



**MISO Assessment of  
Interface Pricing Issues  
raised by MISO IMM and  
WPPI Energy**

MISO-PJM Joint and Common Market

January 24, 2014

# Overview

- **MISO IMM pointed to the issue of overstatement of external congestion value in Interface prices**
- **WPPI commented that the existing MISO and PJM's interface prices are not the economically correct prices**
- **MISO has evaluated potential solutions to resolve the issues**
  - MISO IMM proposed long term solution (remove external congestion from Interface price definition)
  - PJM proposed solution (market flow credit)
  - WPPI proposed solution (common interface definition between MISO and PJM)

# Overview

- **MISO believes that**
  - MISO IMM proposed long term solution will resolve the issue of overcharging external congestion value
  - WPPI proposed solution has merits to improve economic efficiency and might also solve the issues raised by the MISO IMM
- **Further investigation is needed to**
  - Fully evaluate impact of WPPI proposal including practical considerations
  - Compare the IMM proposed long term solution and WPPI's proposal

# MISO IMM proposed solution

- **Summary of proposed solution**
  - Remove external congestion from interface prices for the transactions scheduled involving MISO and PJM
  - For transactions scheduled with only one RTO, include the external congestion part but add market flow credit to address revenue adequacy issue
- **MISO conducted analysis to evaluate MISO IMM proposed long term solution and concluded that it appears to be the optimal solution**
  - It can solve both the revenue adequacy issue and transaction double payment issue in the real time market
  - No gaming opportunities are found when different transaction paths are selected

# WPPI proposal

- **WPPI commented that the existing MISO and PJM interface prices are not the economically correct prices since they:**
  - Do not tend to reflect actual interchange marginal cost
  - Do not tend to converge at joint optimal dispatch
- **WPPI suggested that both MISO and PJM should use the same nodes and weights for the interface definition to**
  - Yield prices that lead to the equilibrium point of joint optimal dispatch
  - Provide economically efficient interchange price signals
- **WPPI also suggested that this could potentially solve the double counting issue**

# MISO's assessment of WPPI proposal

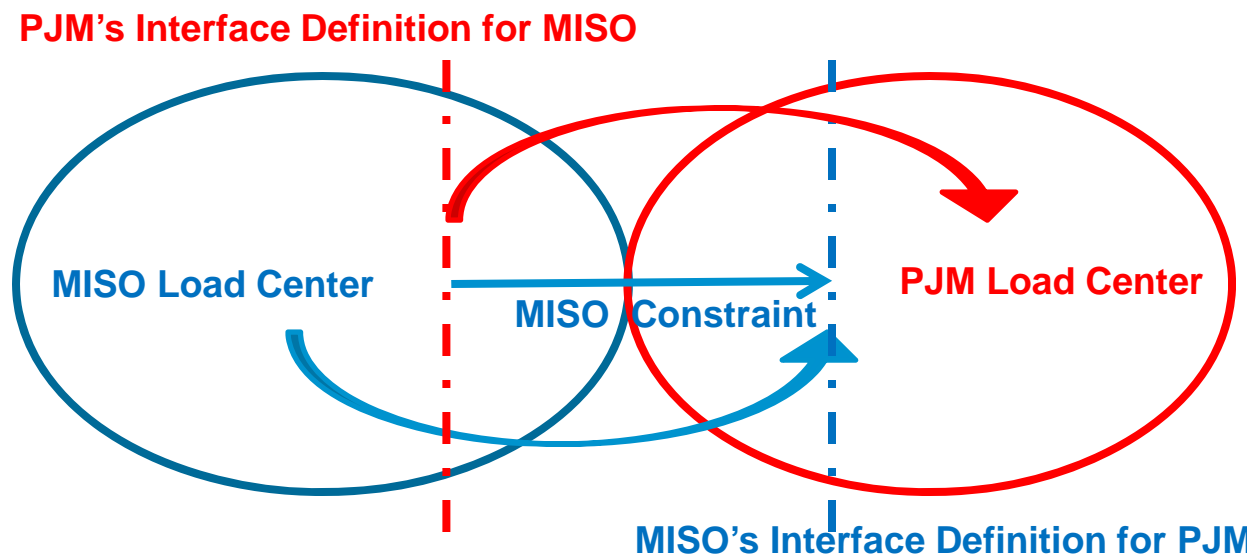
- **MISO evaluated WPPI proposal by performing analysis and concluded that**
  - The proposed method could improve pricing signals and transaction efficiency
  - It could solve the issue of overstatement of external congestion value in interface prices since each RTO would cover a portion of
- **Further evaluation is required to:**
  - Confirm if congestion payment is the right amount for the MISO-PJM transaction
  - Assess impact of partial congestion payment due to internal (non-M2M) constraints

# Current Method

- For a MISO to PJM transaction, each RTO captures full congestion value on a jointly managed constraint

MISO calculated congestion value = MISO calculated shadow price \* Constraint Shift Factor between MISO load center and MISO's Interface definition for PJM

PJM calculated congestion value = PJM calculated shadow price \* Constraint Shift factor between PJM's Interface definition for MISO and PJM load enter



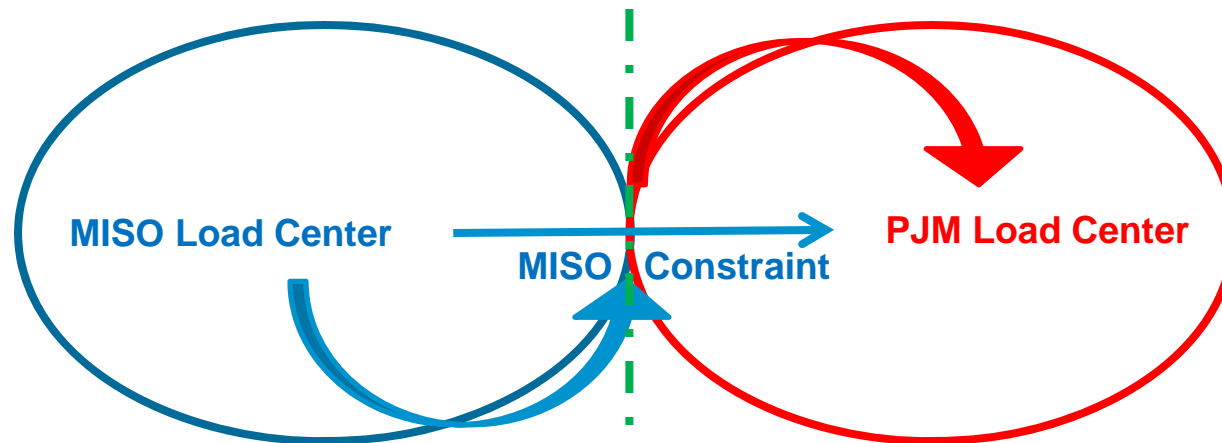


# Common Interface Definition

- **MISO will pay/charge transactions for congestion value from MISO load center to the interface while PJM will cover from the interface to PJM load center**

MISO calculated congestion value = MISO calculated shadow price \* Constraint Shift Factor between MISO load center and Common Interface

PJM calculated congestion value = PJM calculated shadow price \* Constraint Shift factor between Common Interface and PJM load center





# Comparison of potential solutions

	<b>Option 1 IMM Proposed Long Term Solution</b>	<b>Option 2 WPPI Proposed Solution</b>
<b>Interface Price Change</b>	Non-monitoring RTO excludes external congestion value for transactions with both RTOs, but no change for transactions with only one RTO	Each RTO will include external congestion value up to / from the new common interface definition
<b>Transaction Settlement</b>	Existing process; will use new interface price	Existing process; will use new interface price
<b>Market Flow Credit</b>	Yes	No
<b>Address Double Counting Issue</b>	Yes	Yes, for M2M constraints; Yes, for internal constraints, transactions may get partial congestion payment/charge
<b>Address Revenue Adequacy Issue</b>	Yes	Further Evaluation required
<b>Unintended Consequences</b>	Dispatch results may change in DA if the same method applied to DA	Further Evaluation required

# Current status of RTO and IMM discussions

- **RTOs and the respective IMM met in December 2013 and reached agreement that the issue of overstatement on external congestion value in interface prices exists**
- **MISO and PJM are evaluating the WPPI proposed method and investigating options for selection of nodes if that method is adopted**

# Next Steps

- **Perform further analysis to fully evaluate WPPI proposal**
- **Investigate implementation details of the solutions proposed by the MISO IMM and WPPI**
- **Continue to collaborate with PJM to reach an agreement on a solution to resolve the issue**

# Questions?

## Contact

**Dhiman Chatterjee**

[dchatterjee@misoenergy.org](mailto:dchatterjee@misoenergy.org)

**Tengshun Peng**

[tpeng@misoenergy.org](mailto:tpeng@misoenergy.org)

**Xianjun Zhang**

[xzhang@misoenergy.org](mailto:xzhang@misoenergy.org)