

175 FERC ¶ 61,096
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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

California Independent System Operator Corporation Docket Nos. ER21-955-000
ER21-955-001

ORDER ACCEPTING IN PART AND REJECTING IN PART TARIFF REVISIONS

(Issued April 30, 2021)

1. On January 27, 2021 (January 27 Filing), as amended on March 25, 2021 (March 25 Amendment), pursuant to section 205 of the Federal Power Act (FPA)¹ and section 35.13 of the Commission's regulations,² the California Independent System Operator Corporation (CAISO) submitted two sets of proposed revisions to its Open Access Transmission Tariff (Tariff) to amend provisions for its Energy Imbalance Market (EIM). In this order, we accept CAISO's first set of proposed Tariff revisions, to become effective May 1, 2021. We also accept in part CAISO's second set of proposed Tariff revisions, effective October 1, 2021, as requested, subject to CAISO notifying the Commission of the actual implementation date, and reject in part CAISO's second set of proposed Tariff revisions.

I. Background

2. The EIM enables entities outside CAISO's balancing authority area (BAA) to participate in the CAISO-administered real-time market for imbalance energy. The January 27 Filing included a total of five Tariff changes, submitted in two sets. The first set of Tariff changes proposes: (1) requiring EIM participants to settle deviations in their Energy Transfer System Resource schedules (base schedule deviations) through CAISO's market at a common location and price; (2) excluding uninstructed imbalance energy and unaccounted for energy quantities in the bid cost recovery (BCR) uplift transfer adjustment formulation; and (3) allowing EIM participants to include resources' start-up energy in their base schedule submissions. The second set of Tariff changes proposes:

¹ 16 U.S.C. § 824d.

² 18 C.F.R. § 35.13 (2020).

(1) allowing EIM participants the option to not have CAISO settle unaccounted for energy within an EIM participant's BAA; and (2) moving the final hourly base schedule submission deadline from 40 minutes to 30 minutes before the start of each hour and running an additional resource sufficiency test 30 minutes before the hour.

3. CAISO submitted the March 25 Amendment, indicating it was experiencing software issues related to allowing EIM participants to include resources' start-up energy in their base schedule submissions (i.e., the third proposed Tariff change within the first set) and removed it from the filing, leaving only four proposed changes, as described below.³ In the March 25 Amendment, CAISO requests a May 1, 2021 effective date for the first two changes (settlement of EIM Base Schedule Deviations and EIM Transfer BCR) and an effective date of October 1, 2021, for the remaining two Tariff provisions (EIM Entity Unaccounted for Energy Settlement and EIM Base Schedule Timeline Change), subject to the actual implementation date.⁴

II. Instant Filing

A. Settlement of EIM Base Schedule Deviations⁵

4. CAISO proposes requiring EIM participants to settle deviations in their base schedules through CAISO's market at a common location and price, thus eliminating the option for EIM participants to settle deviations in their base schedules bilaterally.⁶ Currently, EIM participants have the option to settle base schedule deviations between EIM participants through CAISO if the EIM participants agree upon the pricing locations of the transaction and the ratio for sharing these agreed upon pricing points (usually 50/50) for settlement, but are not obligated to do so. CAISO has discovered that both: (1) using a ratio based on multiple prices to settle base schedule changes and (2) EIM

³ CAISO March 25, 2021 Amendment to January 27 Filing at 3 (March 25 Amendment).

⁴ The March 25 Amendment proposes a May 1, 2021 effective date for Tariff records, whereas CAISO had previously requested an April 1, 2021 effective date in its January 27 Filing. CAISO explains that the only change to those Tariff records was the removal of the Tariff language associated with the proposal with which it was experiencing software issues. The Tariff records associated with the proposed October 1, 2021 effective date were filed in eTariff with a 12/31/9998 date. CAISO indicates it will submit a subsequent filing five business days after the actual implementation date to specify the effective date associated with these Tariff records. January 27 Filing at 1.

⁵ CAISO proposes to revise Tariff section 29.11(q) and 29.11(r). *Id.* at 4.

⁶ *Id.*

participants opting out of CAISO's settlement process has resulted in asymmetrical settlement and cost-shifts between BAAs. CAISO avers that because some EIM participants choose to settle base schedule deviations bilaterally, there is the potential for costs to shift inappropriately when wheeling imbalance energy through multiple EIM BAAs as CAISO's settlement process may pay or charge one EIM participant for a transfer into or out of its BAA, but not pay or charge for the opposite leg.⁷

5. Additionally, CAISO explains that even if it settles all the base schedule deviations, there is still the potential for cost shifting when one of the EIM BAAs in the transaction is wheeling through and is under a power balance constraint. To remedy this, CAISO is proposing to settle the imbalance energy resulting from these schedule changes for all EIM participants using the pricing node at the location of the schedule changes rather than the ratio of both the receiving and sending BAA prices as it does today.⁸ CAISO explains that this change will result in a symmetrical settlement where the payment for the import and the charge for the export are consistent with the BAA's internal prices.⁹

6. CAISO states that these changes will reduce the potential for cost shifting between BAAs because settling EIM base schedule deviations through CAISO will no longer be optional, CAISO will establish the location for pricing the deviations, and the intertie price at that location will apply to both sides of the transaction.¹⁰

B. EIM Transfer Bid Cost Recovery Adjustment¹¹

7. CAISO issues BCR payments to ensure resources scheduled in the market recover their costs when the market does not provide sufficient revenues to cover their bid-in costs. For example, energy payments at the locational marginal price may be insufficient to cover the commitment costs of a resource the market starts, and a corresponding BCR payment makes up for this shortfall. BCR payments are funded through uplift costs allocated to market participants. In the real-time market, CAISO calculates BCR

⁷ *Id.*

⁸ *Id.* at 5–6.

⁹ *Id.* at 6.

¹⁰ *Id.*

¹¹ CAISO proposes to revise Tariff section 11.8.6.3.2. *Id.* at 8.

payments based on the costs and market revenues of resources committed in the real-time market or dispatched incremental to their day-ahead schedules.¹²

8. CAISO allocates uplift costs associated with real-time BCR payments to load and exports within CAISO's BAA because they benefit from real-time unit commitment or incremental dispatch. CAISO also allocates a portion of these costs between BAAs in the EIM area to account for BCR costs incurred to support energy transfers between BAAs. In the real-time market, CAISO considers EIM transfers and adjusts BCR uplift to fairly allocate the uplift across BAAs in the EIM area. In addition to the EIM transfers resulting from the real-time market's dispatch of resources, CAISO currently adjusts the BCR uplift allocation between BAAs based on uninstructed imbalance energy and unaccounted for energy quantities.¹³

9. As an example, CAISO states that if a resource in one BAA is committed in the real-time market to meet load changes in another BAA, the cost of any BCR uplift payments received by the generator in the first BAA should be allocated to the other BAA as the beneficiary of that unit commitment. For BAAs supporting net EIM transfers out of their BAA, CAISO currently adjusts the real-time BCR uplift between BAAs based on uninstructed imbalance energy and unaccounted for energy quantities. However, CAISO states that it has determined including these determinants in the BCR adjustment formulation does not track with cost causation.¹⁴

10. CAISO states that unaccounted for energy is a post-market accounting of energy and that it does not commit or dispatch resources based on unaccounted for energy and as such, it does not cause a BAA to incur BCR costs to serve load in another BAA. Therefore, CAISO states that including it in the calculation does not align with cost causation. CAISO also states that there is no strong correlation between uninstructed imbalance energy and real-time BCR uplift because real-time unit commitment is not driven by deviations causing imbalance energy. For these reasons, CAISO states it has concluded that including unaccounted for energy and uninstructed imbalance energy in the calculation to determine adjustments to BCR uplift to account for EIM transfers does not align with cost causation principles.¹⁵

11. CAISO proposes to no longer consider uninstructed imbalance energy and unaccounted for energy quantities in the BCR uplift transfer adjustment formulation.

¹² *Id.* at 7.

¹³ *Id.*

¹⁴ *Id.*

¹⁵ *Id.* at 7–8.

Instead, CAISO proposes to allocate a portion of a BAA's BCR uplift to transfers out of that BAA only in proportion to the ratio of the transfers out to the sum of the BAA's load, exports, and transfers out. According to CAISO, this change will align the calculation for adjusting BCR uplift charges associated with EIM transfers with CAISO's established methodology for allocation of real-time BCR uplift costs within its own BAA. CAISO states that removing these determinants from the formulation that adjusts real-time BCR costs to account for transfers between BAAs avoids potential cost shifting and better aligns the formulation with cost causation principles.¹⁶

C. EIM Entity Unaccounted for Energy Settlement¹⁷

12. CAISO currently settles unaccounted for energy in all EIM entity BAAs, which results in a charge or credit to the affected EIM entity. CAISO proposes to allow EIM participants the option to not have CAISO settle unaccounted for energy within an EIM entity's BAA. CAISO states that this change addresses the potential cost shifting that can currently occur in an EIM entity's unaccounted for energy settlement.¹⁸ The option would be available only to EIM participants that use a load derivation approach to calculate their load. An EIM entity that uses load derivation to calculate its load does so by subtracting a loss amount specified by its tariff from its metered load amounts. CAISO indicates that it cannot accurately account for an EIM entity's transmission losses when it calculates that entity's unaccounted for energy if the EIM entity calculates its load using its internal generation net of imports/exports, as adjusted for transmission losses. CAISO explains that this is because the EIM participant's transmission loss factor specified in its tariff and used in the calculation is different from actual losses calculated by CAISO's market. CAISO states that this is different from entities that report their demand using end-use meters (i.e., the load aggregation approach) whose scheduled losses can differ from actual losses reflected in their meter readings.¹⁹

13. According to CAISO, the mismatch between Tariff-specified losses and actual losses gives rise to unaccounted for energy. CAISO's settlement includes various accounts (e.g., accounts for congestion, losses, unaccounted for energy) and EIM participants' tariffs provide for differing allocations of these accounts within their BAAs. As a result, when CAISO settles unaccounted for energy within an EIM participant's

¹⁶ *Id.* at 8.

¹⁷ CAISO proposes to revise Tariff section 29.11(c). *Id.* at 10. In the March 25 Amendment, CAISO withdrew revisions to Tariff sections 29.34(e) and 29.34(f). March 25 Amendment at 3.

¹⁸ January 27 Filing at 11.

¹⁹ *Id.* at 10–11.

BAA, cost shifts can occur within the EIM participant's BAA due to a difference in how CAISO calculates the balance for each of the various accounts as compared to how the EIM participants' tariffs may calculate and allocate them.²⁰

14. CAISO states that if an EIM participant chooses not to have CAISO settle its unaccounted for energy, the EIM participant will account for these losses outside of the CAISO market. The EIM participant and CAISO settlements, in this case, would not incorporate losses by assuming a transmission loss factor of zero and CAISO will apply a zero-percent transmission loss factor when calculating the hourly base schedule. In addition, CAISO states that the EIM participant will apply a zero percent transmission loss factor when calculating its load using the load derivation approach. CAISO explains it would then exclude the EIM participant from calculation of the unaccounted for energy amount and avoid potential cost shifts.²¹

15. CAISO explains that some EIM participants using the load derivation approach may not have CAISO include unaccounted for energy settlement in their BAAs, while others may continue to have CAISO account for it. CAISO states that these varied approaches to the question are appropriate because CAISO does not require EIM participants to allocate unaccounted for energy under its Tariff in the same manner. CAISO also states that the impact of potential cost shifting occurs in the EIM participant's BAA and may not be significant, whereas the cost of making the associated changes to support the shift may be significant. CAISO explains that it believes this decision is best determined through the regulatory process applicable to the EIM participant's allocation of unaccounted for energy charges in its BAA.²²

D. EIM Base Schedule Submission Timeline Change²³

16. CAISO proposes to move the final hourly base schedule submission deadline from 40 minutes to 30 minutes before the start of each hour. CAISO states that base schedules reflect an EIM participant's planned supply resource schedules and demand forecast for its BAA, represent the baseline for imbalance energy settlement in the EIM, and are an important component of the EIM participant's hourly resource sufficiency evaluation, which ensures EIM participants schedule sufficient supply resources. CAISO explains that moving the timeline for submitting final base schedules 10 minutes closer to the start

²⁰ *Id.* at 11–12.

²¹ *Id.* at 12.

²² *Id.*

²³ CAISO proposes to revise Tariff sections 29.34(f)(1)(C), 29.34(f)(1)(D), 29.34(k), 30.5.7, 34.1.6, 34.3, and 34.4. *Id.* at 13.

of each operating hour allows base schedules and the EIM's resource sufficiency test to include more timely and accurate information than they currently use, which will lead to lower amounts of uninstructed imbalance energy. CAISO also states that technology improvements now allow it to configure the market systems to complete the 15-minute market run in a shorter time and, as a result, CAISO can move the start of the market run to after 30 minutes before the hour without impacting system performance.²⁴

17. CAISO states that EIM participants currently submit base schedules for each operating hour to CAISO at multiple intervals. EIM participants submit initial base schedules at 75 minutes before the hour after which, CAISO's systems run the EIM resource sufficiency evaluation and provide advisory results back to EIM participants. CAISO explains that this process repeats at 55 minutes before the hour, and then the final base schedules are currently due at 40 minutes before the hour. This iterative process enables EIM participants to update their base schedules with more accurate information, such as resource output, load forecasts, and bilateral transaction schedules. CAISO states that this allows EIM participants to view advisory results produced by the resource sufficiency evaluation, and permits them time to correct any resource sufficiency evaluation failure, which is important because EIM rules specify the EIM cannot dispatch additional transfers into or out of a BAA that fails a final resource sufficiency evaluation.²⁵

18. In conjunction with moving the deadline for the final base schedule submissions, CAISO proposes to run an additional resource sufficiency test 30 minutes before the hour. This would become the final resource sufficiency evaluation run that determines whether a BAA can participate in additional EIM energy transfers. CAISO states that the resource sufficiency evaluation currently run at 40 minutes before the hour will remain and become an additional advisory run.²⁶ In combination, CAISO explains, these changes will allow base schedules and resource sufficiency tests to use more timely and accurate information and may lower the EIM participants' uninstructed imbalance energy.

19. CAISO requests a May 1, 2021 effective date for the first two changes (settlement of EIM Base Schedule Deviations and EIM Transfer BCR) and an effective date of October 1, 2021, for the remaining two Tariff provisions (EIM Entity Unaccounted for Energy Settlement and EIM Base Schedule Timeline Change), subject to the actual

²⁴ *Id.*

²⁵ *Id.* at 13–14.

²⁶ *Id.* at 14.

implementation date. CAISO also requests waiver of the notice requirements to allow such effective dates.²⁷

III. Notice and Responsive Pleadings

20. Notice of the January 27 Filing was published in the *Federal Register*, 86 Fed. Reg. 7865 (Feb. 2, 2021), with interventions and protests due on or before February 17, 2021. Timely motions to intervene were filed by NV Energy, Inc., Powerex Corp., Salt River Agricultural Improvement and Power District, Southern California Edison Company, the City of Redding, California, the City of Santa Clara, California, and the Modesto Irrigation District. A timely motion to intervene and comments were filed by the Department of Market Monitoring of CAISO (DMM).

21. Notice of the March 25 Amendment was published in the *Federal Register*, 86 Fed. Reg. 16,714 (March 31, 2021), with interventions and protests due on or before April 5, 2021. None was filed.

IV. Comments

22. DMM supports all four of CAISO's proposed enhancements. First, DMM recognizes that the stakeholder initiative revealed that energy imbalances have not been settled on the locational marginal price, causing inequitable settlement issues.²⁸ DMM believes CAISO's amendment resolves this issue.²⁹ Second, DMM agrees with CAISO that the proposed changes to EIM transfer BCR adjustment should better align the allocation of this uplift with existing established cost causation principles of BCR cost allocation.³⁰ Third, DMM states that unaccounted for energy is not a relevant metric to EIM participants who must derive their load through generation and intertie meters, and therefore DMM does not take issue with giving these entities the option to not settle unaccounted for energy.³¹ Fourth, DMM agrees with moving the base schedule submission deadline closer to the beginning of the 15-minute market run because the

²⁷ March 25 Amendment at 4–5.

²⁸ DMM February 17, 2021 Comments at 2.

²⁹ *Id.*

³⁰ *Id.*

³¹ *Id.* at 4.

change will allow greater flexibility for EIM participants to take actions to pass the resource sufficiency tests.³²

V. Discussion

A. Procedural Matters

23. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2020), the notice of intervention and timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

B. Substantive Issues

24. We accept in part and reject in part CAISO's proposed Tariff revisions. As discussed more fully below, we accept CAISO's first set of Tariff revisions, effective May 1, 2021, as requested. We also accept in part CAISO's second set of Tariff revisions, effective October 1, 2021, subject to CAISO submitting a subsequent filing five business days after the actual implementation date to specify the effective date associated with these Tariff records.³³ We also reject in part CAISO's second set of Tariff revisions, as discussed below.

25. We find that CAISO's proposal requiring EIM participants to settle deviations in their base schedules through CAISO's market at a common location and price more closely aligns EIM settlement with CAISO's real-time market settlement and eliminates inappropriate cost-shifting between EIM BAAs that could occur under the existing rules when imbalance energy is wheeled through multiple EIM BAAs, as CAISO described in its filing. We thus find the first proposal just and reasonable because it aligns with cost causation principles by helping ensure that costs are allocated to those entities that cause them to be incurred.³⁴

26. We also find that CAISO's BCR uplift allocation proposal is just and reasonable because the proposal removes two items from BCR uplift allocation that are not clearly drivers of BCR costs (i.e., uninstructed imbalance energy and unaccounted for energy

³² *Id.*

³³ We grant CAISO's request for waiver of the Commission's prior notice filing requirement, 18 C.F.R. § 35.3(a)(1), to permit the proposed Tariff revisions to be tendered more than 120 days in advance of the requested effective date.

³⁴ *See, e.g., Cal. Indep. Sys. Operator Corp.*, 165 FERC ¶ 61,116, at P 48 (2018) (citing *Midwest ISO Transmission Owners v. FERC*, 373 F.3d 1361, 1368 (D.C. Cir. 2004)).

quantities). The Commission largely accepted a similar CAISO proposal in a past proceeding related to real-time market BCR uplift.³⁵ In addition, this revised methodology aligns the EIM BCR uplift allocation with CAISO's real-time market BCR uplift allocation. We thus find that the proposal is just and reasonable as it removes two items from BCR uplift allocation that are not clearly drivers of BCR costs.

27. With respect to the second set of changes, we find that updating the calculation for EIM participants' unaccounted for energy is just and reasonable because it avoids any unnecessary cost shifts among EIM participants' transmission customers. Further, we believe the revision to the EIM base schedule timeline is just and reasonable because it allows EIM participants to submit more timely and accurate base schedules closer to the operating hour, which is an improvement over the current Tariff rules.³⁶

28. However, we reject CAISO's proposed Tariff records associated with section 29.34, EIM Operations, 14.1.0, filed in the March 25 Amendment in Docket No. ER21-955-001. The proposed effective date submitted in eTariff is April 1, 2021, which is inconsistent with the requested effective date in the March 25 Amendment and the effective date granted herein. In addition, those Tariff records appear to lack any new proposed language and thus filing those records appears unnecessary. Instead, the Tariff records associated with section 29.34, EIM Operations, 15.1.0, and filed with the March 25 Amendment correctly capture the language associated with the EIM Base Schedule Timeline Change and have an effective date of 12/31/9998, consistent with the other Tariff records to be effective October 1, 2021, subject to CAISO making a further filing specifying the actual implementation date.

³⁵ See *Cal. Indep. Sys. Operator Corp.*, 162 FERC ¶ 61,022, at PP 11–19 (2018) (2018 Order). In the 2018 Order, the Commission found that CAISO had not determined an appropriate first tier allocation to real-time deviations from the day-ahead schedule based on cost causation, despite studying the issue and undertaking a stakeholder process. The Commission specifically found that “[g]iven modifications to CAISO’s tariff implemented since the September 2006 MRTU Order, and that CAISO and its stakeholders have not advanced in determining cost causation, we find that CAISO need not modify its tariff to provide for a two-tier allocation method for real-time bid cost recovery.” *Id.* P 18.

³⁶ See Transmittal at 13 (noting that the revised deadline to submit proposals better aligns with Bonneville Power Administration’s timeline for designating its customers’ hourly energy scheduled based on its hydroelectric production forecast); *Cal. Indep. Sys. Operator Corp.*, 170 FERC ¶ 61,168, at P 12 (2020) (noting Bonneville Power Administration’s proposal to CAISO’s stakeholder process from market closing deadline from T-40 minutes to T-30 minutes).

The Commission orders:

CAISO's proposed revisions are hereby accepted in part, effective May 1, 2021, and October 1, 2021, as requested, and rejected in part, as discussed in the body of this order, subject to CAISO submitting a subsequent filing five business days after the actual implementation date of the Tariff records associated with the October 1, 2021 effective date to specify the effective date associated with these Tariff records.

By the Commission.

(S E A L)

Kimberly D. Bose,
Secretary.