC*, 64 F.3d 679, 691 (D.C. Cir. 1995) (*Oxy USA*); *City of Bethany v. FERC*, 727 F.2d 1131, 1136 (D.C. Cir. 1984) (*City of Bethany*) (when determining whether a rate was just and reasonable, the Commission properly did not consider "whether a proposed rate schedule is more or less reasonable than alternative rate designs").

[43] CAISO Transmittal, Attachment C, at 4.

[44] CAISO Transmittal at 28.

38. CAISO explains that during the August 2020 firm-load shedding events, the CAISO BAA passed the capacity test within the resource sufficiency evaluation. CAISO asserts that a BAA's ability to pass the capacity test during emergency conditions indicates potential shortcomings in the design or implementation of the test. CAISO explains that including uncertainty within the capacity test should reduce the potential for a BAA to inappropriately lean on the EIM to address uncertainty.[45]

39. CAISO states that it recognizes that including the uncertainty requirement within the capacity test may cause EIM entity BAAs to fail the capacity test more frequently, thereby limiting the EIM energy transfers to the capacity deficient BAA. However, CAISO states that it believes that losing the incremental economic activity the EIM provides during tight supply conditions is an appropriate trade off to ensure BAAs participate in the EIM with sufficient capacity to meet their obligations. CAISO emphasizes that BAAs in the EIM should focus on procuring sufficient capacity, including capacity to address uncertainty, to meet all of their obligations before the EIM to prevent a BAA in the EIM from inappropriately relying on the EIM to meet its net load needs.[46]

40. As a safeguard during the first 12 months of including the uncertainty requirement in the capacity test, CAISO proposes Tariff authority to disable the uncertainty requirement three business days after issuing a market notice explaining how unintended resource sufficiency test failures exceed the reasonably expected results (i.e., economic transfers are being unduly limited in non-tight supply conditions). CAISO states that in exercising this authority, it will consider the frequency, magnitude, and circumstances associated with any test failures. CAISO states that it would submit an informational report to the Commission within 30 days of disabling the feature explaining the circumstances of its conclusion. CAISO asserts that this ability will serve as a safeguard to reassure entities concerned that an incremental change to a complex evaluation may produce unintended results, while allowing CAISO to implement the proposal for summer 2021. CAISO acknowledges that some stakeholders would prefer that it make no changes to the resource sufficiency test until it completes a more comprehensive analysis. CAISO contends that there is no reason to defer including the uncertainty requirement, as it will immediately improve the resource sufficiency evaluation and includes safeguards against unintended consequences if they arise. CAISO also notes that it has committed to undertake a more comprehensive stakeholder process to examine the resource sufficiency evaluation starting in April 2021.[47]

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

[46] *Id.* at 29.

[47] *Id.* at 30.

41. Next, CAISO proposes to require EIM entity BAAs to use the automated market feature that updates an EIM entity BAA's "mirror resource" schedule when the market awards an import at a CAISO intertie scheduling point sourced from an EIM entity's BAA. CAISO explains that using mirror system resources enables system resources to participate in the CAISO markets by modeling the energy interchange out of the EIM entity BAA separately from transfers resulting from the EIM's resource-specific dispatch.[48]

42. Under the current Tariff, an EIM entity scheduling coordinator can update mirror resources either manually or on an automated basis. CAISO explains that manually updating mirror resources can increase the risk of error, particularly under stressed conditions, and adversely affect reliability. For example, CAISO asserts that one day during last year's summer heat events, system anomalies and operational issues occurred because CAISO's market systems and an EIM BAA used incorrect information. To eliminate the risk of manual update errors and thus ensure correct modeling of cleared interchange transactions between CAISO and the EIM entity, CAISO proposes to require mirror resources to be updated on an automated basis.[49]

b. <u>Comments and Protest</u>

43. The EIM Parties and Bonneville assert that CAISO's proposal to include an uncertainty requirement in the capacity test is a step in the right direction but that more extensive changes are needed to inhibit one BAA from leaning on another.[50] DMM asserts that requiring BAAs to provide sufficient capacity to meet a reasonable amount of uncertainty in addition to forecasted load should better ensure that each BAA provides sufficient resources to the real-time market, but also notes that it supports continued work on improving the tests.[51]

44. Bonneville and the EIM Parties assert that the resource sufficiency evaluation should be redesigned for accuracy, effectiveness, and equitability. In addition, the EIM Parties assert that simple and effective consequences for failing the resource sufficiency evaluation should be developed. The EIM Parties further contend that the interaction

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[48] *Id.* at 31-32.

[49] CAISO notes that due to an oversight in manually updating a mirror resource's schedule during last summer's tight conditions, the mirror resource did not reflect the intertie schedule change resulting in approximately 1200 MW area control error deviation within an EIM entity's BAA. *Id.* at 31-32.

[50] EIM Parties Comments at 6-7; Bonneville Comments at 3.

[51] DMM Comments at 4-5.

between EIM transfers and EIM resource sufficiency should be examined and redesigned to the extent necessary to ensure the resource sufficiency evaluation accurately assesses each BAA's ability to meet its obligations on a stand-alone basis.[52] The EIM Parties ask the Commission to direct CAISO to continue stakeholder discussions on this topic. Likewise, Bonneville requests that CAISO establish milestones or a timeline for its upcoming policy initiative to further enhance the resource sufficiency evaluation.[53]

45. PG&E asks the Commission to reject the addition of the net load uncertainty requirement to the capacity test portion of the EIM resource sufficiency evaluation. PG&E argues that adding the uncertainty requirement could introduce adverse consequences such as causing a BAA to fail the test when it actually has sufficient capacity and making it more difficult for individual load serving entities to ascertain the appropriate amount of forward capacity to procure to ensure the entire BAA can pass the test. PG&E notes that the Commission has previously rejected requests for forward capacity obligations as part of the EIM. Further, PG&E asserts that the uncertainty requirement could result in transfers to CAISO or other BAAs being capped during potential emergencies if BAAs fail the capacity test more often, thereby jeopardizing grid reliability. In addition, PG&E contends that it will be difficult for market participants and operators to have assurance that the test is working as intended, because of recent calculation errors and the complex interactions and inputs that affect the test. Should the Commission accept CAISO's proposal, PG&E asks the Commission to require CAISO to monitor and provide regular reports on the impact of these changes. Finally, PG&E states that it supports CAISO's proposed ability to disable the uncertainty requirement in the event of unintended resource sufficiency evaluation failures.[54]

c. <u>CAISO Answer</u>

46. In response to PG&E, CAISO emphasizes that making the capacity test more stringent will not create an unreasonable or unnecessary level of unpredictability regarding the procurement obligation of a balancing authority or load serving entity within a BAA. CAISO asserts that the resource sufficiency test, including the capacity test, does not create a forward procurement obligation for a balancing authority or load serving entity within a BAA. According to CAISO, the capacity test only determines whether each BAA is separately able to meet its obligations for all 15-minute intervals of an operating hour. CAISO acknowledges that failure of the capacity test under stressed

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[52] EIM Parties Comments at 7.

[53] Bonneville Comments at 7.

[54] PG&E Comments at 10-12.

conditions may signal that additional capacity should be procured on a long-term basis, but that determination is not established through the resource sufficiency evaluation.[55]

47. CAISO states that there is no need to undertake any further monitoring or reporting regarding the resource sufficiency evaluation, as PG&E requests. CAISO also notes that it already provides information concerning the performance of the resource sufficiency evaluation through its Market Performance and Planning Forum. CAISO reiterates its commitment to consider further improvements to the resource sufficiency evaluation in a future stakeholder initiative, but asserts that there is no need for the Commission to impose an obligation for it to file a specific timeline for an initiative which is beyond the scope of this proposal.[56]

d. Determination

48. We accept as just and reasonable CAISO's two proposals to improve EIM operations and coordination. First, we accept CAISO's unopposed proposal to require use of the automated market feature that updates an EIM entity BAA's mirror resource schedule when the market awards an import at a CAISO intertie scheduling point sourced from an EIM entity's BAA. By requiring automatic updates to mirror resource information, CAISO should avoid the risk of the type of errors that occurred through the manual update process and caused system anomalies and operational issues during last summer's heat event.

49. Second, we accept CAISO's proposal to include a net load uncertainty requirement in the capacity test portion of the EIM resource sufficiency evaluation as just and reasonable, because the modified test should better ensure that each BAA has sufficient resources to cover its load obligations. By effectively increasing the requirement to pass the capacity test by the forecast net load uncertainty amount, BAAs will need to procure sufficient capacity to meet all their obligations before turning to the EIM. Thus, this proposed Tariff revision should help prevent a BAA in the EIM from inappropriately leaning on neighboring BAAs to meet its net load needs.

50. We find that CAISO's proposed Tariff authority to disable the inclusion of the uncertainty requirement will serve as a reasonable safety net in the event the uncertainty requirement causes unintended resource sufficiency evaluation failures. We find that CAISO has adequately specified the conditions under which it will disable the feature in

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[55] CAISO Answer at 14.

[56] *Id.* at 11.

the Tariff and that its proposal for a further informational filing to the Commission on the issue will provide additional transparency to market participants.

51. We are not persuaded by PG&E's arguments in favor of rejecting CAISO's proposal to include the uncertainty requirement in the resource sufficiency evaluation. First, we find PG&E's concern that CAISO's proposal will introduce confusion as to how much capacity load serving entities need to procure to be misplaced. The proposed uncertainty requirement will apply to each BAA, not to an individual load serving entity. Further, PG&E appears to misconstrue the objective of the capacity test as creating a forward procurement obligation for the BAA or a load serving entity within a BAA. However, the capacity test is a real-time evaluation to determine whether a BAA has submitted sufficient schedules and bids to meet its expected demand and does not establish forward capacity procurement requirements.[57] With respect to PG&E's claim that the Commission should reject the addition of the uncertainty requirement because it previously rejected requests for forward capacity obligations in the EIM, we find that PG&E again mistakes the purpose of the capacity test and misinterprets the Commission's prior finding. In the same order PG&E cites, the Commission accepted CAISO's proposed resource sufficiency evaluation to ensure BAAs participate in the EIM with sufficient resources to prevent leaning among BAAs.[58] Here, the Commission is similarly accepting a proposed enhancement to the existing resource sufficiency test to continue to ensure BAAs participate with sufficient capacity to meet their own load needs in real-time.

52. We are also unpersuaded by PG&E's argument that increased failures of the capacity test could compromise reliability due to transfers between BAAs being capped during emergencies. As noted above, the EIM requires that each BAA provide sufficient resources to serve its own load reliably. We agree with CAISO that, to the extent EIM transfers are limited and additional external supply is available to a BAA, a BAA can still access that external supply outside of the EIM via an emergency operator action. Therefore, by helping to ensure that each BAA procures sufficient capacity to serve its own load, reliability should be enhanced making the capacity test more rigorous.

53. With respect to PG&E's contention that it will be difficult for market participants and operators to have assurance the test is working as intended, we find that CAISO's

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[57] CAISO Answer at 13-14.

[58] *Cal. Indep. Sys. Operator Corp.*, 147 FERC ¶ 61,231, at P 122 (2014) ("We accept CAISO's proposal regarding EIM resource sufficiency and its proposed measures for the prevention of leaning […] Overall, we find CAISO's proposal to be reasonable, as it allows EIM participants to gain the benefits of increased resource diversity, while preventing them from inappropriately leaning on other BAAs.").

proposed Tariff authority to permit it to disable the feature if certain conditions arise and submit a filing to the Commission on the issue should provide PG&E assurance that stakeholders will be informed if the test is not operating as expected. Furthermore, both DMM and CAISO regularly provide information on the performance of the resource sufficiency evaluation in various reports and fora. For instance, DMM reports on resource sufficiency evaluation failures in the EIM in its quarterly Reports on Market Issues and Performance.[59] CAISO also notes that it provides information on the performance of the resource sufficiency evaluation through its Market Performance and Planning Forum, which CAISO holds every two months.[60] These existing reports should provide transparency to stakeholders on the inclusion of the uncertainty requirement.

54. Finally, we decline to require CAISO to file a specific timeline to undertake a stakeholder process to comprehensively evaluate the resource sufficiency evaluation, as requested by Bonneville. However, we acknowledge CAISO's stated commitment to begin such a process in April 2021 and we expect that CAISO will follow through with its plan to work with stakeholders on this issue.

5. Pricing of Operating Reserves During System Emergencies

a. CAISO Proposal

55. CAISO proposes to revise its Tariff to price all operating reserves at the applicable energy bid cap when dispatched to provide energy in a system emergency and CAISO has run out of economic bids. CAISO's Tariff specifies that contingency-only reserves are operating reserves that have been designated as available to be dispatched to provide energy only in the event of a contingency or an imminent or actual system emergency, such as happened last August in CAISO.[61] In the day-ahead market, a scheduling coordinator may designate its bid to provide spinning or non-spinning reserves as contingency-only.[62] All spinning and non-spinning reserves procured in the real-time markets (including the hour-ahead scheduling process, 15-minute market, and real-time

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[59] *See, e.g.,* CAISO, *Q4 2020 Report on Market Issues and Performance*, (April 28, 2021) http://www.caiso.com/Documents/Report-2020-Fourth-Quarter-Report-on-Market-Issues-and-Performance-April-28-2021.pdf#search=market%20issues%20and%20performance.

[60] CAISO Answer at 6.

[61] CAISO Tariff at § 34.10 and Appendix A.

[62] *Id*. § 30.5.

dispatch) are treated as contingency-only.[63] Under extremely tight system conditions, CAISO can "arm" load for shedding in order to provide the non-spinning reserves needed to meet Western Electricity Coordinating Council reserve requirements. In other words, CAISO can rely on the controlled dropping of load to serve as operating reserves.[64] Arming load to serve as operating reserves allows CAISO to release conventional resources that had been providing operating reserves not designated as contingency-only (i.e., *non*-contingency only reserves) to provide energy.

56. CAISO states that, under its current Tariff, if it dispatches contingency-only reserves in response to a system emergency that occurs because it has run out of economic bids (but no contingency event has occurred), CAISO prices the contingency-only reserves at the hard energy bid cap. However, when load is armed to provide reserves, and generation providing non-contingency-only reserves is released into the bid stack to provide energy and dispatched, CAISO prices those non-contingency reserves at their bid price. CAISO states that this pricing construct contributed to lower than expected prices during the August 2020 heat event, whereas real-time prices under those conditions should have been higher to signal the need for more energy and avoid potential deflation of real-time prices. CAISO asserts that pricing all reserves dispatched to provide additional energy during a system emergency at the bid cap will signal tight system conditions and avoid sending incorrect price signals to market participants. CAISO explains that it expects the market will price energy based on this enhancement sparingly, if ever, because system emergencies are rare and emergencies that require dispatch of operating reserves to meet base demand even more exceptional. CAISO asserts that the proposed Tariff revisions enhance the current pricing practice, avoid price deflation, and help attract additional supply. Finally, CAISO states that the revisions are consistent with the principles of shortage pricing and will result in better price formation and reliability enhancements.[65]

b. Comments and Protest

57. DMM states that it supports this proposal as a reasonable extension of how contingency-only reserves are priced when these resources are called upon to provide energy that will help ensure that prices are relatively high when system conditions are

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[63] *Id*. § 34.2.3.

[64] CAISO states that arming load is a process where CAISO system operators inform load serving entities to make all preparations necessary to be able to drop load in a controlled manner if a generation contingency were to occur. CAISO Transmittal at 33.

[65] *Id.* at 32-35.

extremely tight.[66] Calpine states that the proposal is a small step forward, but that it hopes the Commission will encourage CAISO to pursue its stakeholder process to develop a more comprehensive scarcity pricing proposal that provides price signals sufficiently in advance of the emergency conditions of the type that arose in the summer of 2020.[67] SoCal Edison emphasizes the importance of developing a comprehensive scarcity pricing and system market power mitigation framework throughout the regional western markets.[68]

58. PG&E argues that the Commission should require modifications to CAISO's proposal related to pricing operating reserves during system emergencies. PG&E asserts that allowing a reserve resource with an unverified-cost bid to set the market price at $2,000/MWh creates an opportunity for suppliers to maximize short-term profits by creating artificial shortages that could cause conditions that require the CAISO operators to arm load. Thus, PG&E contends that this proposal could expose California ratepayers to inflated prices and undermine reliability benefits.[69] PG&E acknowledges that pricing last summer was problematic, but states that it worries the proposed Tariff revisions, along with the current pricing practice for contingency-only reserves, could incentivize physical withholding once the opportunity for $2,000/MWh prices becomes available with the implementation of Order No. 831.[70] PG&E further states that the Tariff amendment could effectively bypass the cost-verification process under Order No. 831.[71]

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[66] DMM Comments at 3-4.

[67] Calpine Comments at 6.

[68] SoCal Edison Comments at 3.

[69] PG&E Comments at 13-14.

[70] *Offer Caps in Markets Operated by Regional Transmission Organizations and Independent System Operators*, Order No. 831, 157 FERC ¶ 61,115, at P 1 (2016), *order on reh'g and clarification*, Order No. 831-A, 161 FERC ¶ 61,156 (2017). Order No. 831 requires each RTO/ISO to, among other things: (1) cap each resource's incremental energy offer at the higher of $1,000/MWh or that resource's verified cost-based incremental energy offer; and (2) cap verified cost-based incremental energy offers at $2,000/MWh when calculating locational marginal prices; and (3) establish a verification process for cost-based incremental offers above $1,000/MWh that ensures that a resource's cost-based incremental energy offer reasonably reflects that resource's actual or expected costs.

[71] PG&E Comments at 13.

59. As an alternative to CAISO's proposal, PG&E requests that the Commission require CAISO to insert the bids associated with released reserve capacity at the maximum of (1) the resource's calculated Default Energy Bid price, (2) the last cleared economic bid, or (3) the established $1,000/MWh market energy offer soft cap. PG&E argues that these modifications would protect against supply shortages, but avoid potential unnecessary costs. Further, PG&E asserts that the Commission should only accept this pricing proposal for a one-year period and require CAISO to address overlapping issues with system market power mitigation and the capacity procurement mechanism (CPM) before making scarcity pricing changes permanent. Finally, in light of its concerns about physical withholding, PG&E requests that the Commission direct CAISO to develop a simplified form of system market power mitigation that could be quickly implemented quickly this summer through an emergency filing if needed.[72]

c. CAISO Answer

60. CAISO asserts that its proposed pricing rule is consistent with its existing Tariff, which permits CAISO to use the hard energy bid cap to price contingency-only reserves dispatched in an emergency to provide energy. CAISO contends that the revisions proposed here merely extend that practice to non-contingency-only reserves to avoid real-time price deflation and to help signal tight supply conditions in real-time.[73]

61. CAISO disputes PG&E's suggestion that the proposed revisions could lead to physical withholding. To the contrary, CAISO argues that the proposal should incentivize suppliers to offer additional supply during tight conditions by providing the necessary price signals. CAISO also asserts that the existing resource adequacy rules require scheduling coordinators to offer their capacity into the CAISO markets and face significant financial exposure if they engage in physical withholding with the objective of influencing CAISO market outcomes. Further, CAISO predicts that scheduling coordinators will seek energy payments when supply is short and prices are high and, therefore, the probability that scheduling coordinators would withhold capacity and forego energy payments on the remote chance that CAISO will need to release non-

[72] PG&E states that, in a March 17, 2021 memo to the CAISO Board of Governors, DMM recommended CAISO develop a very simplified form of system market power that could be implemented quickly for summer 2021. PG&E Comments at 16 (citing CAISO Transmittal, Attach. D- Memo and Presentation to the CAISO Board of Governors and DMM Update).

[73] CAISO Answer at 17-18.

contingency reserves is low. CAISO notes that no evidence of physical withholding has been found in relation to the August 2020 heat events.[74]

62. CAISO argues that the Commission need not address PG&E's suggested alternate pricing proposal or its request for a one-year sunset date while CAISO addresses CPM and system market power mitigation issues. CAISO contends that PG&E's concerns extend beyond the scope of CAISO's proposed Tariff revisions and asserts that the Commission's inquiry into whether proposed rates are just and reasonable should not extend to determining whether a proposed rate schedule is more or less reasonable than an alternative rate design.[75] Thus, CAISO argues that the Commission should disregard PG&E's arguments and approve CAISO's proposal as just and reasonable without modification or sunset.[76]

d. **Determination**

63. We accept CAISO's proposed pricing rule as a just and reasonable approach to avoiding inappropriate price deflation and attracting supply during tight system conditions. As part of CAISO's compliance with Order No. 831, the Commission has already approved using the energy bid cap to price contingency-only operating reserves dispatched in an emergency to provide energy.[77] Through this proposal, CAISO seeks to extend this practice to non-contingency-only reserves to avoid the real-time price deflation experienced during the August 2020 heat events. We agree with CAISO that this measure should help signal tight supply conditions in real-time to help attract additional supply and imports.

64. We find that PG&E's concerns about physical withholding to create artificial shortages are speculative and unlikely because system emergency events where this pricing rule would apply should be rare. In addition, in those circumstances, the opportunity costs for a scheduling coordinator to seek to provide operating reserves in lieu of energy, in hopes of the higher payment, would be very high because energy prices would be very high during hours of tight supply. As noted above, CAISO already applies the pricing rule proposed here to contingency-only reserves and PG&E fails to explain how extending the same principle to non-contingency-only reserves would be inconsistent with the cost verification requirements of Order No. 831. Having found

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[74] *Id.* at 19.

[75] *Id.* at 17 (citing *Cal. Indep. Sys. Operator Corp.*, 128 FERC ¶ 61,265, at P 21 (2018)).

[76] *Id.* at 19-20.

[77] CAISO Tariff, § 34.10.

CAISO's proposed revisions to be just and reasonable, we need not further address the merits of PG&E's proposed alternate rate.[78] For the same reason, as discussed above, we reject PG&E's request for a one-year sunset date.

65. While we find that concerns about more comprehensive scarcity pricing, system market power mitigation, and CPM are beyond the scope of the limited pricing revisions proposed here, we agree with commenters that these issues remain important and encourage CAISO to work with stakeholders to address these issues.

6. Generator Interconnection Process

a. CAISO Proposal

66. CAISO proposes two separate changes to the Generator Interconnection Process in its Tariff to make more capacity available for summer 2021 to address the issue of insufficient generating capacity, as identified in the Final Root Cause Analysis. First, CAISO proposes to remove the cap on the behind-the-meter expansion process. CAISO explains that the behind-the-meter expansion process allows for interconnection customers to add generating capacity without increasing the interconnection service capacity originally studied at the site up to a certain threshold. The current process of expanding behind-the-meter capacity caps expansion to the lesser of 125% of the existing capacity or 100 MW. CAISO states that removing the expansion cap will allow for variable energy resources and other resources to hold excess energy and discharge that energy when demand is high. Furthermore, CAISO states that the cap on behind-the-meter expansion was put into place before additions of battery storage became common. Therefore, according to CAISO, the original intent of the cap, which was to prevent excessive build out behind-the-meter, is now suppressing the ability of resources to maximize the MWh the facility can provide throughout the day.[79]

67. Second, CAISO proposes to allow itself to award available interim deliverability temporarily to independent study interconnection customers who achieve commercial operation before CAISO conducts the next deliverability assessment. CAISO explains that currently, independent study interconnection customers are required to participate as "energy only" until CAISO is able to conduct the next cluster deliverability assessment. CAISO states that typically an interconnection customer will wait a year before the cluster deliverability assessment and during that time is not permitted to provide resource adequacy capacity even if surplus deliverability is available. CAISO proposes to determine if interim deliverability is available and award it to an interconnection customer as soon as practical, and no later than the calendar month prior to the

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[78] *See, e.g., Oxy USA*, 64 F.3d at 691; *City of Bethany*, 727 F.2d at 1136.

[79] CAISO Transmittal at 37.

interconnection customer achieving commercial operation. In order to protect deliverability for earlier-queued interconnection customers, CAISO proposes that any customer awarded interim deliverability will retain that deliverability only until (1) the interconnection customer allocated that deliverability achieves commercial operation, or (2) CAISO completes the next scheduled deliverability assessment and the interconnection customer completes delivery network upgrades. CAISO argues that these two provisions will allow available delivery to be used and simultaneously preserve the rights of interconnection customers further ahead in the queue.[80]

b. Determination

68. We accept CAISO's proposed revisions to its generator interconnection process as just and reasonable. We find that removing the cap on behind-the-meter expansion should help improve reliability by enhancing resources' ability to use storage to hold excess energy and discharge that energy during times of high demand. We also find that awarding deliverability on an interim basis to independent study process interconnection customers is a just and reasonable measure that will increase the availability of resources that can provide resource adequacy capacity. Further, we find that CAISO has included adequate provisions to guard against queue jumping and preserve the rights of interconnection customers further ahead in the queue.

The Commission orders:

(A) CAISO's proposed Tariff revisions are hereby accepted for filing, to be effective no later than June 15, 2021, as requested, as discussed in the body of this order.

(B) CAISO is hereby directed to notify the Commission of the actual effective date of the Tariff revisions within five business days of their implementation, in an eTariff submittal using Type of Filing Code 150 – Report.

By the Commission. Commissioner Chatterjee is not participating.

(S E A L)

Debbie-Anne A. Reese,
Deputy Secretary.

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[80] *Id.* at 38.