



Interface Pricing Error in MISO and PJM

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Introduction

- We continue to be very concerned that MISO and PJM's interface prices contain a substantial error when a market-to-market constraint is binding.
- This presentation:
 - ✓ Briefly describes the error; and
 - ✓ Discusses potential alternatives for addressing the error.
- Given the nature of the error, it is *not* important for both RTO's:
 - ✓ To implement the same remedy; or
 - ✓ To implement remedies at the same time.
- Hence, we advise each RTO to move as quickly as possible to address this error.



Interface Pricing Error

- The error arises when a M2M constraint is binding in both the MISO and PJM markets and a transaction settles with both RTOs
- In this case, the transaction will be over-paid or over-charged because it settles with both RTOs.
- The problem is that:
 - ✓ The payment by the *monitoring* RTO fully and efficiently compensates the transaction for the flow relief it provides.
 - ✓ Therefore, *every dollar paid by the non-monitoring RTO for the same relief is redundant with the payment made by the monitoring RTO.*
- There is no justification for the non-monitoring RTO to make an additional payment or impose an additional charge on the transaction.
- The following transactions are all mis-priced when M2M is active:
 - ✓ PJM to MISO, and MISO to PJM;
 - ✓ All wheels through MISO to or from PJM (e.g., Ontario to PJM);
 - ✓ All wheels through PJM to or from MISO;



Effects of the Interface Pricing Error

- Our primary concern with this error is that it provides inefficient scheduling incentives and, therefore, will cause:
 - ✓ What would be efficient transactions to not be scheduled; and
 - ✓ Inefficient transactions to be scheduled.
 - ✓ These inefficient transaction patterns lead to higher production costs and, ultimately, to higher costs to the RTO's consumers.
- It also raises significant equity concerns regarding the costs imposed on the non-monitoring RTO's customers:
 - ✓ The costs of the redundant payments are ultimately borne by the non-monitoring RTO's customers as:
 - Negative excess congestion fund (ECF) in MISO, balancing congestion in PJM, or
 - FTR underfunding (MISO and PJM).
 - ✓ We've estimated substantial costs incurred by both RTOs, but larger for PJM. We have been working with PJM to get better data to refine the estimate.



Solutions for the Interface Pricing Error

Type of Transaction and Alternative Remedies	Comments
1. Only scheduled with Monitoring RTO a. No error – no change needed	
2. Scheduled with both RTOs a. Delete Cong. Component in Non-Monitoring RTOs Interface Price	Eliminates the redundant payment -- most efficient and reasonable solution.
3. Only scheduled with Non-Monitoring RTO a. Delete Cong. Component in Non-Monitoring RTOs Interface Price	Likely the simplest/fastest solution and is equitable because the non-monitoring RTO receives no reimbursement. Less efficient.
b. No Change	More efficient than (a), but is inequitable. May be difficult to implement 2.a. without changing
c. Keep cong. component and give non-monitoring RTO market flow credit.	Best long-term solution: maximizes efficiency and equity.



Interface Pricing Error Solutions

- We believe this issue should be addressed as quickly as possible.
- We have recommended removing the congestion component for external constraints from *all* the interface prices of the non-monitoring RTO (remedy 2.a. and 3.a.) in the short-run because:
 - ✓ This is probably the quickest solution and addresses the equity concerns.
 - ✓ The potential inefficiency of removing the congestion component from the settlements of transactions that only settle with the non-monitoring RTO (3.a.) is much smaller than the inefficiency of delaying the remedy and continuing the current pricing for a longer period.
- However, the best solution in the long-term is to:
 - ✓ Remove the CC for transactions that settle with both RTOs (2.a.) and
 - ✓ Keep the CC when a transaction settles only with the non-monitoring RTO, but modify the market flow credit for these transactions.
- The RTOs should be working with their vendors to evaluate these remedies as quickly as possible.