



Update on Interface Pricing for PJM and MISO

Presented to:

Joint and Common Market Meeting

David Patton, Ph.D.
MISO IMM

November 18, 2015



Introduction: Interface Pricing

- Interface pricing is essential because:
 - ✓ It is the sole means to facilitate efficient power flows between RTOs.
 - ✓ Poor interface pricing can lead to significant uplift costs and other inefficiency.
 - ✓ They are an essential basis for “coordinated transaction scheduling” or “CTS” to maximize the utilization of the interface.
- To date, the RTO’s have been discussing two potential long-term solutions:
 - ✓ Allowing the monitoring RTO to fully price its own constraints; and
 - ✓ Establishing a common interface at the seam, resulting in congestion prices from both RTOs for all market-to-market constraints.
- Because these may be difficult to implement, the RTOs have been discussing short-term options that we are working with MISO to evaluate.



Short-Term Alternative Approaches

MISO Incremental Improvement:

- MISO removes congestion price for all external constraints (incl. PJM).
- Pros and Cons:
 - + Eliminates redundant payments for PJM M2M constraints;
 - + Retains efficient pricing of non-M2M constraints; and
 - Retains status quo for MISO M2M constraints.

“Collaborative” PJM Interface Approach:

- Both RTO’s adopt common interface at the seam.
- Pros and Cons:
 - + Eliminates duplicate estimates of physical flow effects on PJM and MISO M2M constraints;
 - Creates pricing concerns when shadow prices do not converge;
 - Distorts congestion effects on non-M2M constraints.

Constraints Affected by the Short-Term Approaches

Type of Constraint	MISO Incremental		PJM Interface	
	DA	RT	DA	RT
MISO M2M	?	?	?	?
MISO Non-M2M	+	+	-	-
PJM M2M	Likely +	?	Likely -	?
PJM Non-M2M	Unaffected		Unaffected	



Analysis to Evaluate the Short-Term Approaches

- We are working with MISO to evaluate these two approaches.
- We are evaluating the effects of the approaches on:
 - ✓ The efficiency of the price signal (the incentive to transact);
 - ✓ The volatility of the price signal, which includes:
 - Overall volatility; and
 - The change in price from before the scheduling deadline to when the transaction flows.
 - ✓ Both of these dimensions are important for evaluating which approach will facilitate more efficient imports and exports.
- The analysis will be robust and include:
 - ✓ Each class of constraint affected by the choice of approach;
 - ✓ Data from 2013 to Fall 2015; and
 - ✓ Effects in the day-ahead and real-time markets.
- We understand that MISO will also be evaluating revenue imbalances.



Conclusions

- The analysis should help identify the best steps that can be taken in the short-term to improve the RTOs' interface pricing.
- It should be feasible to make decisions and begin moving forward by the end of the year.
- Regardless of the approach selected, it will be important for MISO to:
 - ✓ Closely monitor the pricing under the short-term approach implemented;
 - ✓ Evaluate and work with PJM toward a long-term solution;
 - ✓ Work with SPP to identify a feasible and efficient interface pricing approach; and
 - ✓ Remove all other external congestion from its other interfaces.