

FEDERAL ENERGY REGULATORY COMMISSION  
WASHINGTON, D.C. 20426

OFFICE OF ENERGY MARKET REGULATION

California Independent System  
Operator Corporation  
Docket Nos. ER15-1919-000  
ER15-1919-001

California Independent  
System Operator Corporation  
250 Outcropping Way  
Folsom, CA 95630

July 30, 2015

Attention: John Anders  
Attorney for California Independent System Operator Corporation

Reference: Deficiency Letter

Dear Mr. Anders:

On June 15, 2015, as amended June 25, 2015 and July 1, 2015, the California Independent System Operator Corporation (CAISO) filed proposed tariff revisions governing the Energy Imbalance Market (EIM). CAISO's proposed modifications are the result of the EIM Year One Enhancement stakeholder initiative intended to improve functionality, allow participation of additional balancing authority areas (BAAs), address issues encountered during the first year of EIM operations, and comply with Commission directives in the order approving the implementation of the EIM. Specifically, CAISO's proposed revisions seek to: (1) reflect several changes to accommodate the use of available transfer capability for EIM Transfers; (2) provide a cost-based greenhouse gas bid adder mechanism, as previously directed by the Commission;<sup>1</sup> (3) align the EIM administrative charge with the CAISO grid management charge to ensure CAISO market participants and EIM market participants pay the same rate for similar real-time services; and (4) improve the evaluation of resource sufficiency by including, among other things,

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<sup>1</sup> *California Indep. Sys. Operator Corp.*, 147 FERC ¶ 61,231, at PP 239-40 (2014) (June 19 Order).

a historical scheduling error of imports and exports in base schedules and an evaluation of the resource sufficiency of the CAISO BAA.<sup>2</sup>

Please be advised that the filing is deficient and the Commission requires additional information in order to process the filing. To assist Staff with the analysis of this filing, please provide a complete response to the following:

A. EIM Transfer Parameter

With regard to EIM Transfers,<sup>3</sup> CAISO proposes to include a transfer-related cost as a parameter, applicable to intertie scheduling paths for scheduling EIM Transfers. CAISO explains that the new transfer parameter will enable the market optimization to function more efficiently in selecting the optimal intertie scheduling paths in the EIM footprint as a result of NV Energy and other BAAs joining the EIM.<sup>4</sup> CAISO states that it will set the parameter at a level that reflects the relative priorities of various paths for scheduling EIM Transfers and will allow the market optimization to differentiate the value of scheduling on more optimal paths rather than less optimal paths. CAISO further states that during market simulations it will determine the appropriate level of the transfer cost by balancing the benefits of including transfer costs with the impact to locational marginal prices (LMPs). CAISO explains that it will need to recalibrate the transfer cost parameters from time to time for reasons such as changes in network topology, changes in transmission rights, and seasonality. Finally, CAISO proposes to cap the cost of any transfer parameter at \$0.10 per MWh.<sup>5</sup>

1. Please provide additional context regarding the reason that the EIM Transfer parameter approach is needed. To the extent CAISO's proposal modifies the EIM's original design, which relies on a flow-based optimization, by instead relying on a path priority based approach for EIM Transfers, please explain the

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<sup>2</sup> CAISO June 25 Transmittal Letter at 1.

<sup>3</sup> CAISO's tariff defines an EIM Transfer as "[t]he transfer of Energy in Real-Time between an EIM Entity Balancing Authority Area and the CAISO Balancing Authority Area, or between EIM Entity Balancing Authority Areas, using transmission capacity made available to the Real-Time Market through the Energy Imbalance Market. The EIM Transfer is not a Real-Time Interchange Export Schedule or a Real-Time Interchange Import Schedule." *See* CAISO Tariff, Appendix A (Master Definition Supplement).

<sup>4</sup> *Id.* at 6.

<sup>5</sup> *Id.* at 7.

rationale for this decision. On the other hand, if CAISO's proposal will not alter the original EIM design's reliance on a flow-based optimization, please explain how the current method of optimization is maintained with the introduction of the transfer cost parameter. Staff understands the Transfer Parameter as a mechanism to select which transmission path will be used to transfer imbalance energy, not as a limit to either flows or LMPs. If staff's understanding is incorrect, please explain whether the Transfer Parameter does in fact act as a limit to flows or LMPs.

2. CAISO states that "because the optimization can account for EIM transfers on multiple paths with different transfer limits, the CAISO needs a parameter to determine efficiently on which E-tags to schedule the EIM transfer for accounting purposes."<sup>6</sup>
  - a. Please clarify what CAISO means by the term "E-tags" within this statement. Do these "E-tags" refer to EIM dynamic tags? Are any other "E-tag" types included?
  - b. Please provide a specific example illustrating CAISO's design, including details of how the parameter will function in practice to select a more optimal path in a particular situation.
  - c. Finally, please clarify in which optimization of the real-time market (15-minute, five-minute, or both) CAISO proposes to use the EIM transfer cost parameter.
3. CAISO states that the transfer cost parameter "will allow the market optimization to differentiate the value of scheduling on more optimal paths rather than less optimal paths."<sup>7</sup>
  - a. Please explain what CAISO means by "more optimal paths" and "less optimal paths," and indicate the basis for this differentiation.
  - b. Please indicate who determines the "relative priorities of various paths." What role will the EIM BAAs or any other entities have in determining the path priorities? Which entity has the final decision-making authority with respect to determining path priorities?

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<sup>6</sup> *Id.* at 6.

<sup>7</sup> *Id.*

- c. Please indicate how CAISO intends to assign the cost parameters to different paths.
    - d. Please indicate where CAISO plans to document its selection criteria.
4. Please explain how often CAISO anticipates that the relative priority of paths will be recalibrated. Please specify what triggers would justify a change to the priority of paths and if CAISO plans on including this information in the business practice manual or tariff. Please indicate if notice will be provided to stakeholders of any recalibration.
5. Please explain how CAISO proposes to calculate the transfer cost parameters in a potential new EIM entity's market simulation. Does the addition of new EIM entities necessitate modifications to the transfer cost parameters of the previously integrated EIM entities? Please indicate if specific simulation scenarios are planned, and if so, provide further details regarding the scenarios and measures for success. Finally, please explain how much actual market operation experience CAISO believes is needed to finalize the parameters.
6. CAISO's proposed tariff revisions do not include any procedures to identify how the new transfer cost parameters will impact LMPs.
  - a. Has CAISO developed any such procedures? What procedures, if any, are in place for evaluating the outcome of the distribution of the settlement impact of the transfer cost parameters, over time, on various entities?
  - b. To the extent that there are such procedures, please indicate if CAISO intends to include them in the business practice manual and, if so, why CAISO considers such procedures to be appropriate for inclusion in the business practice manual instead of the filed tariff?
7. CAISO proposes to cap the cost of any EIM Transfer parameter at \$0.10 per MWh. Please explain how CAISO determined the level of the proposed transfer parameter cost cap and how the amount will effectively differentiate the value of scheduling on more optimal paths rather than less optimal paths.

## B. Greenhouse Gas Adder

In the Commission's June 19 Order, the Commission directed CAISO to implement a cost-based greenhouse gas bid adder mechanism.<sup>8</sup> Instead of offering a

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<sup>8</sup> June 19 Order, 147 FERC ¶ 61,231 at PP 236-40.

cost-based bid curve as is done for default energy bids, CAISO proposes to allow participating resources to bid up to each unit's maximum greenhouse gas compliance cost based on the unit's maximum heat rate registered with CAISO, the greenhouse gas allowance price, the resources emissions rate, and an additional 10 percent. Further, CAISO proposes to allow resources to change their greenhouse gas bid hourly, rather than daily.

1. CAISO states that allowing EIM participating resources to bid up to each unit's maximum greenhouse gas compliance cost plus 10 percent increases flexibility and will enhance, rather than deter, EIM Transfers into California.<sup>9</sup>
  - a. Please explain why it is appropriate to allow participating resources to bid more than their greenhouse gas compliance cost.
  - b. What flexibility is provided by allowing resources to bid above their greenhouse gas costs and how does this flexibility benefit the market?
2. Please explain why it is necessary to allow resources to change the greenhouse gas adder hourly rather than daily.

This letter is issued pursuant to 18 C.F.R. § 375.307(a)(1)(v) (2014) and is interlocutory. This letter is not subject to rehearing pursuant to 18 C.F.R. § 385.713 (2014), and a response to this letter must be filed with the Secretary of the Commission within 30 days of the date of this letter by making an amendment filing in accordance with the Commission's electronic tariff requirements.<sup>10</sup> In a concurrent notice, Commission staff is initiating a meeting 10 days after the issuance of this deficiency letter to further explore the questions raised in this letter and gather additional detail regarding CAISO's proposal.

The information requested in this letter will constitute an amendment to your filing, and a new filing date will be established, pursuant to *Duke Power Company*, 57 FERC ¶ 61,215 (1991), upon receipt of CAISO's electronic tariff filing. A notice of amendment will be issued upon receipt of your response.

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<sup>9</sup> CAISO June 25 Transmittal Letter at 10.

<sup>10</sup> *Electronic Tariff Filings*, 130 FERC ¶ 61,047, at PP 3-8 (2010) (stating that an amendment filing must include at least one tariff record even though a tariff revision might not otherwise be needed). The response must be filed using Type of Filing Code 180 – Deficiency Filing. If there are no changes to tariff records, CAISO can attach a single tariff record with no changes.

Failure to respond to this letter within the time period specified may result in an order rejecting your filing. Pending receipt of the above information, a filing date will not be assigned to your filing.

Sincerely,

Steve P. Rodgers, Director  
Division of Electric Power  
Regulation – West