

MISO Advisory Committee
August 26, 2015
Hot Topic: Price Formation
Organization of MISO States (OMS) Response
For the State Regulatory Sector

Introduction:

The Organization of MISO States (OMS) appreciates this opportunity to provide the MISO Board of Directors, MISO Staff and other stakeholders with the State Regulatory Authorities' sector perspective on Price Formation. MISO's purpose is to deliver the lowest cost of power, by optimizing generation and transmission costs. Price signals and market design are critical and threshold issues for MISO's goal of an economically efficient wholesale market. The OMS comprises both vertically integrated and retail choice jurisdictions. Consequently, some of our response below will be more applicable to the former than the latter. Additionally, for those states that participate in multiple RTOs and ISOs, these answers are intended to be applicable for the MISO market only.¹

Policy Questions:

1. *Do the projects specified in the Market Vision Program further promote appropriate price formation?*

Generally, the Market Vision Program projects promote appropriate energy price formation. The project list will be updated with new projects and reprioritized annually. Therefore, it is too early to judge the merits of the Market Vision Program. At this time the OMS puts greater value on the process and transparency of the process, rather than the end list product. We want to see how MISO executes the projects to improve energy price formation. The OMS anticipates a robust dialogue in the future as the MISO stakeholder community evaluates the Market Vision Programs proposals.

MISO's Day Ahead and Real Time energy markets, in conjunction with the Ancillary Services Markets (ASM), have worked well according to the Independent Market Monitor's (IMM) State of the Market reports spanning 2005 through 2014. This success of price formation in energy markets is enhanced by the IMM serving as a sheriff to mitigate the effects of any exercise of market power. One of the IMM's tools is setting reference prices and comparing offers to those

¹ Kentucky, Illinois and Indiana abstain from these comments.

reference levels to determine if market power is being exercised in pricing. The current system generally works well.

An exception that occurred recently is the Revenue Sufficiency Guaranty (RSG) tariff design. In the 2013 State of the Market report, IMM Dr. David Patton found a flaw in the tariff². Lacking sufficient RSG mitigation authority, uplift costs went to the wrong stakeholders. However, MISO made a recent ameliorative tariff filing at the Federal Energy Regulatory Commission (FERC).

The IMM establishes Broadly Constrained Areas, Narrowly Constrained Areas and Reference Level Prices for the MISO markets. This is a crucial aspect of the IMM's ability to address market design issues. Using these tools among others, the IMM polices the market design and operations to make sure that price formation is economically efficient.

The OMS believes there is one area where there is a need for additional education and improved communication. Both MISO and the IMM should better explain and potentially publish the methodology used to determine reference levels and the resulting prices. The IMM also has the ability to mitigate inappropriate offers if they distort the market clearing Locational Marginal Prices (LMPs). Mitigating price offers contributes to price transparency.

To determine market power pricing, the IMM needs to know what the energy market marginal costs are at different time periods. From his analysis of expected and marginal costs, Dr. Patton calculates reference levels for all generator offers. The IMM regularly tells stakeholders that he examines hyper competitive periods to establish the reference level prices. However, Dr. Patton has never shared this methodology nor the resulting price levels.

While the OMS recognizes this request is novel and may result in additional work for both the IMM and MISO, the broader MISO stakeholder community will only benefit from a better understanding of this critical process. In particular, the requested information would enable the OMS to see how the IMM measures energy market marginal costs and provide additional efficacy in his State of the Market reports.

The OMS acknowledges that simply posting all the relevant data the IMM uses to determine generator reference levels may potentially reveal market sensitive information. Consequently, the OMS is willing to work with MISO and the IMM to protect this data to ensure this information would be available solely to regulators and not MISO market participants. In short, greater transparency is needed to ensure proper price formation.

In addition to the IMM's functions, the present MISO tariff caps generator offers in the co-optimized energy and ASM markets when operating reserves are dispatched at \$1000/MWh. In times of emergency, there is an exception. During such times, MISO calls upon operating

² 2013 MISO IMM State of the Market Report, pages 39-40.

reserves and employs its scarcity pricing methodology. Under this scenario, some generators could receive up to \$3,500/MWh due to constrained demand. FERC, the IMM, MISO and its stakeholders all agreed to this cap. Although the resultant scarcity offer cap is an administratively derived price, FERC, the IMM, MISO and stakeholders reached agreement on said cap only after balancing several factors.

In summary, the present price formation process works in MISO and should not be changed for the sake of changing.

2. ***With regards to scarcity pricing, are there elements on the current market design that impeded proper scarcity price formation? In your answer, consider the following:***
 - a. ***Do the market mitigation rules inhibit asset owners from offering their assets at their true opportunity cost?***

The current offer caps reflect a careful balance of federal and state policy interests on generation, dispatch efficiency, and LMP price volatility to protect consumers from price spikes.

What is “true opportunity cost”? What can we achieve by asset offers at “true opportunity cost”? There is no formal economic definition for "true opportunity costs". However, economics does use the concept of opportunity cost meaning either short run or long run marginal costs. For this question, OMS thinks the word true refers to the long run marginal cost. MISO's present energy market would only set short run marginal costs.

In MISO, most of the utilities are vertically regulated. Under this traditional regime, the meaning of “true opportunity cost” is very different from the meaning of “true opportunity cost” as used for merchant generation. In vertically integrated jurisdictions, most generators recover their capacity cost through retail rate making proceedings. In many cases, the energy-related costs are also recovered this way. In retail choice jurisdictions with deregulated generation facilities and independent power producers the economic paradigm is different.

MISO's market designs allows for an Independent Power Producer (IPP) to enter into the market bilateral contract with a Load Serving Entity (LSE). Unless short run prices are always very high, an IPP without a such a bilateral contract will not recover long run marginal costs.³

³ Although it does not recommend any changes to the MISO price cap at this time, the Public Utility Commission of Texas notes that the price cap in ERCOT has been gradually increased to a level of \$9,000/MWh. This cap is intended to incorporate both the scarcity price of operating reserves and the Value of Lost Load. Texas believes that the higher price cap will result in both greater operational reliability and greater assurance of resource adequacy. Prices may not reach the \$9,000 level frequently, if at all and then for only brief intervals (if coupled with a properly constructed operating reserve demand curve), but they nonetheless provide incentives for generators to participate in the market and to develop new generation.

b. Does the existence of or the level of offer caps and price caps inhibit proper scarcity pricing?

The current market rules allow for scarcity pricing exceeding the \$1,000/MWh offer cap. During an emergency, the energy price cap jumps to \$3,500/MWh. This is also MISO's Value of Lost Load (VoLL). Consequently, the scarcity pricing is maximized at \$3,500/MWh. Does a price signal above VoLL alter an energy consumer's or producer's behavior? If the VoLL is set properly, any price above it will not alter a market participants' energy consumption. Under this condition, a market participant would curtail its consumption as soon as the cost increased above the benefit of that consumption. A scarcity price exceeding \$3,500/MWh can alter an energy producer's behavior. It does not make economic sense for a producer to invest in a project where its expected revenue stream is below what's needed to justify its investment. Higher returns induce new investment which was not previously marginally profitable as long as the new increased revenue is equal or above the net loss of marginally unprofitable projects.

The OMS believes that a scarcity event where the energy price exceeds \$3,500/MWh is an extremely rare event. In other words, the expected return from this event will be very low due to low probability (expected return = probability of the event * return at the time of the event). Consequently, it is unlikely to alter an energy producer's behavior.

In summary, the OMS believes the current offer cap or price cap does not inhibit proper scarcity price formation.⁴

3. MISO continues to take steps to improve its price signals under emergency conditions. Under this effort, how important is it for:

a. MISO to allow demand response asset owners to be able to specify monetary offers for their load curtailment?

The OMS is supportive of Extended Locational Marginal Pricing in non-emergency conditions. We look forward to a robust dialogue as MISO explores the issues surrounding demand response compensation options.

b. MISO to revisit the steps involved in the emergency operating procedures?

Recently MISO filed tariff revision with FERC (ER15-1776) to address pricing during Emergency Events. When an emergency event occurs MISO is proposing to establish methods to allow price signals to adequately reflect the severity of the situation without impacting system reliability. MISO's proposal is designed to prevent uneconomic price suppression during an emergency and to appropriately value emergency resources through appropriate price signals.

⁴ The Public Utility Commission of Texas believes that demand response should be priced at LMP-G.

To address this, MISO proposes an Emergency Offer Floor (EOF) to assign Proxy Offers for Emergency resources. These Proxy Offers will then be used to determine the prices reflective of the Emergency conditions with minimal impact on existing services and processes. The proposed tariff revisions can be found at <https://www.misoenergy.org/Library/Repository/Tariff/FERC%20Filings/2015-05-22%20Docket%20No.%20ER15-1776-000.pdf>. FERC has not yet ruled on the proposed revision. The OMS is monitoring the situation as the Supreme Court potentially could address these issues in the Order 745 case.

- 4. During FERC's Price Formation Workshops, focus areas addressed the use of uplift payments, offer price mitigation and offer price caps, scarcity and shortage pricing and operator actions that affect prices. Are there any issues or initiatives identified by FERC, other RTOs or interested parties that you believe should be considered by MISO?***

The OMS appreciates the thoughtful conversations on these issues. At this time, there are no additional issues we would like to highlight.

- 5. Are there other price formation issues that have not been identified by the Market Vision Program or in the FERC Price Formation Workshops that MISO should be discussing?***

The OMS does not raise any other price formation issues at this time. However, all price formation initiatives must result in a net benefit to ratepayers or improve reliability. If MISO's price formation analysis cannot clearly show a benefit or improve reliability, the issue is not ready for stakeholder vote. MISO should rework any proposal and bring it back to the stakeholder process for further discussion.

Then the parties should work to answer the benefits and reliability questions thoroughly to fully analyze and vet the benefits and reliability impacts and determine if work on the price formation issue should be prioritized or implemented.

MISO and its stakeholders should apply the public interest standard to analyze the costs and benefits of any price formation proposal to determine which initiatives are the most beneficial to customers and rate payers in the MISO footprint, and prioritize their work on the proposals accordingly.