



**COMMENTS OF ARIZONA PUBLIC SERVICE
REAL-TIME MARKET NEUTRALITY SETTLEMENT
DRAFT FINAL PROPOSAL
DATED MAY 30, 2019**

Submitted by	Company	Date Submitted
Adam Wardell Adam.Wardell@aps.com 602-371-6429	Arizona Public Service	June 13, 2019

Arizona Public Service (APS) appreciates the opportunity to comment on the California Independent System Operator’s (CAISO) Real-Time Market Neutrality Settlement Draft Final Proposal. APS submits the following comments for CAISO’s consideration.

Eliminate Energy Imbalance Market (EIM) Transfer Adjustment

APS generally supports the proposal to eliminate transfer adjustments from the Real-Time Imbalance Energy Offset (RTIEO) calculation and we believe that any changes to settlements should be made prospectively from the effective date of the change. APS believes this is a positive step to enhance the accuracy of settlements, including those related to Greenhouse Gas (GHG) allocations.

APS notes that transfer adjustments acted as a mechanism to reduce settlement volatility, so removing this adjustment highlights the need to ensure that the data inputs to the EIM Transfer Value calculation within RTIEO are correct. The magnitude of errors related to Transfer Value could be financially material, so APS suggests that CAISO should seriously consider implementing some form of internal controls to validate the inputs to the Transfer Value calculation. This will help ensure that the final RTIEO settlement is accurate. Suggestions for internal controls are described below in the “BPM Change to Clarify Submission of ETSR Schedules” section.

Correct Value of EIM Transfers

APS believes the proposal relating to GHG awards in real-time market neutrality is a needed change and supports the effort to revise these calculations. We believe that the methodology proposed by the CAISO generates the correct financial settlement, but we note these calculations are complex and can be hard to follow for end users. In the APS comments to the Issue Paper/Straw Proposal we described in detail why we believe the CAISO proposal is difficult to understand and outlined an alternate solution which achieves the same settlement result but is easier to validate and explain.

We urge CAISO to be as transparent as possible in the calculation and publication of these settlements. We also recommend that CAISO provide additional guidance and/or training when implementing the new methodology in order to help market participants understand how to validate the inputs and outputs of the RTIEO calculation.

APS notes that the revised methodology proposed by CAISO is acceptable for the current situation, but if additional GHG zones are added this design may need to be revisited to accommodate that change. If additional GHG zones are added, APS requests that the CAISO solicit feedback from market participants at that time through a stakeholder process before implementing additional changes.

Business Practice Manual (BPM) Change to Clarify Submission of ETSR Schedules

APS is pleased that the CAISO is proposing changes to the settlement of Energy Transfer System Resources (ETSR) between EIM Entities and CAISO. The methodology currently in effect is flawed because CAISO settles each 5-minute interval by dividing the hourly total into 12 equal values, without shaping the volume at each 5-minute interval. For example, if an EIM Entity has an ETSR Export to CAISO that only occurred during the first 5-minute interval in the hour, CAISO averages that first 5-minute interval's ETSR value over the entire 12 intervals of the hour. This averaging has caused the following issues in the current methodology:

- 1) Transfer value adjustments calculation that does not reflect the adjustments at the proper 5-minute interval level; and
- 2) Incorrect net import/export quantities in a specific 5-minute interval leading to incorrect GHG settlements

APS strongly agrees that using a 5-minute granularity consistently for all ETSRs in EIM (including those between EIM Entities and CAISO) will result in a more accurate settlement. The imbalance energy settlement for each 5-minute interval will better correlate with the result of the 5-minute Market Optimization. Using a 5-minute granularity for all ETSRs will also correct the current misalignment issue where an EIM entity's net settlements of GHG "revenues & charges" between the EIM entity and CAISO uses the hourly integrated value but the specific 5-minute tag value is used for these same settlements when they happen between EIM entities.

In the Draft Final Proposal the CAISO requested stakeholder feedback on the following three options for a Business Practice Manual (BPM) change:

1. RTD EIM Transfer Schedules are deemed delivered.
2. EIM BAA with ETSR tagging responsibility, submits ALL ATF EIM Transfer Values (MW) to Settlements through EIM Real Time Interchange Schedule. These values should be shaped to reflect RTD ETSR Dispatches.
3. Current tagging requirements remain in effect. CAISO Settlement shapes the submitted ETSR ATF values to reflect RTD ETSR Dispatches.

All three of these options resolve the core issue that was described above (dividing an hourly value evenly over 12 intervals). APS believes that the most accurate method for settling ETSRs would be to use the actual tag data as the volume (Option 2 or Option 3), however the simplicity of deeming Real-Time Dispatch (RTD) EIM Transfer Schedules as delivered (Option 1) also makes it an attractive option. APS' preferences for standardizing the submission of 5-minute ETSR data are described below.

Option 1 is the simplest method and would eliminate potential errors in EIM Real Time Interchange Schedule submissions from EIM Entities to CAISO. However, there are instances where the actual tag volume may be different from the instructed transfer volume. In these instances if the ISO used Option 1 the Transfer Value component of RTIEO would not be as accurate as it would be if the tag value was used. However, our understanding (based on CAISO's comments on the 6/6/2019 stakeholder call) is that any variances between the tag volume and the RTD ETSR Dispatch would settle through the Unaccounted for Energy (UFE) charge code. While we believe Option 1 could resolve the core issues at hand, this would not be APS's preferred option.

Option 2 utilizes tag volumes, which is more accurate, but requires extensive changes for EIM Entities and their software vendors. With Option 2, there is a higher risk that there could be inconsistencies among market participants in how the volume shaping and tagging is performed. There is the potential that inconsistencies in the 5-minute net transfer volumes could create neutrality issues where volumes and settlement dollars do not net to zero. Additionally, EIM Entities would need adequate time to make changes with their software vendors before submitting shaped tag volumes through EIM Real Time Interchange Schedule. Given the high risk for inconsistencies and extensive software changes associated with implementing this option, Option 2 is APS's **least** preferred option.

Like Option 2, Option 3 utilizes more accurate tag volumes. However, unlike Option 2, Option 3 is far less cumbersome for EIM Entities and their software vendors. Option 3 would ensure a consistent shaping process for the transfer volumes between CAISO and an EIM Entity, since CAISO Settlements would use the same shaping method for all transfers between CAISO and EIM Entities. Due to the relatively simple implementation process and consistency offered in this option, Option 3 would be APS's **most** preferred option.

If CAISO decides to utilize tag volumes (Option 2 or Option 3) instead of deeming RTD EIM Transfer Schedules as delivered (Option 1), APS believes that CAISO should strongly consider implementing validation rules on the values that are submitted by the EIM Entities. A basic internal control or some kind of "reasonableness check" should be in place within CAISO to flag significant discrepancies between the settlement transfer quantities (i.e. tag volumes) and CAISO's RTD ETSR Dispatch volume. For example, a reasonableness check could be a comparison on an hourly level, and CAISO could notify the EIM entity when there is a variance

beyond a defined threshold. That would prompt the EIM Entity to perform additional review of their data and resubmit corrected values if any errors were found.

As described in our comments to the Issue Paper/Straw Proposal, we also suggest that CAISO implement submission timeline requirements for these 5-minute transfer quantities so that settlement calculations in the T+12B settlement statement include actual quantities which can be viewed by EIM entities. CAISO has stated that if actual quantities are not provided by a market participant, an estimated volume will be used in settlements until the T+55B statement.¹ In this type of situation, another EIM entity would be unable to validate actual quantities because only an estimate is available for review.

Timing of Stakeholder Process and Implementation

While APS is supportive of the overall timeline of the Real-Time Market Neutrality Settlement stakeholder process, some of the proposed changes may require significant software and system modifications and will likely require alteration to EIM Entities' internal business processes. Sufficient time must be included in the implementation schedule for accommodating the changes. Furthermore, CAISO should ensure sufficient time to perform all necessary testing prior to implementation.

EIM Governing Body Role

For the reasons set forth in the Draft Final Proposal, APS agrees that the EIM Governing Body should have primary authority over the entirety of this initiative.

Conclusion

APS appreciates the CAISO's consideration of these comments and looks forward to working with the ISO on this effort.

¹ In response to a CIDI inquiry where APS asked what happens if After-the-Fact (ATF) tags for Dynamic ETSRs are not submitted, CAISO stated the following: "For the Settlement Initial Settlement Statement, Settlements will estimate all the ETSR ATFs values based upon the RTD Schedule Awards. Settlements is expecting the Participants to provide updated information by T+48B for inclusion in the T+55B Settlement Statement. If updated information is not provided, Settlement will terminate the estimated value and thus assume the ETSR was not delivered. This will have significant impacts on [market participants'] final Settlements, in particular RTIEO Settlement (CC 64770) and BCR Allocation (CC 66780)."