

## Memorandum

**To:** Energy Imbalance Market Governing Body

**From:** Keith Casey, Vice President, Market & Infrastructure Development

**Date:** June 21, 2019

**Re:** **Decision on Real-Time Market Neutrality Settlement Proposal**

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*This memorandum requires EIM Governing Body action.*

### EXECUTIVE SUMMARY

Real-time market neutrality settlement ensures that the ISO is revenue neutral. Without the real-time market neutrality settlement, the ISO would not be market revenue neutral because the payments to supply are not equal to the charges to demand. The ISO allocates any amounts owed or received resulting from real-time market neutrality accounting based on the components of the locational marginal price. This consists of three separate offset calculations: (1) real-time marginal loss offset, (2) real-time congestion offset, and (3) real-time imbalance energy offset.

In the mid-year update to the policy initiatives catalog, Idaho Power and PacifiCorp requested the ISO review the real-time imbalance energy offset. In response, Management initiated internal review of the settlement amounts and design and identified changes needed to address issues with the current real-time market neutrality settlement. Management thus proposes two changes to the calculation of the real-time imbalance energy offset to more accurately reflect the offset amount for individual balancing authority areas in the EIM area:

1. No longer transfer a portion of the real-time imbalance energy offset between balancing authority areas in the EIM, and
2. Modify the financial value of EIM transfers between non-California balancing authority areas from the system marginal energy cost to the system marginal energy cost less the greenhouse gas (GHG) marginal cost.

Both of these changes fall under the EIM Governing Body's primary decisional authority as explained further below.

Management proposes the following motion:

***Moved, that the EIM Governing Body approves the proposed changes to the real-time imbalance energy offset calculation as described in the memorandum dated June 21, 2019.***

## **DISCUSSION AND ANALYSIS**

Real-time market neutrality settlement is needed to ensure the ISO is market revenue neutral. In clearing and settling the outcomes of the real-time market, the payments (and charges) to supply do not equal the charges (and payments) by demand. This is a result of several factors including: (1) settlement of losses at the marginal rate versus the average rate, (2) unresolved congestion in day-ahead or base schedules, (3) differences between the load forecast and metered load, (4) deviations from dispatch by generation, and (5) unaccounted for energy. The ISO allocates any amounts owed or received resulting from real-time market neutrality settlement based on the components of the locational marginal price using three separate offset accounting methods: real-time marginal loss offset, real-time congestion offset, and real-time imbalance energy offset.

Management proposes two changes to the real-time imbalance energy offset:

1. No longer transfer a portion of the real-time imbalance energy offset between balancing authority areas in the EIM, and
2. Modify the financial value of EIM transfers between non-California balancing authority areas from the system marginal energy cost to the system marginal energy cost less the greenhouse gas (GHG) marginal cost.

Management does not, however, propose any changes to the real-time marginal loss offset or the real-time congestion offset. These offsets are currently calculated for each individual balancing authority area in the EIM area.

### ***Eliminate EIM transfer adjustment***

During the original EIM stakeholder process, it was determined that the real-time imbalance energy offset and the bid cost recovery cost allocation should have an additional step to move a portion of these charges and revenues between balancing authority areas because they are the result of serving demand. Demand was defined as metered load within the balancing authority area, exports from the balancing authority area, and EIM transfers out of the balancing authority area.

For the bid cost recovery allocation, which includes costs not covered by the locational marginal price and primarily reflects costs of committing a resource, cost causation due to EIM transfers was considered to be more direct than the real-time imbalance energy offset. In this case it is economic to incur commitment costs to support the transfer. Therefore, to the extent the resource committed does not fully recover its costs, EIM transfers out should

be allocated a portion of the bid cost recovery payments to the resource. The cost causation is direct because this is an uplift cost, which is directly attributable to producing energy that happens to not be recovered through the locational marginal price.

On the other hand, neutrality amounts are different than bid cost recovery amounts as they do not simply represent costs not recovered through the locational marginal price. Neutrality amounts occur when payments and charges to scheduling coordinators do not net to zero in a settlement interval for various reasons as discussed above. Therefore, the cost causation for allocating the real-time imbalance energy offset to demand is indirect.

Under the current settlement design when there are transfers between EIM balancing areas, a share of the real-time imbalance energy offset is transferred between the balancing authority areas. This provision was established at the time because these offset amounts were seen as charges and credits related to serving demand. The ISO's experience within its balancing authority area, after implementation of FERC Order 764, was that the real-time imbalance energy offset was small and largely driven by how closely resources on regulation responded to uninstructed deviations. However, more recent information has shown that real-time imbalance energy offset is now primarily driven by the way in which each balancing authority area manages and accounts for their balancing area services. As a result, Management finds that it is no longer appropriate to transfer real-time market neutrality from one balancing authority area to another. Therefore, Management proposes to eliminate the transfer adjustment so each balancing authority area is responsible for its own real-time imbalance energy offset.

### ***Financial value of EIM transfers between non-California balancing authority areas***

Since EIM transfers are not explicitly settled as an import and export between balancing authority areas in the EIM area, the financial value of EIM transfers is included in the initial calculation of the real-time imbalance energy offset. The financial value of the EIM transfer is calculated by multiplying the system marginal energy cost by the MWh quantity of the EIM transfers in and out of the balancing authority areas. The system marginal energy cost is the same for all nodes in the EIM area. The sum of the financial value across the EIM footprint is zero because all EIM transfers out have a corresponding EIM transfer in. The financial value replicates the energy settlement of EIM transfers in order to have imbalance supply and demand resulting from the market optimization be equal for each balancing authority area.

However, using the system marginal energy cost, which includes GHG costs, is not appropriate for transfers that occur between non-California balancing authority areas. This is because the value of the energy transferred is lower outside of California because these transfers do not include GHG costs. When there are net imports into the California area, price separation will occur when the GHG marginal cost of serving California transfers is non-zero. This results in higher prices in the California area than in non-California areas.

Management proposes that for EIM transfers between non-California balancing authority areas, the financial value will be at the system marginal energy cost less the GHG marginal cost. This aligns the financial value of the EIM transfer out with the payments made to generation that support the EIM transfer.

## **DECISIONAL CLASSIFICATION**

The EIM Governing Body has primary authority over the first proposed change, which eliminates the transfer adjustment between balancing authority areas of the real-time imbalance energy offset, because the primary driver is an issue specific to the EIM balancing authority areas. Although the new rule would be generally applicable to the entire real-time market, the ISO has pursued this change because eliminating the adjustment in real-time imbalance energy offset would more accurately reflect cost causation. More specifically, the primary driver for this change is the need to ensure that EIM balancing authority areas are receiving a more accurate allocation based on proper cost causation principles. While the change will have impacts on all balancing authority areas, the issue that is the primary driver is specific to EIM and was raised by EIM Entities. One stakeholder, Southern California Edison Company, expressed concern about the decisional classification for this component of the proposal in comments on the initial issue paper and straw proposal. Management responded to those comments and further explained the basis for its classification determination. Southern California Edison Company did not submit further comments in response to the draft final proposal.

The second proposed change, which would establish the financial value of EIM transfers between balancing authority areas not subject to a greenhouse gas compliance obligation as the system marginal energy cost less the cost of GHG, falls within the primary authority of the EIM Governing Body because this rule is EIM-specific.

## **POSITIONS OF THE PARTIES**

Stakeholders generally support the two proposed changes and the accelerated process to implement the corrections as soon as possible. However, stakeholders have concerns in three areas: (1) the need for a comprehensive review of offsets and uplifts, (2) an assessment of business processes to mitigate future settlement issues, and (3) an assessment of the feasibility of conducting a retroactive settlement.

Stakeholders highlighted the complexity involved in calculation of real-time market neutrality. Some stakeholders argued that this justifies a new stakeholder initiative to further review the calculation of offsets and cost allocation. Other stakeholders questioned if the implementation approach for the financial value of EIM transfers is scalable if additional GHG programs must be supported. In response, Management commits to conduct a comprehensive review of the real-time settlement charge codes

associated with interactions between balancing authority areas in the real-time market enhancements initiative scheduled for next year. In addition, Management is committed to ensuring that the financial value of EIM transfers is scalable to multiple GHG programs in the West. To that end, Management will include within the scope of the multi-GHG areas initiative currently planned to commence later this year, assuming an additional GHG program would need to be supported, a validation that the current implementation is scalable to the additional GHG programs.

Market issues are identified by the ISO, stakeholders and the Department of Market Monitoring through a number of different avenues, and once identified, Management prioritizes addressing the market issues over other market design changes. The ISO has internal processes to review market results and tracks market issues through resolution. Stakeholders can identify and communicate market issues by submitting issue tickets, disputes, and through discussion with ISO Management and staff. Likewise, the Department of Market Monitoring works closely with the ISO to identify and resolve market issues. While the market issues in this initiative were not immediately identified, Management believes the existing processes worked to ensure a quick resolution once the market issues had been identified.

Lastly, some stakeholders argued that the ISO has not given sufficient consideration to retroactive correction of the real-time imbalance energy offset. Management conducted a thorough analysis of whether any of the issues addressed by the proposal could be subject to retroactive settlement treatment. First, regarding the elimination of the transfer adjustment, the current policy in place was established based on information at the time that supported the transfer adjustment. This issue was considered during the Federal Energy Regulatory Commission's process to approve the EIM design. FERC found the proposal to be just and reasonable. The ISO implemented the transfer adjustment consistent with the approved tariff. Since that time, new information has indicated that under current EIM operations, eliminating the transfer adjustment would be more an accurate method for allocating real-time imbalance energy offset amounts. For these reasons, Management concluded that the elimination of the transfer adjustment is not appropriate for retroactive settlement. Similarly, for the financial value of EIM transfers change, Management finds that this was also implemented consistent with the FERC-approved tariff and therefore not appropriate for retroactive settlement.

## **CONCLUSION**

Management requests the EIM Governing Body approve Management's proposed changes to the real-time imbalance energy offset. Eliminating the EIM transfer adjustment will more appropriately reflect the offset amount for individual balancing authority areas in the EIM area. In addition, calculating the financial value of EIM transfers between non-California balancing authority areas at the system marginal

energy cost less the GHG marginal cost will accurately reflect the payment to generation supporting the EIM transfer.