

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

California Independent System) Docket No. ER20-1890-000
Operator Corporation)

**ANSWER OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR
CORPORATION TO COMMENTS**

The California Independent System Operator Corporation (CAISO) submits its answer to comments on the CAISO's May 22, 2020, filing (May 22 Filing).¹

I. Introduction

The May 22 Filing proposed three sets of changes to its tariff provisions covering intertie transactions. The first set of changes enhances existing tariff provisions regarding the treatment of intertie schedules and related rules regarding electronic tags (E-Tags). The second set of changes reformulates the CAISO's existing non-delivery charge for deviations from scheduled intertie transactions. The third set of changes clarifies several aspects of the CAISO's day-ahead intertie scheduling practices.

Eleven parties intervened in this proceeding. Two parties, the CAISO's Department of Market Monitoring (DMM) and Powerex Corp. (Powerex), filed substantive comments.² DMM and Powerex both support the May 22 Filing and

¹ The CAISO submits this answer pursuant to Rule 213 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213.

² The following entities filed motions to intervene in the proceeding: Calpine Corporation; Pacific Gas and Electric Company; California Public Utilities Commission; Modesto Irrigation District; City of Santa Clara, California; Cities of Anaheim, Azusa, Banning, Colton, Pasadena and Riverside,

filed their respective comments solely seeking clarification about certain aspects of the May 22 Filing.³ Through this answer, the CAISO provides the requested clarifications. Additionally, DMM's comments highlight an opportunity to provide further specificity in one area of the proposed tariff amendments. The CAISO is prepared, if so ordered on compliance, to file the minor identified improvements on the tariff language included in the May 22 Filing in response to DMM. These amendments are purely clarifying changes and do not alter the substance of the CAISO's May 22 Filing.

II. The May 22 Filing Does Not Replace Other Initiatives Regarding Energy Imports

Powerex comments that the May 22 Filing “should be recognized as only an incremental step, and not as comprehensively addressing the root cause of California’s energy delivery performance challenges.”⁴ Powerex notes that what it views as those “root causes” are being considered in both the CAISO's ongoing Resource Adequacy Enhancements stakeholder initiative and the Day-Ahead Market Enhancements stakeholder initiative.⁵ Similarly, DMM notes its view that the new under/over delivery charge “should not be viewed as a step towards addressing the more fundamental reliability and market design problems

California; California Department of Water Resources State Water Project; Northern California Power Agency; Southern California Edison Company; CAISO's Department of Market Monitoring; and Powerex Corp.

³ DMM comments at 1 (“DMM supports the proposed tariff changes as an improvement over the current market rules”); Powerex comments at 7 (“Powerex believes the Commission should accept the proposed tariff revisions”).

⁴ Powerex comments at 7.

⁵ *Id.*

associated with the CAISO's rule for resource adequacy imports," which DMM notes the CAISO is considering in the Resource Adequacy Enhancements stakeholder initiative.⁶

The CAISO confirms that the Resource Adequacy Enhancements⁷ and Day-Ahead Market Enhancements⁸ stakeholder initiatives remain active. The ultimate outcome of those initiatives is uncertain at this time, but the CAISO agrees that Commission acceptance of the current proposal would not supplant further consideration of the import-related topics Powerex and DMM raise.

III. The Energy Profile of an E-Tag at Twenty Minutes Before the Hour Does Not Impact the Binding Award in the First Two Intervals of the Fifteen Minute Market

DMM seeks clarity on how the CAISO intends to implement the proposed amendments to section 30.5.7. This section defines how the CAISO market processes E-Tags. It contains five sub-sections, sections 30.5.7.1 through 30.5.7.5, that provide detailed rules concerning self-schedule hourly blocks, variable energy resource self-schedules, economic hourly bids, economic hourly block bids with intra-hour option, and fifteen minute market economic bids, respectively. These are the five types of intertie schedules in the CAISO market.

These five sections have parallel construction. They first state a general rule that a scheduling coordinator must submit an E-Tag by forty minutes before the trading hour "that passes CAISO E-Tag validation procedures" They

⁶ DMM comments at 7.

⁷ Further information about this initiative is available at: <http://www.caiso.com/StakeholderProcesses/Resource-adequacy-enhancements>.

⁸ Further information about this initiative is available at: <http://www.caiso.com/StakeholderProcesses/Day-ahead-market-enhancements>.

then state that the quantity of the *transmission profile* on the E-Tag at forty minutes before the trading hour must at a minimum match the hourly schedule and that if the energy profile is below the hourly schedule, then the CAISO will cap the schedule in the fifteen minute market at the quantity of the transmission profile. The tariff provisions then state that the *energy profile* of the E-Tag may be adjusted up to twenty minutes before the trading hour but that it must match the quantity of the hourly schedule by that point.⁹ Finally, they state that if a “Scheduling Coordinator fails to submit a valid E-Tag consistent with these deadlines, then the CAISO will set the MW quantity of the FMM Schedule . . . to zero for each FMM interval of the hour.”¹⁰

DMM is concerned this final sentence suggests that “if the importer does not submit an energy profile equal to the amount of the HASP schedule by T-20, then the ISO will set the settled energy for the import in FMM intervals 1 and 2 to 0 MW.”¹¹ In DMM’s view such an implementation would be inconsistent with the outcome of the stakeholder process the CAISO Board of Governors approved.

The fifteen minute market posts market awards 22.5 minutes before each market interval. The CAISO’s understands this issue in section 30.5.7 is noteworthy to DMM because DMM is concerned the CAISO potentially would allow importers to cancel their fifteen minute market award after they have

⁹ In the case of a fifteen minute market economic bid, the energy profile at twenty minutes prior to the trading hour must match the fifteen minute market award for the first fifteen-minute interval of the trading hour.

¹⁰ Section 30.5.7.5, covering fifteen minute market economic bids, allows for further E-Tag adjustments prior to each fifteen minute market interval.

¹¹ DMM comments at 8. DMM’s comments focus specifically on section 30.5.7.1, but the sentence in question appears in all five sub-sections of section 30.5.7.

already seen the price for at least the first fifteen-minute interval of the hour.

The CAISO appreciates DMM's concern on this issue and clarifies it was never the CAISO's intent to implement section 30.5.7 as to allow market participants to zero out their fifteen minute market awards after they have seen the prices for any fifteen minute market intervals. After considering DMM's comments and carefully reviewing the submitted tariff language, the CAISO realizes that the reference to "these deadlines" is unclear. The CAISO intended it to refer only to the requirement that an E-Tag be submitted by forty minutes before the trading hour. If an importer submits no E-Tag by that point, then the CAISO will zero out the schedule for all four intervals of the fifteen minute market. So long as a scheduling coordinator submits an E-Tag with some value for the transmission profile and energy profile by forty minutes before the trading hour, then other tariff rules would define the consequences. As stated in the proposed tariff amendments, if the transmission profile at forty minutes before the trading hour is below the output from the hour-ahead scheduling process, then the CAISO will cap the schedule in the fifteen minute market to that lower quantity. If the energy profile at twenty minutes prior to the trading hour does not match the hourly schedule, then the tariff provisions of section 30.5.7 would not affect the fifteen minute market schedule. The lower energy profile would, however, be considered in the fifteen minute market runs for the third and fourth fifteen-minute intervals of the trading hour. The scheduling coordinator also would be exposed to the proposed under/over delivery charge. This consequence is not explicitly stated in section 30.5.7, but would apply based on

the proposed amendments to tariff section 11.31.

To provide greater clarity on these matters, the CAISO is prepared, if so ordered on compliance, to file the attached supplemental amendments to section 30.5.7.¹² The proposed incremental edits clarify three key points: (1) the CAISO only will zero out an import's fifteen minute market schedule if the scheduling coordinator submits no E-Tag by forty minutes prior to the hour; (2) the energy profile at twenty minutes before the trading hour must equal the lower of: (a) the quantity of the transmission profile at forty minutes prior to the trading hour, or (b) the hourly schedule; and (3) failure to submit an energy profile by twenty minutes before the trading hour that supports the hourly schedule exposes the scheduling coordinator to the under/over delivery charge.¹³

These amendments represent clarifications to the May 22 Filing and are not material or substantive changes to that proposal. The first clarification responds to DMM's concern that a scheduling coordinator could zero out its hourly schedule in the fifteen minute market by failing to submit an energy profile at twenty minutes before the trading hour. This concern does not consider that by that point the first fifteen minute market interval of the hour has already been completed and the second fifteen-minute interval is in the process of running. By

¹² Attachment A contains clean tariff sheets of the proposed incremental edits to section 30.5.7. Attachment B provides a red-lined document showing the further proposed amendments compared to the current tariff. Attachment C provides a red-lined document showing the further proposed amendments compared to the language proposed in the May 22 Filing.

¹³ This latter point is not proposed for section 30.5.7.5, which applies to fifteen minute economic bids, because the under/over delivery charge for that type of import schedule is based on the transmission profile at forty minutes before the trading hour (rather than the energy profile at twenty minutes before the trading hour).

twenty minutes before the hour, the CAISO has no feasible way to zero out the import's schedule by that point. The only way to accomplish this would be to develop an after-the-fact settlement rule of some sort that treated the schedules as if they were zero. The CAISO never discussed such a rule in the underlying stakeholder process, and it is not part of the proposal. For this reason, the first clarification is clearly consistent with the CAISO's overall proposal.

The second clarification addresses a minor inconsistency in the proposed language. The language included in the May 22 Filing failed to consider that where the transmission profile at forty minutes prior to the hour does not fully cover the hourly schedule, the transmission profile caps the fifteen minute market award. In such cases there is no need to require the energy profile at twenty minutes before the hour to match the higher quantity of the hourly schedule. The CAISO systems also would not allow the scheduling coordinator at that point to submit an energy profile that exceeds the transmission profile. This second clarification merely acknowledges these realities.

The third clarification is also consistent with the May 22 Filing because it does not add any rules concerning imports. Instead, it merely cross-references other new rules that are proposed elsewhere in the tariff.

IV. Attachments

Included in this answer are the following:

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| Attachment A | Clean tariff sheets of the proposed incremental edits to section 30.5.7. |
| Attachment B | Red-lined document showing the further proposed amendments compared to the current tariff. |

Attachment C

Red-lined document showing the further proposed amendments compared to the language proposed in the May 22 Filing.

V. Conclusion

The CAISO welcomes this chance to provide DMM, Powerex, and all other parties further clarity on the May 22 Filing. With these clarifications, particularly the minor incremental tariff amendments noted above, there should be no question that the May 22 Filing represents appropriate and needed improvements for the CAISO markets.

Respectfully submitted,

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Dated: June 29, 2020

Attachment A – Clean Tariff

Answer to Comments

California Independent System Operator Corporation

June 29, 2020

30.5.7 E-Tag Rules and Treatment of Intertie Schedules

In addition to complying with all generally applicable E-Tagging requirements, Scheduling Coordinators must submit their E-tags consistent with the requirements specified in this Section 30.5.7. If a Scheduling Coordinator receives an intra-hour Schedule change, then the Scheduling Coordinator must, by twenty minutes before the start of the FMM interval to which the Schedule change applies, ensure that an updated energy profile reflects the change. Absent extenuating circumstances, the CAISO automatically updates Energy profiles on E-tags for Energy Schedules that change from HASP to the FMM within a Trading Hour. In performing this service for a Scheduling Coordinator, the CAISO does not assume any responsibility for compliance with any E-tag requirements or obligations to which the Scheduling Coordinator is subject. The changed energy profile will apply for the balance of the operating hour unless it is subsequently changed by a further updated energy profile.

30.5.7.1 Self-Schedule Hourly Blocks

By forty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag (or set of E-Tags) that passes CAISO E-Tag validation procedures and that supports the Self-Schedule Hourly Block. If the Scheduling Coordinator fails to submit a valid E-Tag by forty minutes prior to the applicable Trading Hour, then the CAISO will set the MW quantity of the FMM Schedule associated with the Self-Schedule Hourly Block to zero for each FMM interval of the hour.

The transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour must be equal to the Self-Schedule Hourly Block. If the Scheduling Coordinator has a transmission profile less than its advisory Energy schedule, then the CAISO will limit the schedule for Energy in the FMM so that it does not exceed the quantity of the transmission profile.

The energy profile of the E-Tag at forty minutes prior to the applicable Trading Hour need not equal the Self-Schedule Hourly Block and the Scheduling Coordinator may revise the Energy profile up to twenty minutes prior to the applicable Trading Hour. At twenty minutes prior to the applicable Trading Hour, the quantity of the Energy profile must be equal to the lower of: (a) the transmission profile of the E-tag at forty minutes prior to the applicable Trading Hour; or (b) the Self-Schedule Hourly Block. A Scheduling Coordinator is exposed to the Under/Over Delivery Charge if the Energy profile at twenty minutes prior to the applicable Trading Hour is not equal to the Self-Schedule Hourly Block.

The CAISO may modify the Energy profile due to Reliability related curtailments.

30.5.7.2 Variable Energy Resource Self-Schedule

By forty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag (or set of E-Tags) that passes CAISO E-Tag validation procedures and that supports the Variable Energy Resource Self-Schedule. If the Scheduling Coordinator fails to submit a valid E-Tag by forty minutes prior to the applicable Trading Hour, then the CAISO will set the MW quantity of the FMM Schedule associated with the Variable Energy Resource Self-Schedule to zero for each FMM interval of the hour.

The transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour must be equal to the Variable Energy Resource Self-Schedule. If the Scheduling Coordinator has a transmission profile less than its advisory Energy schedule, then the CAISO will limit the schedule for Energy in the FMM so that it does not exceed the quantity of the transmission profile.

The energy profile of the E-Tag at forty minutes prior to the applicable Trading Hour need not equal the Variable Energy Resource Self-Schedule and the Scheduling Coordinator may revise the Energy profile up to twenty minutes prior to the applicable Trading Hour. At twenty minutes prior to the applicable Trading Hour, the quantity of the Energy profile must be equal to the lower of: (a) the transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour; or (b) the Variable Energy Resource Self-Schedule. A Scheduling Coordinator is exposed to the Under/Over Delivery Charge if the Energy profile at twenty minutes prior to the applicable Trading Hour is not equal to the Variable Energy Resource Self-Schedule.

The CAISO may modify the Energy profile due to Reliability related curtailments.

30.5.7.3 Economic Hourly Block Bid

By forty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag (or set of E-Tags) that passes CAISO E-Tag validation procedures and that supports the Economic Hourly Block Bid. If the Scheduling Coordinator fails to submit a valid E-Tag by forty minutes prior to the applicable Trading Hour, then the CAISO will set the MW quantity of the FMM Schedule associated with the Economic Hourly Block Bid to zero for each FMM interval of the hour.

The transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour must be equal to the Economic Hourly Block Bid. If the Scheduling Coordinator has a transmission profile less than its

advisory Energy schedule, then the CAISO will limit the schedule for Energy in the FMM so that it does not exceed the quantity of the transmission profile.

The energy profile of the E-Tag at forty minutes prior to the applicable Trading Hour need not equal the Economic Hourly Block Bid and the Scheduling Coordinator may revise the Energy profile up to twenty minutes prior to the applicable Trading Hour. At twenty minutes prior to the applicable Trading Hour, the quantity of the Energy profile must be equal to the lower of: (a) the transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour; or (b) the quantity of the Economic Hourly Block Bid. A Scheduling Coordinator is exposed to the Under/Over Delivery Charge if the Energy profile at twenty minutes prior to the applicable Trading Hour is not equal to the Economic Hourly Block Bid.

The CAISO may modify the Energy profile due to Reliability related curtailments.

30.5.7.4 Economic Hourly Block Bid with Intra-Hour Option

By forty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag (or set of E-Tags) that passes CAISO E-Tag validation procedures and that supports the Economic Hourly Block Bid with Intra-Hour Option. If the Scheduling Coordinator fails to submit a valid E-Tag by forty minutes prior to the applicable Trading Hour, then the CAISO will set the MW quantity of the FMM Schedule associated with the Economic Hourly Block Bid with Intra-Hour Option to zero for each FMM interval of the hour.

The transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour must be equal to the Economic Hourly Block Bid with Intra-Hour Option. If the Scheduling Coordinator has a transmission profile less than its advisory Energy schedule, then the CAISO will limit the schedule for Energy in the FMM so that it does not exceed the quantity of the transmission profile.

The energy profile of the E-Tag at forty minutes prior to the applicable Trading Hour need not equal the Economic Hourly Block Bid with Intra-Hour Option and the Scheduling Coordinator may revise the Energy profile up to twenty minutes prior to the applicable Trading Hour. At twenty minutes prior to the applicable Trading Hour, the quantity of the Energy profile must be equal to the lower of: (a) the transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour; or (b) the quantity of the Economic Hourly Block Bid with Intra-Hour Option. A Scheduling Coordinator is exposed to the Under/Over Delivery Charge if the Energy profile at twenty minutes prior to the applicable Trading Hour is not equal to the

Economic Hourly Block Bid with Intra-Hour Option.

The CAISO may modify the Energy profile due to Reliability related curtailments.

In the case of an intra-hour redispatch from the FMM, the CAISO may increment or decrement the Energy profile to correspond to the intra-hour redispatch. The MW level to which the FMM can redispatch an Economic Hourly Block Bid with Intra-Hour Option above its HASP Advisory Schedule is limited by the quantity of the transmission profile submitted by forty minutes prior to the applicable Trading Hour.

30.5.7.5 FMM Economic Bid

By forty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag (or set of E-Tags) that passes CAISO E-Tag validation procedures and that supports the FMM Economic Bid. If the Scheduling Coordinator fails to submit a valid E-Tag by forty minutes prior to the applicable Trading Hour, then the CAISO will set the MW quantity of the FMM Schedule associated with the FMM Economic Bid to zero for each FMM interval of the hour.

The transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour must be greater than or equal to the FMM Economic Bid. If the Scheduling Coordinator has a transmission profile less than its advisory Energy schedule, then the CAISO will limit the schedule for Energy in the FMM so that it does not exceed the quantity of the transmission profile.

The energy profile of the E-Tag at forty minutes prior to the applicable Trading Hour need not equal the FMM Economic Bid and the Scheduling Coordinator may revise the Energy profile up to twenty minutes prior to the applicable Trading Hour. At twenty minutes prior to the applicable Trading Hour, the quantity of the energy profile must be equal to the lower of: (a) the transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour; or (b) the quantity of the FMM energy schedule for the first FMM interval of the applicable Trading Hour.

The CAISO may modify the Energy profile due to Reliability related curtailments.

Scheduling Coordinators with cleared FMM Economic Bids may update either the transmission profile or the Energy profile after forty minutes prior to the applicable Trading Hour and twenty minutes prior to the applicable Trading Hour, respectively. A Scheduling Coordinator choosing to update the transmission profile must submit an updated transmission profile at least 40 minutes prior to the applicable FMM interval. A Scheduling Coordinator choosing to update the Energy profile must submit an updated Energy

profile at least 20 minutes prior to the applicable FMM interval.

Cleared FMM Economic Bids are eligible for Bid Cost Recovery as specified in Section 11.8.

Attachment B – Redline Tariff Changes

Answer to Comments

California Independent System Operator Corporation

June 29, 2020

30.5.7 E-Tag Rules and Treatment of Intertie Schedules

In addition to complying with all generally applicable E-Tagging requirements, Scheduling Coordinators must submit their E-tags consistent with the requirements specified in this Section 30.5.7. If a Scheduling Coordinator receives an intra-hour Schedule change, then the Scheduling Coordinator must, by twenty minutes before the start of the FMM interval to which the Schedule change applies, ensure that an updated energy profile reflects the change. Absent extenuating circumstances, the CAISO automatically updates Energy profiles on E-tags for Energy Schedules that change from HASP to the FMM within a Trading Hour. In performing this service for a Scheduling Coordinator, the CAISO does not assume any responsibility for compliance with any E-tag requirements or obligations to which the Scheduling Coordinator is subject. The changed energy profile will apply for the balance of the operating hour unless it is subsequently changed by a further updated energy profile.

30.5.7.1 Self-Schedule Hourly Blocks

By forty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag (or set of E-Tags) that passes CAISO E-Tag validation procedures and that supports the Self-Schedule Hourly Block. If the Scheduling Coordinator fails to submit a valid E-Tag by forty minutes prior to the applicable Trading Hour, then the CAISO will set the MW quantity of the FMM Schedule associated with the Self-Schedule Hourly Block to zero for each FMM interval of the hour.

The transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour must be equal to the Self-Schedule Hourly Block. If the Scheduling Coordinator has a transmission profile less than its advisory Energy schedule, then the CAISO will limit the schedule for Energy in the FMM so that it does not exceed the quantity of the transmission profile.

The energy profile of the E-Tag at forty minutes prior to the applicable Trading Hour need not equal the Self-Schedule Hourly Block and the Scheduling Coordinator may revise the Energy profile up to twenty minutes prior to the applicable Trading Hour. At twenty minutes prior to the applicable Trading Hour, the quantity of the Energy profile must be equal to the lower of: (a) the transmission profile of the E-tag at forty minutes prior to the applicable Trading Hour; or (b) the Self-Schedule Hourly Block. A Scheduling Coordinator is exposed to the Under/Over Delivery Charge if the Energy profile at twenty minutes prior to

the applicable Trading Hour is not equal to the Self-Schedule Hourly Block.

The CAISO may modify the Energy profile due to Reliability related curtailments.

~~By twenty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag in support of Self-Scheduled Hourly Blocks. The transmission profile must be greater than or equal to the Energy profile, and the Energy profile must equal the Self-Scheduled Hourly Block. The CAISO may modify the Energy profile due to Reliability related curtailments.~~

30.5.7.2 Variable Energy Resource Self-Schedule

By forty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag (or set of E-Tags) that passes CAISO E-Tag validation procedures and that supports the Variable Energy Resource Self-Schedule. If the Scheduling Coordinator fails to submit a valid E-Tag by forty minutes prior to the applicable Trading Hour, then the CAISO will set the MW quantity of the FMM Schedule associated with the Variable Energy Resource Self-Schedule to zero for each FMM interval of the hour.

The transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour must be equal to the Variable Energy Resource Self-Schedule. If the Scheduling Coordinator has a transmission profile less than its advisory Energy schedule, then the CAISO will limit the schedule for Energy in the FMM so that it does not exceed the quantity of the transmission profile.

The energy profile of the E-Tag at forty minutes prior to the applicable Trading Hour need not equal the Variable Energy Resource Self-Schedule and the Scheduling Coordinator may revise the Energy profile up to twenty minutes prior to the applicable Trading Hour. At twenty minutes prior to the applicable Trading Hour, the quantity of the Energy profile must be equal to the lower of: (a) the transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour; or (b) the Variable Energy Resource Self-Schedule. A Scheduling Coordinator is exposed to the Under/Over Delivery Charge if the Energy profile at twenty minutes prior to the applicable Trading Hour is not equal to the Variable Energy Resource Self-Schedule.

The CAISO may modify the Energy profile due to Reliability related curtailments.

~~By twenty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag in support of a Variable Energy Resource Self-Schedule. The transmission profile must be greater~~

~~than or equal to the Energy profile, and the Energy profile must equal the Variable Energy Resource Self-Schedule. The CAISO may modify the Energy profile due to Reliability related curtailments.~~

30.5.7.3 Economic Hourly Block Bid

~~By forty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag (or set of E-Tags) that passes CAISO E-Tag validation procedures and that supports the Economic Hourly Block Bid. If the Scheduling Coordinator fails to submit a valid E-Tag by forty minutes prior to the applicable Trading Hour, then the CAISO will set the MW quantity of the FMM Schedule associated with the Economic Hourly Block Bid to zero for each FMM interval of the hour.~~

~~The transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour must be equal to the Economic Hourly Block Bid. If the Scheduling Coordinator has a transmission profile less than its advisory Energy schedule, then the CAISO will limit the schedule for Energy in the FMM so that it does not exceed the quantity of the transmission profile.~~

~~The energy profile of the E-Tag at forty minutes prior to the applicable Trading Hour need not equal the Economic Hourly Block Bid and the Scheduling Coordinator may revise the Energy profile up to twenty minutes prior to the applicable Trading Hour. At twenty minutes prior to the applicable Trading Hour, the quantity of the Energy profile must be equal to the lower of: (a) the transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour; or (b) the quantity of the Economic Hourly Block Bid. A Scheduling Coordinator is exposed to the Under/Over Delivery Charge if the Energy profile at twenty minutes prior to the applicable Trading Hour is not equal to the Economic Hourly Block Bid.~~

~~The CAISO may modify the Energy profile due to Reliability related curtailments.~~

~~By twenty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag in support of an Economic Hourly Block Bid. The transmission profile must be greater than or equal to the Energy profile, and the Energy profile must equal the Economic Hourly Block Bid as awarded through HASP. The CAISO may modify the Energy profile due to Reliability related curtailments.~~

30.5.7.4 Economic Hourly Block Bid with Intra-Hour Option

~~By forty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag (or set of E-Tags) that passes CAISO E-Tag validation procedures and that supports the Economic Hourly Block Bid with Intra-Hour Option. If the Scheduling Coordinator fails to submit a valid E-Tag by~~

forty minutes prior to the applicable Trading Hour, then the CAISO will set the MW quantity of the FMM Schedule associated with the Economic Hourly Block Bid with Intra-Hour Option to zero for each FMM interval of the hour.

The transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour must be equal to the Economic Hourly Block Bid with Intra-Hour Option. If the Scheduling Coordinator has a transmission profile less than its advisory Energy schedule, then the CAISO will limit the schedule for Energy in the FMM so that it does not exceed the quantity of the transmission profile.

The energy profile of the E-Tag at forty minutes prior to the applicable Trading Hour need not equal the Economic Hourly Block Bid with Intra-Hour Option and the Scheduling Coordinator may revise the Energy profile up to twenty minutes prior to the applicable Trading Hour. At twenty minutes prior to the applicable Trading Hour, the quantity of the Energy profile must be equal to the lower of: (a) the transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour; or (b) the quantity of the Economic Hourly Block Bid with Intra-Hour Option. A Scheduling Coordinator is exposed to the Under/Over Delivery Charge if the Energy profile at twenty minutes prior to the applicable Trading Hour is not equal to the Economic Hourly Block Bid with Intra-Hour Option.

The CAISO may modify the Energy profile due to Reliability related curtailments.

~~By twenty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag in support of an Economic Hourly Block Bid. The transmission profile must be greater than or equal to the Energy profile, and the Energy profile must equal the Economic Hourly Block Bid as awarded through HASP. The CAISO may modify the Energy profile due to Reliability related curtailments. In the case of an intra-hour redispatch from the FMM, the CAISO may increment or decrement the Energy profile to correspond to the intra-hour redispatch. The MW level to which the FMM can redispatch an Economic Hourly Block Bid with Intra-Hour Option above its HASP Advisory Schedule is limited by the quantity of the transmission profile submitted by forty minutes prior to the applicable Trading Hour.~~

30.5.7.5 FMM Economic Bid

By forty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag (or set of E-Tags) that passes CAISO E-Tag validation procedures and that supports the FMM Economic Bid. If the Scheduling Coordinator fails to submit a valid E-Tag by forty minutes prior to the applicable

Trading Hour, then the CAISO will set the MW quantity of the FMM Schedule associated with the FMM Economic Bid to zero for each FMM interval of the hour.

The transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour must be greater than or equal to the FMM Economic Bid. If the Scheduling Coordinator has a transmission profile less than its advisory Energy schedule, then the CAISO will limit the schedule for Energy in the FMM so that it does not exceed the quantity of the transmission profile.

The energy profile of the E-Tag at forty minutes prior to the applicable Trading Hour need not equal the FMM Economic Bid and the Scheduling Coordinator may revise the Energy profile up to twenty minutes prior to the applicable Trading Hour. At twenty minutes prior to the applicable Trading Hour, the quantity of the energy profile must be equal to the lower of: (a) the transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour; or (b) the quantity of the FMM energy schedule for the first FMM interval of the applicable Trading Hour.

The CAISO may modify the Energy profile due to Reliability related curtailments.

Scheduling Coordinators with cleared FMM Economic Bids may update either the transmission profile or the Energy profile after forty minutes prior to the applicable Trading Hour and twenty minutes prior to the applicable Trading Hour, respectively. A Scheduling Coordinator choosing to update the transmission profile must submit an updated transmission profile at least 40 minutes prior to the applicable FMM interval. A Scheduling Coordinator choosing to update the Energy profile must submit an updated Energy profile at least 20 minutes prior to the applicable FMM interval.

~~By twenty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag in support of a FMM Economic Bid. The transmission profile must be greater than or equal to the maximum bid-in capacity for the Trading Hour, and the Energy profile must equal the MWs awarded for the first FMM interval of the Operating Hour. If the Scheduling Coordinator intends to limit its participation in the FMM to the quantity in the HASP advisory energy schedule (including zero), the Scheduling Coordinator may update its transmission profile to the maximum amount it wants to make available to the FMM prior to the start of the binding FMM optimization, which is no earlier than thirty-seven and a half minutes before the applicable Trading Hour. If the Scheduling Coordinator does not have a transmission profile greater than or equal to its advisory Energy schedule, then the CAISO will limit the schedule for~~

~~Energy in the FMM so that it does not exceed amounts greater than what is listed in the transmission profile.~~ Cleared FMM Economic Bids are eligible for Bid Cost Recovery as specified in Section 11.8.

Attachment C – Redline Tariff Changes compared to May 22 Filing

Answer to Comments

California Independent System Operator Corporation

June 29, 2020

30.5.7 E-Tag Rules and Treatment of Intertie Schedules

In addition to complying with all generally applicable E-Tagging requirements, Scheduling Coordinators must submit their E-Tags consistent with the requirements specified in this Section 30.5.7. If a Scheduling Coordinator receives an intra-hour Schedule change, then the Scheduling Coordinator must, by twenty minutes before the start of the FMM interval to which the Schedule change applies, ensure that an updated energy profile reflects the change. Absent extenuating circumstances, the CAISO automatically updates Energy profiles on E-Tags for Energy Schedules that change from HASP to the FMM within a Trading Hour. In performing this service for a Scheduling Coordinator, the CAISO does not assume any responsibility for compliance with any E-Tag requirements or obligations to which the Scheduling Coordinator is subject. The changed energy profile will apply for the balance of the operating hour unless it is subsequently changed by a further updated energy profile.

30.5.7.1 Self-Schedule Hourly Blocks

By forty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag (or set of E-Tags) that passes CAISO E-Tag validation procedures and that supports the Self-Schedule Hourly Block. If the Scheduling Coordinator fails to submit a valid E-Tag by forty minutes prior to the applicable Trading Hour, then the CAISO will set the MW quantity of the FMM Schedule associated with the Self-Schedule Hourly Block to zero for each FMM interval of the hour.

The transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour must be equal to the Self-Schedule Hourly Block. If the Scheduling Coordinator has a transmission profile less than its advisory Energy schedule, then the CAISO will limit the schedule for Energy in the FMM so that it does not exceed the quantity of the transmission profile.

The energy profile of the E-Tag at forty minutes prior to the applicable Trading Hour need not equal the Self-Schedule Hourly Block and tThe Scheduling Coordinator may revise the Energy profile up to twenty minutes prior to the applicable Trading Hour. At twenty minutes prior to the applicable Trading Hour, ~~but~~ the quantity of the Energy profile must be equal to the lower of: (a) quantity of the ~~the~~ transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour; or (b) the Self-Schedule Hourly Block

~~by twenty minutes prior to the applicable Trading Hour. A Scheduling Coordinator is exposed to the Under/Over Delivery Charge if the Energy profile at twenty minutes prior to the applicable Trading Hour is not equal to the Self-Schedule Hourly Block.~~

The CAISO may modify the Energy profile due to Reliability related curtailments.

~~If the Scheduling Coordinator fails to submit a valid E-Tag consistent with these deadlines, then the CAISO will set the MW quantity of the FMM Schedule associated with the Self-Schedule Hourly Block to zero for each FMM interval of the hour.~~

30.5.7.2 Variable Energy Resource Self-Schedule

By forty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag (or set of E-Tags) that passes CAISO E-Tag validation procedures and that supports the Variable Energy Resource Self-Schedule. ~~If the Scheduling Coordinator fails to submit a valid E-Tag by forty minutes prior to the applicable Trading Hour, then the CAISO will set the MW quantity of the FMM Schedule associated with the Variable Energy Resource Self-Schedule to zero for each FMM interval of the hour.~~

The transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour must be equal to the Variable Energy Resource Self-Schedule. If the Scheduling Coordinator has a transmission profile less than its advisory Energy schedule, then the CAISO will limit the schedule for Energy in the FMM so that it does not exceed the quantity of the transmission profile.

~~The energy profile of the E-Tag at forty minutes prior to the applicable Trading Hour need not equal the Variable Energy Resource Self-Schedule and t~~The Scheduling Coordinator may revise the Energy profile up to twenty minutes prior to the applicable Trading Hour. ~~At twenty minutes prior to the applicable Trading Hour, but~~ the quantity of the Energy profile must be equal to the lower of: (a) the transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour; or (b) the quantity of the Variable Energy Resource Self-Schedule. ~~by twenty minutes prior to the applicable Trading Hour. The CAISO may modify the Energy profile due to Reliability related curtailments. A Scheduling Coordinator is exposed to the Under/Over Delivery Charge if the Energy profile at twenty minutes prior to the applicable Trading Hour is not equal to the Variable Energy Resource Self-Schedule.~~

~~The CAISO may modify the Energy profile due to Reliability related curtailments. If the Scheduling Coordinator fails to submit a valid E-Tag consistent with these deadlines, then the CAISO will set the MW quantity of the FMM Schedule associated with the Variable Energy Resource Self-Schedule to zero for each FMM interval of the hour.~~

30.5.7.3 Economic Hourly Block Bid

By forty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag (or set of E-Tags) that passes CAISO E-Tag validation procedures and that supports the Economic Hourly Block Bid. ~~If the Scheduling Coordinator fails to submit a valid E-Tag by forty minutes prior to the applicable Trading Hour, then the CAISO will set the MW quantity of the FMM Schedule associated with the Economic Hourly Block Bid to zero for each FMM interval of the hour.~~

The transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour must be equal to the Economic Hourly Block Bid. If the Scheduling Coordinator has a transmission profile less than its advisory Energy schedule, then the CAISO will limit the schedule for Energy in the FMM so that it does not exceed the quantity of the transmission profile.

~~The energy profile of the E-Tag at forty minutes prior to the applicable Trading Hour need not equal the Economic Hourly Block Bid and t~~The Scheduling Coordinator may revise the Energy profile up to twenty minutes prior to the applicable Trading Hour. ~~At twenty minutes prior to the applicable Trading Hour, but~~ the quantity of the Energy profile must be equal to the lower of: (a) the transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour; or (b) ~~to~~ the quantity of the Economic Hourly Block Bid by twenty minutes prior to the applicable Trading Hour. ~~A Scheduling Coordinator is exposed to the Under/Over Delivery Charge if the Energy profile at twenty minutes prior to the applicable Trading Hour is not equal to the Economic Hourly Block Bid.~~

The CAISO may modify the Energy profile due to Reliability related curtailments.

~~If the Scheduling Coordinator fails to submit a valid E-Tag consistent with these deadlines, then the CAISO will set the MW quantity of the FMM Schedule associated with the Economic Hourly Block Bid to zero for each FMM interval of the hour.~~

30.5.7.4 Economic Hourly Block Bid with Intra-Hour Option

By forty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag (or set of E-Tags) that passes CAISO E-Tag validation procedures and that supports the Economic Hourly Block Bid with Intra-Hour Option. If the Scheduling Coordinator fails to submit a valid E-Tag by forty minutes prior to the applicable Trading Hour, then the CAISO will set the MW quantity of the FMM Schedule associated with the Economic Hourly Block Bid with Intra-Hour Option to zero for each FMM interval of the hour.

The transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour must be equal to the Economic Hourly Block Bid with Intra-Hour Option. If the Scheduling Coordinator has a transmission profile less than its advisory Energy schedule, then the CAISO will limit the schedule for Energy in the FMM so that it does not exceed the quantity of the transmission profile.

The energy profile of the E-Tag at forty minutes prior to the applicable Trading Hour need not equal the Economic Hourly Block Bid with Intra-Hour Option and tThe Scheduling Coordinator may revise the Energy profile up to twenty minutes prior to the applicable Trading Hour. At twenty minutes prior to the applicable Trading Hour, ~~but~~ the quantity of the Energy profile must be equal to the lower of: (a) the transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour; or (b) the quantity of the Economic Hourly Block Bid with Intra-Hour Option. A Scheduling Coordinator is exposed to the Under/Over Delivery Charge if the Energy profile at twenty minutes prior to the applicable Trading Hour is not equal to the Economic Hourly Block Bid with Intra-Hour Option.

~~by twenty minutes prior to the applicable Trading Hour.~~The CAISO may modify the Energy profile due to Reliability related curtailments.

~~If the Scheduling Coordinator fails to submit a valid E-Tag consistent with these deadlines, then the CAISO will set the MW quantity of the FMM Schedule associated with the Economic Hourly Block Bid with Intra-Hour Option to zero for each FMM interval of the hour.~~

In the case of an intra-hour redispatch from the FMM, the CAISO may increment or decrement the Energy profile to correspond to the intra-hour redispatch. The MW level to which the FMM can redispatch an Economic Hourly Block Bid with Intra-Hour Option above its HASP Advisory Schedule is limited by the

quantity of the transmission profile submitted by forty minutes prior to the applicable Trading Hour.

30.5.7.5 FMM Economic Bid

By forty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag (or set of E-Tags) that passes CAISO E-Tag validation procedures and that supports the FMM Economic Bid. If the Scheduling Coordinator fails to submit a valid E-Tag by forty minutes prior to the applicable Trading Hour, then the CAISO will set the MW quantity of the FMM Schedule associated with the FMM Economic Bid to zero for each FMM interval of the hour.

The transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour must be greater than or equal to the FMM Economic Bid. If the Scheduling Coordinator has a transmission profile less than its advisory Energy schedule, then the CAISO will limit the schedule for Energy in the FMM so that it does not exceed the quantity of the transmission profile.

The energy profile of the E-Tag at forty minutes prior to the applicable Trading Hour need not equal the FMM Economic Bid and tThe Scheduling Coordinator may revise the Energy profile up to twenty minutes prior to the applicable Trading Hour. At twenty minutes prior to the applicable Trading Hour, the quantity of the energy profile must be equal to the lower of: (a) the transmission profile of the E-Tag at forty minutes prior to the applicable Trading Hour; or (b) but the quantity of the Energy profile must be equal to the quantity of the FMM energy schedule for the first FMM interval of the applicable Trading Hour by twenty minutes prior to the applicable Trading Hour.

The CAISO may modify the Energy profile due to Reliability related curtailments.

~~If the Scheduling Coordinator fails to submit a valid E-Tag consistent with these deadlines, then the CAISO will set the MW quantity of the FMM Schedule associated with the FMM Economic Bid to zero for each FMM interval of the hour.~~

Scheduling Coordinators with cleared FMM Economic Bids may update either the transmission profile or the Energy profile after forty minutes prior to the applicable Trading Hour and twenty minutes prior to the applicable Trading Hour, respectively~~the relevant deadlines~~. A Scheduling Coordinator choosing to

update the transmission profile must submit an updated transmission profile at least 40 minutes prior to the applicable FMM interval. A Scheduling Coordinator choosing to update the Energy profile must submit an updated Energy profile at least 20 minutes prior to the applicable FMM interval.

Cleared FMM Economic Bids are eligible for Bid Cost Recovery as specified in Section 11.8.

CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing document upon all of the parties listed on the official service list for the above-referenced proceeding, pursuant to the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010).

Dated at Folsom, California this 29th day of June, 2020.

/s/ Jacqueline Meredith
Jacqueline Meredith