

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Indicated Load-Serving Entities)	
)	
v.)	
)	
Midcontinent Independent Transmission System Operator, Inc. and PJM Interconnection, L.L.C.)	Docket No. ER13-75-000

**MOTION TO INTERVENE AND COMMENTS
OF THE
MIDCONTINENT ISO'S INDEPENDENT MARKET MONITOR**

Pursuant to Rules 212 and 214 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission (“FERC” or “Commission”), 18 C.F.R. §§ 385.212 and 214 (2007), Potomac Economics respectfully moves to intervene in the above-captioned proceeding concerning the July 2, 2013 complaint filing (the “Complaint”) made by the Indicated Load-Serving Entities (“Indicated LSEs”) against the Midcontinent ISO (“MISO”) and the PJM Interconnection, L.L.C. (“PJM”).

The Indicated LSEs’ Complaint involves the interpretation of the Joint Operating Agreement (“JOA”) provisions which will impact market-to-market congestion management procedures (“M2M”). In addition to impacting the settlement, the JOA interpretation may substantially affect the commitment and dispatch of resources in both areas, as well as the energy prices and settlements in both markets.

Potomac Economics is the Independent Market Monitor (“IMM”) for MISO, responsible for monitoring MISO’s electricity markets, including monitoring the market-to-market coordination under the MISO-PJM JOA. Additionally, Potomac Economics is required under the provisions of MISO’s Open Access Transmission and Energy Markets Tariff (“EMT”) to monitor and evaluate the market outcomes and market rules to promote the efficiency and competitiveness of all markets, including the congestion management procedures using market-to-market coordination under the JOA.

I. NOTICE AND COMMUNICATIONS

All correspondence and communications in this matter should be addressed to:

Dr. David B. Patton
Potomac Economics, Ltd.
9990 Fairfax, Boulevard, Suite 560
Fairfax, VA 22030
(703) 383-0720

II. MOTION TO INTERVENE

On July 2, 2013, the Indicated LSEs filed the Complaint against MISO and PJM (“the RTOs”) seeking the return of \$6.9 million to MISO load-serving-entities (“LSEs”) which was, according to the Complaint, improperly resettled under the MISO-PJM JOA.

The Complaint refers to and includes Potomac Economics’ work products which were developed in our role as IMM for MISO. The IMM originally brought attention to the JOA resettlement through reports to and public discussions with the MISO Board of Directors (“BOD”) in the fall of 2012.¹ The IMM subsequently referred the matter to the Commission

¹ See October Monthly Report to the Markets Committee of the Board of Directors on November 14, 2013.

believing this to be a violation of the Tariff. Following the public IMM reporting on the issue to the Board of Directors, stakeholders requested and received additional details from MISO regarding the rationale for the resettlement. For the reasons set forth in these comments, we recommend that the Commission grant the relief requested by the Indicated LSE's and require MISO and PJM to modify one section of its JOA to clarify when market-to-market resettlements are warranted.

Potomac Economics' intervention is appropriate because, as the IMM for the MISO, we may be directly affected by the outcome of the proceeding and we have a direct interest in this proceeding that cannot adequately be represented by any other party.² Additionally, Potomac Economics' intervention and participation is in the public interest. For these reasons, Potomac Economics respectfully requests that it be permitted to intervene in this proceeding with full rights as a party hereto.

III. BACKGROUND

Since the start of the MISO energy markets in April 2005, MISO and PJM (the RTOs) have coordinated congestion management under the JOA. When either RTO, as the monitoring RTO, incurs congestion management costs to manage flows of the non-monitoring RTO that exceed the non-monitoring RTOs Firm Flow Entitlements (FFE), the monitoring RTO's costs incurred on behalf of the non-monitoring RTO are reimbursed under the JOA.

On two MISO-monitored constraints (flow gates) coordinated under the JOA during late June and July, PJM paid MISO approximately \$7 Million because PJM's market flows significantly exceeded its FFEs. Based on a PJM request to review these settlements, MISO

² See 18 C.F.R. § 385.214(b)(2)(ii).

determined that the settlements, which were deemed by both RTOs to be otherwise valid, should be refunded to PJM based on a belief that a provision in Module D had not been applied in a timely manner and contributed to the \$7 Million payments.

The MISO IMM discussed this issue with MISO beginning in late July and requested the applicable tariff authority for such a resettlement. MISO primarily cited Section 8.1.2 of the JOA as providing the authority for the resettlement. The IMM reviewed the cited provisions and found that they did not provide MISO and PJM the authority to resettle the amounts in question. The IMM expressed this concern to MISO management, FERC staff, and the MISO Markets Committee of the Board of Directors.

To determine whether its interpretation of the MISO Tariff was valid, the IMM had previously sought and received an opinion from its legal counsel on the applicability of this tariff provision or any other provision in the MISO tariff. The memo provided by William F. Young of Hunton and Williams (“Hunton Memo”) analyzed the tariff provisions and the FERC proceedings under which those provisions were developed and reached the conclusion that PJM and MISO were interpreting the authority under that cited Section far broader the Commissions intent and that Section 8.1.2 did not permit MISO or PJM to resettle under the circumstances cited by MISO. The Hunton Memo is attached to the Complaint.

On December 4, 2012, and then again on January 28, 2013, MISO and IMM staff provided written responses to MISO stakeholder questions prompted by the IMM reports, and

publicly discussed the resettlement with stakeholders. These questions and written responses by the IMM are provided as Attachments A and B.³

IV. LEGAL AUTHORITY FOR RESETTLEMENT

A. Evaluation of the Tariff Authority to Refund Market-to-Market Charges

MISO's stated justification for resettlement depends upon an extraordinarily broad interpretation of Section 8.1.2 of the ICP:

Section 8.1.2: Minimizing Less than Optimal Dispatch. The Parties agree that, as a general matter, they should minimize financial harm to one RTO that results from market-to-market coordination initiated by the other RTO that produces less than optimal dispatch, which can lead to revenue inadequacy for FTR, and impose the burden for such revenue inadequacy on one or both RTOs.

This provision was developed through a settlement proceeding and, at the time, we commented that it was nebulous and provided unreasonable discretion to MISO and PJM to review M2M results after-the-fact and potentially modify the settlements. FERC responded to these comments in their Order on the settlement, finding that the after-the-fact review process was reasonable because it is intended to address only the limited issue of whether an RTO has activated a flowgate that does not qualify as a market-to-market constraint (i.e., a "substitute flowgate").⁴

Both RTOs routinely review and occasionally resettle JOA payments based on corrections made in data or tariff administration related directly to market-to-market

³ The January 28, 2013 written IMM responses to stakeholders and the Hunton Memo are also included in the Indicated LSEs' Complaint as Attachment A.

⁴ *Midwest Independent Transmission System Operator, Inc. v. PJM Interconnection, L.L.C.*, Docket Nos. EL10-45-000 and EL10-45-001, 135 FERC ¶61,243 (Jun. 16, 2011) ("Settlement Order") at ¶ 42.

coordination under the JOA. However, this is the first resettlement of JOA payments based on the interpretation that Section 8.1.2 applies to RTO actions extending beyond the JOA. We believe that the only reasonable interpretation of Section 8.1.2 is that the “less than optimal dispatch” is caused by a defect in the initiation of M2M coordination. We believe that this is consistent with FERC’s determination regarding after-the-fact review of M2M outcomes in its Order on the PJM-MISO settlement.

If one were to expand the interpretation of this provision to include all “less than optimal dispatch”, the provision would become extraordinarily broad and unreasonably discretionary.

The dispatch in virtually every interval is less than optimal because:

- The day-ahead market may not facilitate the commitment of the most efficient set of generating units;
- Suppliers submit offers that did not equal their marginal costs;
- Generators frequently under-produce or over-produce relative to their dispatch instruction;
- RTOs may commit resources for reliability or take other reliability actions that turn out to be unnecessary in retrospect;
- Network flows caused by generators and loads outside MISO can change unexpectedly;
- Assumed network flows associated with changes in imports and exports can be incorrect; and
- Forecasted output of wind resources can be incorrect.

In short, the dispatch will never be fully optimal. Nonetheless, all MISO participants must settle based on the actual dispatch and associated LMPs. RTOs should be treated no differently. Under the M2M provisions, each RTO has entitlements to use a specified quantity of transmission on the other RTO’s system. If it uses more than its entitlement, it should have to pay for its excess use, regardless of whether then congestion may have been affected by one of the factors above that can make the dispatch less than optimal. This is comparable to how

participants must settle. If the RTOs do not settle under these circumstances, the non-monitoring RTO will effectively be granted an unlimited entitlement to the monitoring RTO's transmission capability. This would constitute an inequitable transfer of the economic right to the transmission system from the monitoring RTO's customers to the non-monitoring RTO.

In summary, we find no basis in the tariff for the RTOs to agree to refund the almost \$7 million in M2M charges to PJM. We do not believe that this refund was consistent with the tariff because there was no error or other defect in the initiation of the M2M coordination for the constraint in question.

To get an expert legal opinion regarding this resettlement, we asked Hunton and Williams to analyze the Tariff and the relevant FERC Orders to determine whether it was permissible under the tariff. The legal memo is attached to this filing as Attachment A. The legal analysis described in the Hunton memo are consistent with our conclusion that no legal authority exists for the refund of these charges to PJM. Hence, we support this Complaint by the indicated LSEs.

B. MISO's Legal Rational for the Refund

In response to MISO stakeholders, MISO responded that the underlying reason for the resettlement was the uneconomic dispatch of a MISO generator. MISO stated that:

In June and July of 2012, a specific unit participating in real-time markets adversely impacted congestion management on the Beaver-Channel constraint. . . During particular M2M events in July, PJM raised a question regarding the significant impact of this generator and its response to the market prices during congestion. Originally, MISO believed this unit to be committed for local reliability purposes, upon subsequent contact with the transmission owner and market participant, it was determined that the unit was not needed for local reliability purposes and was in fact operating uneconomically during congestion on the Beaver-Channel constraint. Upon this determination, MISO's IMM mitigated this unit for uneconomic production.

Essentially, MISO argues that the delay in imposing mitigation contributed to "less than optimal dispatch" that justifies the resettlement under Section 8.1.2. As discussed above, expanding the interpretation of Section 8.1.2 to address potential causes of the suboptimal

dispatch beyond potential flaws or errors in the initiation of M2M coordination would grant the RTOs nearly unlimited discretion to determine when to settle M2M charges.

Even if one were to accept that FERC delegated this level of discretion to the RTOs, attributing the “less than optimal dispatch” to the failure to prospectively mitigate the resource in question is not reasonable for two reasons.

First, Module D explicitly recognizes that prospective mitigation of uneconomic production may not always be feasible and provides for a sanction as an alternative remedy. Therefore, the fact that the unit was not mitigated prospectively does not constitute a violation of Module D.

Second, even if the supplier had been mitigated, there is no guarantee that the unit would have been shut down so there may have been no change in the dispatch. Neither MISO nor PJM have the authority to compel a unit to shut down for producing energy uneconomically.

V. PJM MARKET FLOWS AND FIRM FLOW ENTITLEMENT

The arguments in the prior subsection and other arguments made in the complaint demonstrate that the refund is not legally permissible under the MISO tariff and, therefore, constitutes a tariff violation that must be remedied by the Commission. We believe this legal conclusion is a primary concern that the Commission should consider in making its determination. The legal authority to employ discretion to resettle M2M charges is wholly independent of equitable or economic efficiency concerns. These concerns cannot reasonably be a basis to allow RTOs to exercise authority that was never delegated by the Commission or otherwise violate their tariffs.

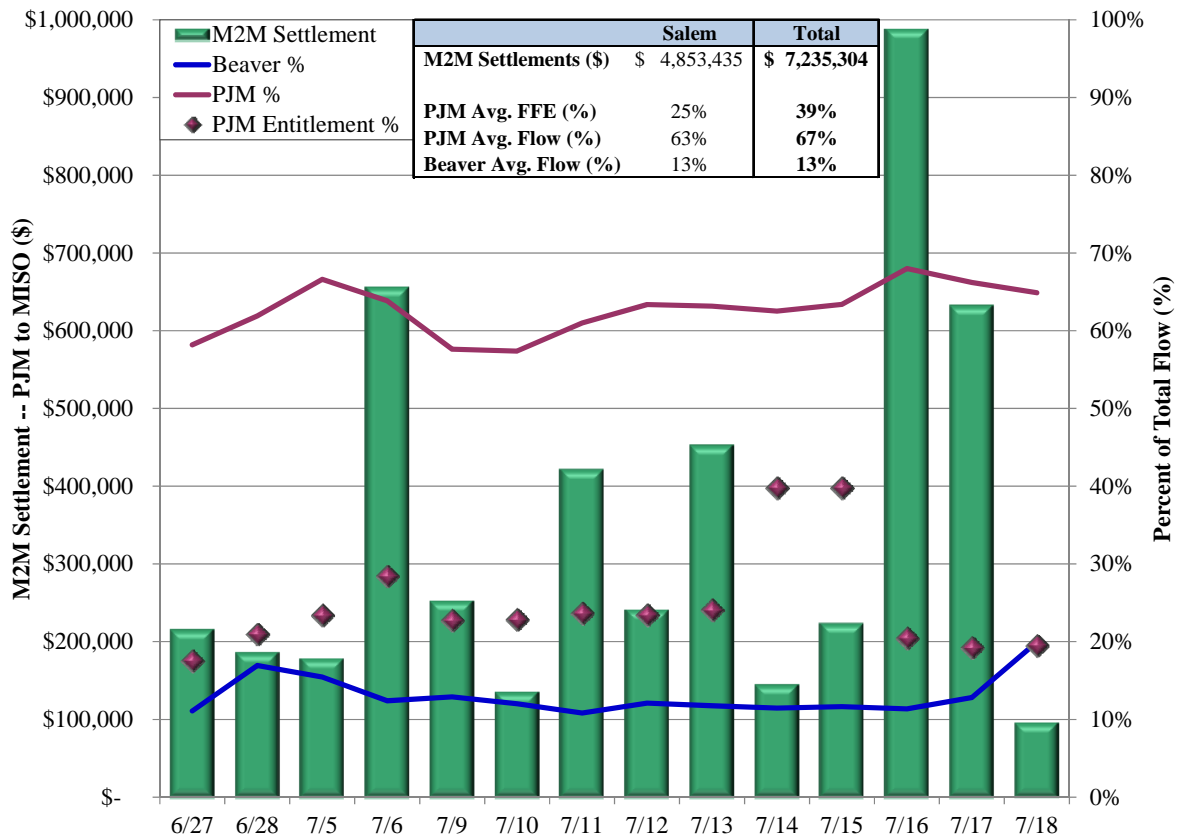
Nonetheless, equitable and economic efficiency concerns *would not* justify this refund because the PJM dispatch is the primary cause of the congestion on the Beaver Channel-Albany

constraints in question. The result of the resettlement would be to shift substantial costs to MISO customers that are primarily caused by PJM.

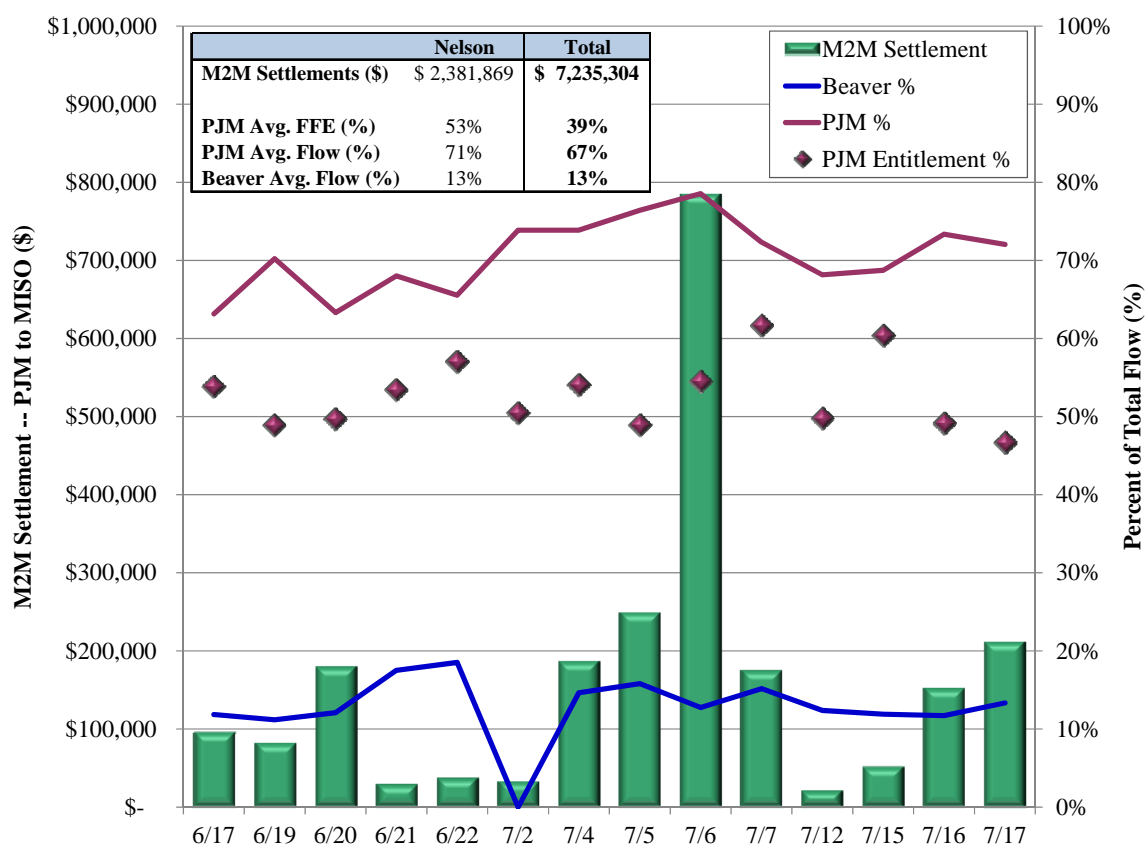
The two figures below show the portion of the flow over two relevant constraints that are caused by PJM and by the unit in question. The two constraints involve the same monitored facility, the Beaver Channel-Albany line, but have two different contingent elements. These figures show:

- The market-to-market charges being refunded on a daily basis;
- The percent of the flow over the constraint caused by PJM and the unit in question on average during intervals when the constraint is being coordinated; and
- PJM’s average firm flow entitlement as a percent of the total flow on the constraint when it is being coordinated.

Constraint: Beaver Channel-Albany for loss of Salem



Constraint: Beaver Channel-Albany for loss of Nelson



The first figure shows that PJM’s market flows averaged more than 60 percent of the total flow on the first constraint, more than double its FFE of 25 percent. The second figure shows that PJM’s market flows averaged more than 70 percent of the total flow on the second constraint, roughly 20 percent more than its FFE. For both constraints, the unit that was committed uneconomically accounted for only 13 percent of the total flow on the constraint. Hence, it is difficult to conclude that the unit in question was the primary cause of the constraint, or to assert that the constraint would not have been binding had the unit shut down.

By resettling, MISO effectively granted PJM an entitlement to all of the flows on these constraints retroactively even though its properly calculated entitlement was much lower. Given that the flows over these constraints attributable to the PJM dispatch was the primary cause of the congestion, it is both inequitable and inefficient to shift these costs to MISO’s customers.

Despite this conclusion based on the facts in this case, however, we continue to believe that the principle issue in this complaint is whether the RTOs have been granted the authority to determine when they will and will not settle M2M charges under the JOA.

VI. RECOMMENDATIONS

For the reasons set forth above, we believe this resettlement is a violation of the JOA, which is an attachment to the MISO and PJM tariffs. Additionally, we believe the result of the resettlement is inequitable. Hence, we recommend the Commission grant the relief requested by the Indicated LSEs to reverse the resettlement and once again charge PJM for its excess flows over the constraints in question.

Additionally, to remedy the apparent ambiguity regarding the authority provided by Section 8.1.2, we recommend the following revisions to clarify “minimizing financial harm” is only intended to refer to revising market-to-market settlements and that such revisions should only occur when there has been an error or flaw in the implementation of the market-to-market coordination between the RTOs. Our recommended revisions to clarify this Section of the JOA are as follows:

Section 8.1.2: **Conditions Under Which the RTOs may Revise M2M Settlements**~~Minimizing Less than Optimal Dispatch~~. The Parties agree that, ~~as a general matter,~~ they will revise market-to-market settlements to ~~should~~ minimize financial harm to ~~either one~~ RTO that results from an error or flaw in the initiation or implementation of market-to-market coordination, including errors that affect FFEs or calculated market flows or initiating coordination on a flowgate that does not qualify as a market-to-market constraint. These errors or flaws in the market-to-market coordination initiated by the other RTO that produces less than optimal dispatch, which can lead to higher congestion costs and/or revenue inadequacy for FTRs, and impose the burden for such revenue inadequacy on one or both RTOs.

These revisions are consistent with the Commission's prior determinations regarding the RTOs' after-the-fact review of market-to-market settlements and should ensure that similar issues regarding market-to-market resettlements do not occur in the future.

Respectfully submitted,

/s/ David B. Patton

David Patton
President
Potomac Economics, Ltd.

July 22, 2013

CERTIFICATE OF SERVICE

I hereby certify that I have this day e-served a copy of this document upon all parties listed on the official service list compiled by the Secretary in the above-captioned proceeding, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010).

Dated this 22nd day of July 2013 in Fairfax, VA.

/s/ David B. Patton

Attachment A

IMM Responses to Stakeholder Question re M2M Resettlement 12/4/2012

1. How was the \$7m resettlement calculated?
[See the MISO Response.](#)
2. MISO please provide:
 - a. A diagram explaining how the situation happened.
[See MISO Response. The IMM concurs, but would not that PJM was responsible for roughly two-thirds of the flow over the constraints, which is approximately six times more than the flows caused by the self-scheduled unit and three times more than PJM's entitlement.](#)
 - b. How it was determined that resettlement is being owed to PJM now (step by step detail).
 - i. MISO please provide the identity of the generator and flowgate. If the name and owners of the generator and/or flowgate cannot be provided, MISO please state why.
[The IMM does not agree that resettlement is owed to PJM. A review of the IMM's legal counsel indicated that none of the Sections of the JOA, including those cited by MISO, provide the RTOs the authority or obligation to resettle M2M payments because they were indirectly affected by the operating actions of one of the RTOs or a participant.](#)
 - ii. Please state the provisions of the JOA, by section number, that apply to each step of the diagram requested above.
[MISO Response: See References provided above.](#)
3. If a generating unit is self-scheduled, does this necessarily mean that MISO is not dispatching system correctly?
[No](#)
4. If in fact something was done inappropriately by the generator owner or MISO, please identify what was done. Will there be a procedure/ software fix in the future so this does not happen again? MISO, please provide a timeline of when such a fix would be implemented.
[The resource in question could have been mitigated sooner for uneconomic production. Mitigation was not initially imposed primarily because the MISO staff believed the unit was needed for local reliability.](#)
5. Was any capacity that was paid to MISO from PJM for the constraint in question worth less than what PJM paid for it?
[See MISO Response.](#)
6. Please explain how an individual MP could increase the costs for M2M?
[The IMM agrees with the MISO Response.](#)
7. Please confirm, if one RTO is over its Firm Flow Entitlement on a flowgate, is the other RTO's shadow price being used to solve the constraint?

[See MISO Response.](#)

8. How would a self-scheduled generator in MISO impact PJM so that PJM is over its entitlement?
[A self-scheduled generator cannot cause PJM to exceed its entitlement. It can, as MISO notes, cause the shadow price of the constraint to rise. However, this increase in congestion affects not only PJM, but all market participants that cause flows over the Flowgate.](#)

9. MISO please confirm if there will be a "software fix" that will allow for a "checking system" so that operators confirm in "x" period of time that units are on for reliability, voltage, economics, etc. We find that this is important since MISO was thinking that this particular unit was on for reliability and for an extended period of time; there should be a "check" somewhere so this cannot happen again.
[See MISO Response.](#)

10. The MISO stakeholders would also respectfully like to requests the IMM attend the Market Subcommittee meeting on December 4th to respond to the above questions, as well as provide a status update of slide 36 bullet points of the IMM's November 14, 2012 Markets Committee of the Board of Director presentation (bullet points provided below):
 - a. From a substantive perspective, we are concerned that it is not justified for MISO customers to incur these costs because PJM accounts for the majority of the flow on the relevant constraints and was well over its entitlement.
[See our answers to questions 2.a and b. Based on PJM's flows summarized in these answers, we conclude that PJM's market flows were the primary cause of the constraint.](#)
From a legal perspective, we have received an initial legal opinion from our FERC counsel that this refund is not covered by the provisions in the JOA, but he is doing further research on the issue. [The additional research, including a review of the Commission's Order on M2M settlement between MISO and PJM, confirmed the preliminary legal opinion that the JOA does not authorize resettlement in this case.](#)

Submitted on behalf of the following MISO Stakeholders:

Ameren Services
American Municipal Power, Inc.
Basin Electric Power Cooperative
Big Rivers Electric Corporation
Cedar Falls Utilities
DTE Energy
Central Minnesota Municipal Power Agency
Great Lakes Utilities
Hoosier
Illinois Municipal Electric Agency
Indiana Municipal Power Agency
Indianapolis Power & Light
Madison Gas & Electric Company
Michigan Public Power Agency

Missouri River Energy Services
Muscatine Power and Water
Northern Indiana Public Service Company
Prairie Power, Inc.
SIPC
Southern Minnesota Municipal Power Agency
VECTREN
We Energies
Western Area Power Administration
Wisconsin Public Service Corp/Upper Peninsula Power Company
WPPI Energy
Wolverine Power Supply Cooperative
Xcel Energy

ATTACHMENT B

**MISO IMM RESPONSES TO ADDITIONAL
STAKEHOLDER QUESTIONS RE M2M RESETTLEMENT
1/28/2012**

Questions Regarding the July 2012 Resettlement

1. The interpretations and citation of relevant JOA and tariff sections including how the Module D portion of the MISO tariff is linked to the JOA.

MISO IMM Response: We do not believe Module D, other portions of the Tariff, or other operating procedures are covered by the JOA provision that has been cited as the basis for the resettlement. We have attached a legal analysis of the relevant JOA provisions prepared by Hunton and Williams at our request that evaluates this question in detail.

2. A description of communications between any of MISO, PJM or their respective IMM's that led to the conclusion that a resettlement was needed.

MISO IMM Response: See MISO response.

3. A description of the evaluation that determined the unit in question was uneconomic, including potential costs that may not be included in the unit offer such as must-take coal contracts, potential opportunity costs, and hidden start costs.

MISO IMM Response: We perform initial screens that seek to identify units that are committed and dispatched during periods when the market revenues are less than 50 percent of its production costs (as measured by its reference levels). Because the issue in this case involves the commitment of the resource, we account for the fact that an online unit will have to incur additional start-up costs and outage risks to cycle and forego market revenue when it is offline. Contract-specific costs that may be relevant can be provided to the MISO IMM through the Operating Cost Survey and Reference Level Consultation process.

4. Confirm whether the unit in question was self-scheduled in Real Time only, and not in the Day Ahead market.

MISO IMM Response: The unit was Must Run (not self-scheduled) in the Day-Ahead market and generally was scheduled at its minimum output level during periods of congestion. Its minimum level was consistent with our reference minimum levels.

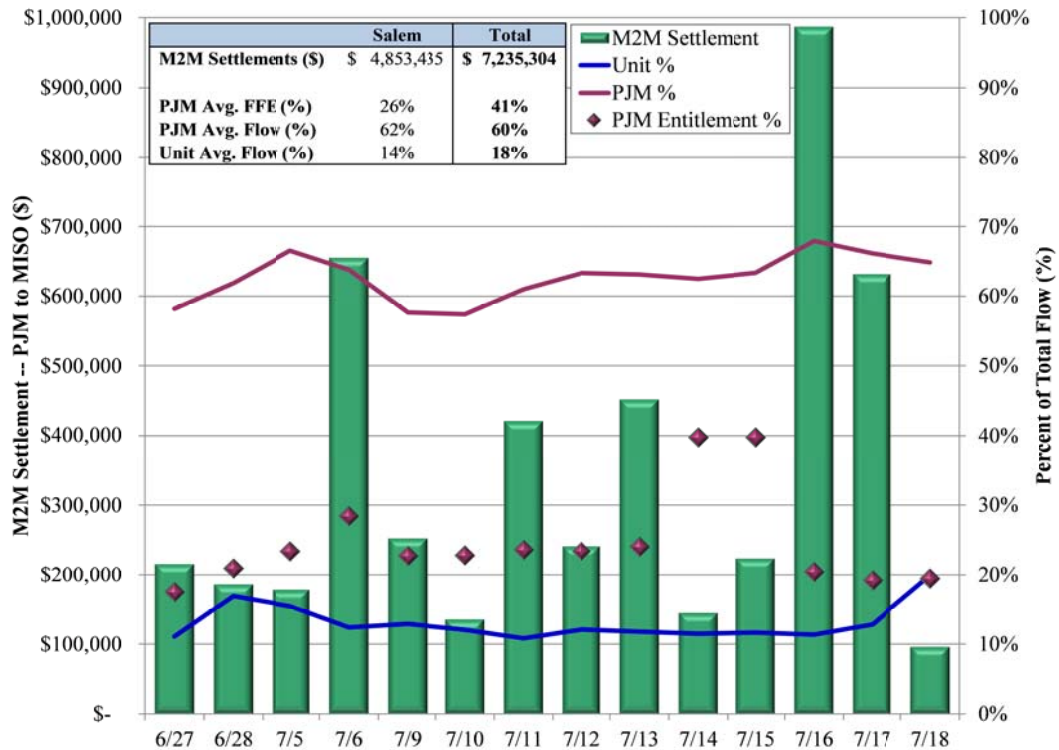
5. A general description of how the IMM analyzes units that are self-committed pursuant to the MISO tariff.

MISO IMM Response: The conduct testing is described in the answer to Question #3. If the unit is creating congestion, we also perform an impact test to determine the potential congestion-related price effect. The impact test is based on the shadow cost of the constraint times the generation shift factor at the most impacted location (where prices increase due to the congestion).

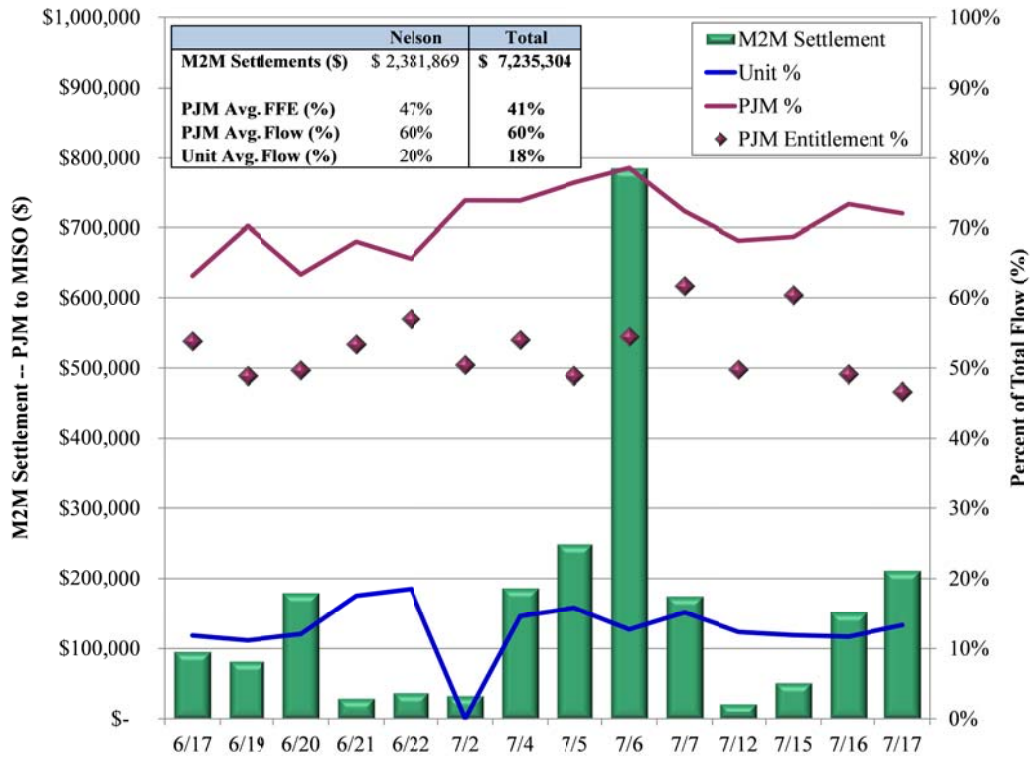
- The MISO and PJM flows on the flowgate in question for all hours that are being resettled and the respective firm flow entitlements for those hours. As well, the flows on that flowgate due to the self-scheduled generator.

MISO IMM Response: Two M2M flowgates were affected by the generator: the two FGs were Beaver Channel to Albany for the loss of Salem (“Salem Constraint”) and Beaver Channel to Albany for the loss of Coordova-Nelson 345 (“Nelson Constraint”). The figures below show the daily average portion of the flows over the constraint attributable to PJM the unit in question. The figure also shows PJM’s average entitlement as a percent of the flows over the constraint.

Salem Constraint



Nelson Constraint



- The impact on MISO’s interpretation of the relevant portions of the JOA when units are self-committed pursuant to the MISO tariff.

MISO IMM Response: See MISO response.

- The next steps that are being contemplated by MISO, PJM and the IMMs, particularly in light of any direction given by the MISO Board and its Market Committee at their December meetings.

MISO IMM Response: We have made a notification of a potential tariff violation to FERC and are considering filing a referral to FERC enforcement.

- Confirmation from the MISO IMM that there was a referral to FERC as a potential MISO violation of their tariff, and the status of this referral.

MISO IMM Response: We have not yet filed a referral since we had understood that MISO was still considering our Tariff interpretation and whether to reverse the resettlement.

Questions Regarding Future Resettlements

1. A description of how the RTOs intend to track reliability commitments, and communicate these to the IMM to prevent a recurrence.

MISO IMM Response: We have improved our procedures to seek this information directly from the participant, rather than from MISO. We will also be sending automated screening information to MISO to facilitate more rapid communication.

2. Detail the specific circumstances that would result in a similar forfeiture of market to market payments. For instance, is violation of Module D required, or would any suboptimal dispatch result in zero market to market settlements. Including:
 - a. Thresholds that would invoke these clauses
 - b. If a unit committed by the RTO could result in similar actions.

MISO IMM Response: For the substantive reasons that we oppose resettlement in this case, would oppose the development of market rules or procedures that would allow for resettlements in the future for reasons beyond issues with the M2M process.