

MISO Advisory Committee
April 24, 2013
Hot Topic: Market Enhancement Priorities
Organization of MISO States (OMS) Response
for the State Regulatory Authorities Sector

The Organization of MISO States (OMS) appreciates this opportunity to comment on Market Enhancement Priorities. The OMS supports MISO's initiative to seek input from stakeholders to establish market enhancement priorities and bring additional value to its participants, serve the public interest and deliver reliable, efficient and reasonably priced electricity services to ratepayers.

1. Given MISO's current market design what are the primary areas that affect the business objectives in your sector and where should MISO place the most attention and focus?

The members of OMS regulate various aspects of many of the members of MISO. Therefore, the OMS business objectives are regulatory in nature with the ultimate focus on safe and reliable electric service at just and reasonable rates. The OMS notes that if MISO gives more attention to Market Participants' business objectives, it should be to consider them, and not just defer to them, as part of the stakeholder process towards market improvement.

The primary market design areas that are important to OMS are those areas that have the most impact on electricity consumers and the utilities regulated by OMS members. OMS wants MISO to continue to focus its market enhancement improvements on and give priority to: (1) Seams issues, which span across many market, planning and operations areas; plus, (2) the Entergy Integration.

OMS believes that seams issues between MISO and neighboring entities such as PJM, SPP, and other transmission providers in both market and non-market areas are very important. OMS recognizes the continued work effort that MISO has made to address seams issues, which we believe to be important given the number of seams that MISO has and the impact these issues have on the stakeholder body and ultimately, consumers. Some of the seams issues that are a priority to OMS, and that OMS would like to see continued work on, include: (1) Interchange Optimization, (2) improved Flowgate modeling to improve Market-to-Market (M2M) coordination and (3) outage scheduling coordination. Eventually OMS would like to see coordinated interregional RTO dispatch (joint dispatch) become a much higher priority for all RTOs, including MISO.

First, OMS is asking MISO to increase efforts to implement Interchange Optimization between MISO and PJM. Interchange Optimization is a means to ensure that energy flows across seams will make the most sense economically. OMS notes that Coordinated Transaction Scheduling (CTS), a similar initiative with the same goal was approved for

implementation by PJM and NYISO in 2012 and is scheduled for live operation in 2014. One of the most significant benefits expected from Interchange Optimization is the improved efficiency of the overall dispatch of generation across the combined MISO and PJM footprint. Additionally, optimizing interchanges between MISO and PJM in the near term could establish a road map for similar coordination with others in the future, such as between MISO and SPP.

Second, OMS wants to see effort to further improve the modeling of Flowgates on and near the seams. Improved flowgate modeling will enhance the ability of the RTOs to utilize the M2M process to manage congestion more efficiently. Managing congestion is one of the most important values provided by RTOs because of the added cost effects of congestion on energy customers.

Additionally, more accurate Flowgate modeling should contribute to improving Financial Transmission Rights (FTRs) by minimizing underfunding on both sides of the MISO and PJM seam, since Real Time (RT) constraints on M2M Flowgates have a negative impact on FTR funding.

OMS would also like to recognize MISO's review of the Firm Flow Entitlements (FFE) Allocation Methodology in 2012. However, OMS encourages MISO to initiate additional review through stakeholder discussions on the current rules governing the provisions for the use and sharing of allocations under various circumstances, for example, when the asset owner is not utilizing the maximum capacity of their allocation. OMS believes that discussion is merited because it is possible that these longstanding practices could be improved upon.

Third, improved transmission and generation outage scheduling coordination between all entities along MISO's seams is necessary. This is because generation outages affect congestion, commitment, and dispatch on both sides of the seam. Therefore, improved coordination can minimize the compounding effects of multiple outages on congestion, commitments, and the corresponding reliability and economic effects on markets. This effort is made even more important due to the timeline for compliance with EPA regulations. In order to comply with the established compliance timeline, an increased number of generation unit retirements are expected in the near term future, as well as an increase in scheduled generation outages as units are retrofitted to be brought up to compliance. These factors are in addition to outages for regularly scheduled maintenance and nonscheduled forced outages. Therefore, a lack of coordination could increase costs to ratepayers and result in significant temporary local reliability issues over the next few years.

While this topic is being addressed in the Joint and Common Market (JCM) initiative between MISO and PJM, it is yet to be completed and implemented. Additionally, similar coordination is needed along all of MISO's seams, such as between MISO and SPP and other transmission providers in both market and non-market areas that neighbor MISO.

With the recent addition of new MISO members, OMS has also added new membership. The new member commissions have regulatory oversight of Entergy, which makes the integration a business objective for the State Regulatory Authorities Sector. Additionally, an

integration of this magnitude will alter the mix of the MISO generation portfolio and will undoubtedly have an impact on current processes.

For example: in anticipation of the Entergy integration, MISO has proposed supplemental rules for Auction Revenue Rights (ARRs) in the FTR process, and procurement of capacity for resource adequacy. While these are interim changes to accommodate the time line of the "live" date for Entergy and other new members in December 2013, there will likely be other processes that need attention, such as MISO's transmission planning process and the implementation of financial trading in the newly added southern region. OMS supports MISO's initiative to continue identifying process changes and business practices that may need attention and alteration for the successful integration of Entergy. We also encourage as much coordination and education with the new members and their respective governing regulatory authorities to promote as seamless of a transition as possible.

2. Prioritize MISO market enhancements MISO into 2014 and beyond? Consider the following categories:

- **Market Participation such as further enabling of Demand Response Resource, Combined Cycle Generation and Energy Storage Resources**
- **MISO Process Efficiency Improvements (i.e. Asset registration, MECT tool, other manual processes)**
- **Generation Commitment and Dispatch**
- **Seams Management**
- **Pricing Signals and Cost Allocation**
- **Financial Instruments such as Virtual Bids and Offers, Financial Transmission Rights and Auction Revenue Rights**
- **Resource Adequacy Construct**
- **Other areas not listed**

OMS interprets this question to ask which categories are most in need of attention versus those that are less urgent, though still important. OMS is not a market participant, and the process complexity of many of the enhancements makes it difficult to make an economic comparison, so our priorities are grouped into these areas:

Needs most attention

OMS puts **Seams Management** at the top of the list both because of its complexity and because it is arguably the most difficult to accomplish. Revisions to Joint Operating Agreements (JOA), Market-to-Market processes, market to non-market processes, energy transfers and capacity transfers all operate under the provisions of differing rules and in some cases different state and international jurisdictions sharing the seam. With the stated goal of greater operational efficiency, it is reasonable to strive for the same market principles across borders as within them. Existing inefficiencies that raise rates to

electricity consumers without corresponding benefit should be addressed first to maximize benefits to ratepayers. A reasonable goal is that the borders between MISO and other RTOs and non-RTO areas should be virtually invisible to best allow for beneficial transactions across seams.

The OMS commented on seams issues for the August 16, 2012, Hot Topic.¹ What OMS noted then is still important and urgent.

While a minority of utilities and market participants within the MISO Region are physically situated on or near a seam with another RTO, these issues and their impacts are not necessarily limited to these entities. Operational issues, interregional planning and market issues can have an impact to all stakeholders, including concerns about unit dispatch, transmission rights and reservations, cost allocation of transmission upgrades, the potential for changes to capacity prices and the potential for changes to Locational Marginal Prices.

In addition, in its comments on the August 17, 2011, Hot Topic on the IMM role regarding seams issues, OMS stated that taking action in these areas should facilitate transactions across RTO areas, resulting in a lower overall cost of dispatch and enhance efficiency in MISO. These actions would serve to make the markets more coordinated. The OMS realizes that MISO cannot make these changes alone, and that other RTOs would need to be actively and willingly involved.

Regarding **Generation Commitment and Dispatch**, and **Price Signals and Cost Allocation** MISO should continue consider work on Extended Locational Marginal Price (ELMP), Ramp Capability Enhancement and Look Ahead Dispatch as high priorities to make the commitment and dispatch more economically efficient to the extent that it provides quantifiable benefits of reliability and cost to ratepayers.

Also important are improvements in market design that minimize separate out-of-market charges, or uplifts, by including them in the market price. This should continue to be high priority when the uplifts are significant, such as high RSG charges. Such uplifts distort the market price, and therefore distort the market signal that the prices are designed to provide, making the market less efficient.² This is similar to other markets that charge additional fees after the buyer agrees to pay a market price. OMS would rather see MISO explore ways in which the uplifted costs could instead be incorporated into the market price of the product or service provided by MISO. MISO's development of ELMP is a good example of such an improvement. OMS encourages MISO to follow through in ELMP testing and parallel settlements for a smooth implementation in 2014.

¹ OMS Hot Topic comments responses to MISO at <http://www.misostates.org/index.php/filings-a-comments-2/oms-hot-topic-responses-to-miso>

² The uplift charge also negatively impacts parties that are forced to pay a pro-rata share of the uplift, as they are effectively paying a subsidy for a service that they may not be using. Such an outcome is not consistent with basic cost allocation principals, where the beneficiaries of a service or product should pay for that service or product.

OMS would also encourage MISO to continue to assist market participants' efforts to establish a Trading Hub or Hubs, in the southern region. The most accurate identification of a liquid trading location is significant because it will provide transparency, efficiency, less volatility and a better convergence of prices.

Needs some attention, less urgent

Market Participation is a lower priority for OMS. Increased market participation should be judged by prices paid by energy consumers.

Regarding **Financial Instruments**, MISO should continue to strive toward fully funding FTRs, but not by uplifting any FTR revenue shortfall to customers. As explained in the response to question 6, OMS does see merit in a financial instrument to hedge real-time congestion.

The changing resource mix in MISO and **Resource Adequacy** continues to need further refinements with resource qualification that defines what resources qualify and how many MWs qualify for those resources under MISO's planning reserves rules (Module E of the tariff) to meet resource adequacy requirements. This is important to states where MISO's qualification criteria change how resources economically compare to each other, and therefore affects state resource planning responsibilities. MISO's continuing assessment of future resource availability and adequacy with stakeholders continues to be important to OMS to help provide assistance to the states to ensure resource adequacy over the next five years.

Not applicable

OMS has no opinion on **MISO Process Efficiency Improvements** because OMS members are not market participants and do not use the processes. OMS understands the question to refer to MISO processes that market participants use and not the MISO stakeholder process. The OMS has commented on MISO's stakeholder process in prior Hot Topic discussions.

3. Why are your sector's priorities the right ones for MISO? What types of industry, environmental, regulatory policy or other drivers does your sector consider the most important in the near and long term?

OMS interprets the first half of this question to be asking what weight should be given to what each sector has to say.

MISO should take into consideration the priorities of all sectors in its decision-making process with an emphasis on priorities where competition and efficiency work best for

ratepayers and market participants. In the MISO stakeholder process, OMS is the State Regulatory Authorities Sector. This sector is unique in that this group of stakeholders is one of few that do not have a profit motive or special interest objective. Instead, the members of OMS are responsible for protecting consumers from unjust and unreasonable rates, while assuring safe and adequate service. Reliability is also important in this balance of responsibilities. In addition, as stated above, the members of OMS regulate many of the members of MISO in its other sectors.

The regulators in OMS must balance many national, regional, and state factors, drivers, and policies, taking into account the priorities of multiple sectors. As OMS recently explained:

As reflected in Order 1000, and unlike any of the other stakeholder groups, the objective function for OMS and the state commissions is safeguarding the public interest. State commissions have responsibility under state and federal law for issues such as resource adequacy, infrastructure planning and siting, and retail ratemaking, among many others. To accomplish these goals, state commissions balance many interests, including those of utilities operating within their states and their customers, consumer advocates, environmental protection groups, industrial groups, generation owners, and other interested parties.³

OMS interprets the second half of this question to ask which drivers should be the most important to MISO. From the OMS perspective, the drivers that should be the most important to MISO (and also to OMS) in the near and long term are those provided by state statutes and rules:

- Ensuring safe, adequate, and reliable electric service at just and reasonable rates to all customers through the combination of the competitive power markets and regulatory actions
- Promoting fairness through information transparency with all participants, including utilities, ratepayers, and the public
- Setting quality standards for utility services and ensuring that the standards are met
- Ensuring utility services are provided in an efficient and environmentally responsible manner
- Protecting the near term and long term interests of ratepayers and utility investors

³ “Comments and Motion for Leave to Answer and Answer of the Organization of MISO States”, filed on March 20, 2013 in FERC Dockets ER13-708 and ER13-708-001
<http://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=13210121> at page 3

4. Where does your sector place market enhancements priorities in comparison to other MISO efforts? (i.e. Transmission Planning, Power Restoration, etc.)

The members of OMS are responsible for acting in the public interest, both in their jurisdictional authority and in the MISO stakeholder process. As a non-profit public utility with broad regional scope, MISO's ultimate priority should also be to act in the public interest. From a public interest perspective, priorities must be balanced and based on objective analysis. It is important to educate stakeholders and provide them with the necessary data and analysis to allow them to rank priorities for MISO efforts accordingly. Along those lines, OMS has some suggestions for improving the prioritization process. Please see the OMS response to question #5.

OMS has been on record in support of the following guiding principles: operational excellence, demonstrable benefits, cost control, commitment to resource adequacy, coordination with neighbors, openness, and support for the regional state committee concept.⁴ Therefore, OMS believes that there are many efforts and issues that are valuable and important to prioritize. Market enhancements are just one group among many of these important efforts. In regards to market enhancements, OMS would like to see MISO focus on efforts that would utilize market mechanisms to improve service and lower costs for consumers.

When prioritizing efforts, OMS urges MISO to consider the fundamental principles that OMS supports. In addition to the OMS principles, MISO should also make reliability, efficiency, and enabling market participation the cornerstones for its prioritizing efforts.

As far as other OMS priorities, both transmission planning and cost allocation are perennially important efforts that receive great attention from OMS because they directly relate to the cost paid by consumers for delivered energy.

An effort that OMS believes is high priority is the Order 1000 regional and interregional compliance efforts. Part of the Order 1000 requirements includes working out the details of the OMS governance and authority enhancement issue. OMS believes that this enhanced authority is absolutely vital to allow regulators to help guide and implement the MISO resource adequacy, transmission planning and cost allocation processes. This needed enhanced authority should be implemented in an efficient manner with OMS and MISO working together to finalize the details.

An additional aspect of the Order 1000 requirements that OMS believes is very important is interregional coordination. OMS believes that it is vital for MISO to work with its seams partners to develop efficient coordination agreements (JOA's or CMP's where appropriate) and also to develop interregional planning processes that will allow for the identification,

⁴ OMS comments in October 2012 AC Hot Topic, MISO Membership. See OMS Hot Topics to MISO at <http://www.misostates.org/index.php/filings-a-comments-2/oms-hot-topic-responses-to-miso>

approval, and construction of transmission between regions that is both needed and cost effective.

MISO's continued assessment of future resource adequacy continues to be important and a high priority to OMS to help us to ensure that there are adequate resources to meet load needs and reserve requirements in the coming years. OMS commented on this for the February 20, 2013, Hot Topic:

Line siting, retail rate recovery of costs, reliability, just and reasonable retail rates, the stock of resources that make up the capacity of the MISO footprint, and generation and transmission siting are typically in the legal purview of the states. So an RTO's objectives will always be subject to the resource mix that exists due to state utility and regulatory decisions.

The OMS therefore urges MISO to put a high priority on assessing the projected changing resource mix, the associated required transmission, coordination of natural gas and electric industry scheduling, and the ability of MISO's maintenance margins to accommodate resource retrofits due to the latest EPA environmental standards and other factors.

Finally, OMS deems MISOs effort in protection of critical assets a high priority. We recognize the necessity of cybersecurity and compliance with NERC Critical Infrastructure Protection (CIP) Standards for the Bulk Electric System (BES). Regulatory authorities have the ability to inquire into their jurisdictional utilities' efforts in cybersecurity preparedness, mitigation, and resiliency. OMS encourages all entities responsible for CIP compliance to move forward with their own plans to protect critical infrastructure and to collaborate with one another. This would include the efforts of the RTOs in their planning and progress to secure critical assets.

5. What methodology should be used to prioritize market improvements? What is your assessment of MISO's current market enhancement prioritization process?

With about six years of market experience, the current prioritization process has been adequate. For items that have not been initiated and prioritized by FERC or NERC, the prioritization has been conducted by explaining a list of items, and ranking the list via averaged stakeholder votes. This is an open, democratic process, but the volume and complexity of items can limit the total value of the outcome. It also puts some stakeholders at a disadvantage because they are not equal in the ability to know the content of the choices and evaluate the possible value of the outcome. Individual stakeholders will compete for ranking the improvements based on the outcomes that best fit their specific business model.

One suggestion is to use a more forum-like style for the purpose of collecting and resolving the issues and priorities. The first step could be a group prioritization in which projects

would be clustered in order of importance, such as a straw poll. Then more metrics could be added, such as: necessity requirements (FERC, NERC, etc.), internal resources (existing labor pool), external resources (contractors, vendors, new equipment), costs and potential benefits (efficiencies, annual cash flows), time frame of commitment, and risk of outcome on target. This would expand the ranking process to include the very real business boundary conditions such as budgets, rates, performance, and other standards of performance.

Another suggestion is for MISO to give priority to market improvements based on market design guiding principles. OMS understands that MISO intends to develop the principles with consultant and stakeholder input later in 2013, and welcomes the opportunity for further input. The principles can then be used to identify enhancements that are cost effective and best move towards those principles. Perhaps MISO should consider establishing the guiding principles sooner.

Another suggestion is to prioritize based on enhancements that most improve MISO's Value Proposition. MISO can prioritize market improvements based on those that provide the most improvement in benefits for the least cost.

As new enhancements are identified, existing work should be reviewed for modifications as the work continues. The new work may be incorporated into the existing process with appropriate analysis of value of reconfiguration at that point in time. In addition, there should be sufficient flexibility to change priorities in the future as conditions change.

Regardless of the methodology used, it is critically important that it be stakeholder inclusive and transparent.

6. How would you define a “complete” market? What elements are missing in the current MISO market?

MISO's major market improvement projects are already well underway, such as ELMP, Ramp Capability Enhancement, and Look Ahead Dispatch. Those initiatives will go a long way towards making MISO's markets more complete. Based on experience so far, however, MISO's markets will continue to require constant attention and further changes as new problems and opportunities for improvement are discovered. Perhaps, MISO's markets will never in a literal sense be complete.

From the viewpoint of OMS, however, one does not have to make a market product out of every service for a market to be complete. Market mechanisms should be pursued where they best meet the needs of electricity consumers and regulatory measures should be pursued where they best meet the needs of electricity consumers.

OMS interprets this question to be asking where MISO should draw the line on the diminishing returns of market improvements given the cost to implement them. Here are

some examples. MISO's Schedule 2, Reactive Supply and Voltage Control, for example, is not a market-based service, and for the time being, likely does not need to be because of the complexity of determining what the need for it is under changing conditions (especially when most needed) to construct a "demand curve" and co-optimizing the bids and offers with MISO's other energy and operating reserves markets.

OMS does see merit in a financial instrument to hedge real time congestion. The creation of a Real-Time (RT) market product, similar to an FTR in the Day-Ahead (DA), could help improve the ability to hedge congestion of RT Locational Marginal Prices (LMPs), provide better convergence of pricing and congestion between DA and RT, and therefore provide a more complete means to hedge total congestion.

The purpose of an FTR is to fully protect a participant against paying congestion charges between locations and therefore the FTR acts as a hedge against the charges, but only for DA, and does not protect participants from congestion charges in the RT Markets. Thus, one cannot fully hedge congestion costs with the current MISO market products. OMS has observed that in MISO's Market Fundamentals training (Foundational Overview of MISO and MISO Markets), MISO highlights that LMP is a component of FTRs and, as such, may be interpreted that FTRs as a response to LMP, can fully hedge congestion charges associated with the differences in LMP between the generation and load. The addition of a RT product will would help improve the ability to hedge congestion and therefore come closer to meeting that ideal.

MISO's Resource Adequacy construct does not need to be market-based for procurement because of the problems inherent with using it for long-term procurement, the problem of changing to a variable planning reserve margin and the companion issue of whether or not to continue using the Loss of Load Expectation of one day in ten years as a resource adequacy requirement.

OMS anticipates that other sectors will urge MISO to further revise its resource adequacy construct to use a sloped demand curve in the annual capacity auction to set prices. The MISO Independent Market Monitor has urged MISO to make such a change. OMS does not see merit in changing MISO's resource adequacy construct to include a sloped demand curve to set prices without first thoroughly examining the implications and the consequences. The use of a sloped demand curve in a capacity auction would require MISO to change from its current fixed Planning Reserve Requirement (PRM) to a variable planning reserve requirement. The sloped demand curve causes both the capacity price and capacity requirement to be dependent on where the demand curve (an administratively created curve) and supply curve cross, as typical design uses the intersection to determine both the price and the reserve requirement as an outcome of the auction. This means that some of the time the requirement will be less than the LOLE-based Planning Reserve Margin (PRM) requirement, and MISO will fail to meet the one-in-ten LOLE criteria. In other RTOs this is addressed by adding an over procurement bias into the curves so that the auction clears the market at or above the LOLE target almost all of the time. The

uncertainty of a variable requirement and the over procurement bias is a significant problem for the LSE utilities in MISO that have procured in advance adequate reserves to meet the fixed LOLE target, because after an auction clears, the resulting price and requirement would likely result in the LSE having to purchase additional reserves, increasing cost to ratepayers above that deemed adequate by MISO's LOLE Study. This uncertainty applies to nearly all of the LSEs in MISO. To talk about resource adequacy changes that include a sloped demand curve, MISO must therefore also address with stakeholders to what extent it should continue to rely on the requirements of its detailed LOLE Study and if the strict one-in-ten criteria threshold for planning reserves should continue to be followed in MISO and the rules of the NERC Reliability Entities that govern MISO's footprint.⁵

⁵ ReliabilityFirst requires the use of LOLE criteria. See <http://www.nerc.com/files/BAL-502-RFC-02.pdf>