

MISO Advisory Committee
February 25, 2015
Hot Topic: Resource Adequacy
Organization of MISO States (OMS) Response
For the State Regulatory Sector

Introduction

The Organization of MISO States (OMS) appreciates the opportunity to comment on resource adequacy (RA) as a Hot Topic for the MISO Advisory Committee. The increasing focus on RA is no doubt related to the projected tightening of reserve margins throughout the footprint as well as the changing nature of the footprint's resource mix. OMS expects that this AC Hot Topic debate will highlight the important role states play in ensuring RA as well as the certain areas where MISO can be of assistance.

Resource Adequacy in the MISO footprint

MISO, its Members, and the Organization of MISO States (OMS) have worked together to address ways that MISO can provide increased transparency to the resource adequacy picture in the current delivery year and in future years, both at a footprint-wide and Local Resource Zone level. Notably, MISO, OMS, and stakeholders have worked together to implement a repeatable survey of the resource adequacy plans of Load Serving Entities and their jurisdictional entities.

These efforts are good examples to consider as you respond to the following question:

- 1. What efforts, if any, could MISO and its stakeholders consider in improving regional resource adequacy transparency and/or processes? Some current and potential initiatives for consideration include:**
 - a. OMS/MISO resource assessment survey**
 - b. Development of a seasonal resource adequacy requirement and/or accreditation**
 - c. Fuel assurance considerations**
 - d. Changes to existing resource adequacy processes (e.g., term)**
 - e. Review of resource adequacy with respect to increase in System Support Resources and other environmental compliance requirements**

In your comments, consider the activity/initiative, as well as the entity responsible for the activity or initiative. If no efforts are needed, explain.

- a. The 2014 OMS/MISO Resource Adequacy Survey (Survey) provided valuable information to MISO, OMS member entities, and other stakeholders regarding resource adequacy within the MISO footprint. OMS and MISO are in the process of formalizing the timing and communications framework to guide the 2015 Survey efforts. Should MISO and OMS deem the framework for continued coordination successful, a more formalized structure in the Tariff and/or Business Practices Manual should be explored to most effectively utilize this valuable tool in future years.

b. OMS supports exploring seasonal capacity products and planning reserve margin requirements and beginning a process to study these items. We believe that a seasonal construct will shed light on, among other things winter preparedness and generator retirements. These issues may not be adequately captured by the current construct.

Some MISO members and market participants may question the need for a seasonal construct given the level of effort required to start and maintain seasonal processes and investigate potential downstream impacts. OMS does not. Given the rising severity of seasonal climate patterns, the need for and benefits of a seasonal construct may very well be greater than the cost and effort required to implement such a construct. To the extent MISO has not already begun studying this issue, MISO should commission a whitepaper to study moving to a seasonal resource adequacy construct and OMS requests regular status updates be distributed to stakeholders.¹

c. OMS believes increasing coordination between the electric and natural gas sectors is an important component of the resource adequacy equation. The members believe that the creation of a clearly defined “Electric-Gas Operations Coordinator” as envisioned by MISO is one way to ensure adequate coordination takes place.

Furthermore, OMS members are actively engaged in the current FERC-driven fuel assurance assessment as part of their state jurisdictional role in ensuring resource adequacy. Its members have provided input to MISO to include in its report to FERC in Dockets AD13-7 and AD14-8. State retail regulators play an important role in assessing and monitoring whether the generators under their regulatory influence – to the extent they have said authority – have adequate fuel reserves, and failing that, access to deliverable fuel if such a need were to arise.

OMS notes that MISO should support the retail regulators in these efforts by providing it with any data it has concerning the regional availability and deliverability of the various types of generator fuels. This information is similar to the information MISO collected and supplied to OMS regarding the LSEs efforts to ensure they acquired adequate resources to meet their needs.

Lastly, the continued efforts to coordinate electric and natural gas processes to better align with future needs for more natural gas fired generation is also important as the region moves to greater reliance on natural gas to meet resource adequacy needs.

d. As a threshold matter, the OMS urges MISO to keep the following in mind when evaluating any possible change to the existing resource adequacy processes – resource adequacy within MISO is largely a state prerogative. Unlike most other RTOs in the Eastern Interconnect, MISO is predominately composed of traditional vertically-integrated, state-regulated utilities. The vast majority of OMS members exercise plenary and exclusive jurisdiction over decisions regarding the type and amount of generation constructed within their jurisdictional boundaries by their jurisdictional utilities, and what costs those utilities are allowed to recover.²

¹ A seasonal construct will need to incorporate a fuel assurance component to account for historically observed fuel-limited operations. The risks associated with specific weather events will be more easily quantified and accounted for in a seasonal assessment, helping to incorporate possible future probabilistic models of resource adequacy.

² There are some areas within MISO where generators are excluded from state and local regulation, and MISO should consider how best to preserve resource adequacy within those regions. However, in doing so, MISO must

To date, MISO's Resource Adequacy Construct (RAC) has respected state and local regulators resource adequacy decisions.³ The Planning Reserve Auction (PRA) is voluntary. It does not attempt to force new capacity into regions that state and local regulators have determined do not need additional capacity.

As part of their regular activities, state and local regulators evaluate their jurisdictional utilities' capacity decisions. They consider not only the consequences of those decisions over the near-term, but also the effect of these decisions 10, 20, 30, and sometimes 40 years into the future. During this evaluative process, state and local regulators quantify their jurisdictional utilities' capacity costs. They gather and receive evidence from industry experts, environmental interest groups, consumer advocates, industry trade groups and other affected stakeholders. Regulators hold hearings where local, regional, and sometimes national interests are represented and considered by the individual regulators and their staff. The majority of MISO's traditional, vertically-integrated utility generator capacity costs – and thus, the majority of MISO's generator capacity costs – recover their capacity costs through this process, and bundled retail rates.

Just one of the many factors state regulators consider before making a decision regarding resource adequacy is fuel diversity. The energy industry is fraught with externalities and uncertainty due to fuel volatility and regulatory uncertainty. State and local regulators manage these risks through careful, long-term planning. As part of that process, regulators analyze whether individual utilities – and in turn, consumers – are over-exposed to the volatility of certain fuel types or other risks. In doing so, regulators insulate jurisdictional utilities and their consumers from unnecessary and unwanted risk and resulting market inefficiencies.

So far, MISO's RAC and Energy and Operating Reserve Markets, working in tandem with state and local regulation, have resulted in reserve margins above all federal, state, and local requirements, and reasonable costs to consumers. Given the many challenges the industry faces, OMS recognizes that reserve margins within MISO are projected to shrink over the next few years. However, OMS and its members are committed to facing these challenges and most OMS members have already begun that process.

Consequently, OMS does not currently support any change to the RAC, the PRA, or any other MISO resource adequacy process. OMS, as mentioned earlier in these comments, is in favor of studying the cost and benefits of a seasonal construct as a first step in potential future changes to the RAC.⁴

That said, OMS is strongly opposed to any change to address the so-called “missing money problem,” including but not limited to, imposing a downward sloping demand curve (DSDC) in the PRA, eliminating Fixed Resource Adequacy Plans (FRAP), and adopting a minimum offer price rule (MOPR).⁵

take care not to infringe on state and local regulators' resource adequacy authority, to the extent such authority exists.

³ Notably, OMS's members are the only entities within the MISO stakeholder process (including MISO) charged with affecting policy that promotes the public interest.

⁴ OMS again calls upon MISO to commission a whitepaper to investigate the cost, benefits and feasibility of such an approach and request regular updates from MISO staff.

⁵ The Michigan PSC and the PUC of Texas are not advocating for changes in the MISO resource adequacy construct but do not have adequate information to take a position on these specific elements (for or against), such as a sloped demand curve. Moreover, the Michigan PSC and the PUC of Texas do not join the comments in this section regarding the “missing money problem.”

To the extent there is a “missing money problem” in MISO,⁶ it is negligible and addressing the supposed problem will provide little benefit to the vast majority of the footprint. For the majority of MISO generation - traditional, vertically-integrated, state-regulated generation – there is no missing money problem.

To reiterate, OMS opposes the introduction of a DSDC in the PRA. A DSDC would hinder, limit, and otherwise subvert state and local regulators’ resource adequacy authority by effectively negating their decisions regarding the optimal capacity level and capacity resource mix within their respective borders. Furthermore, OMS is unaware of any empirical data that would support the claims made by many that DSDCs improve price efficiency and stability and reduce generator incentive to withhold capacity. Moreover, OMS questions whether the DSDC can deliver the benefits promised. It is impossible for a contrived short-run auction to have perfect foresight, and absent a MOPR (a mechanism OMS opposes), the auction would drive long-term generation decisions towards the lowest cost generation. Generation is not homogeneous. Most of the available capacity in the MISO footprint is based on long-run vertically integrated generation. Long-run investment in power generation requires careful consideration of many factors not a short-run price signal in a short-run capacity auction.

Additionally, OMS is opposed to a mandatory resource adequacy construct. If the PRA were mandatory, it would be the sole arbiter of MISO capacity prices, not state and local regulators.

In conclusion, OMS does not presently support any change to MISO’s existing resource adequacy processes. It requests that MISO study whether shortening the PRA to seasonal assessments is feasible and cost-effective. OMS does not support and would strenuously object to imposing a DSDC or a MOPR in the PRA or eliminating Fixed Resource Adequacy Plans, both individually and collectively. Any such mechanism would impede and restrict state and local regulators’ plenary and exclusive authority over resource adequacy within MISO, to the extent said regulators have such authority.

e. OMS supports updating the attachment Y process to prevent generating units being designated as SSRs and then easily switching status. To prevent unnecessary SSR designations in the future, MISO has indicated an interest in updating RA requirements and planning processes. OMS believes additional scrutiny of a unit owner’s request to retire or suspend a unit is also needed to ensure the SSR system is not gamed – that is, merely using the SSR to recoup revenues that the generator is unable to collect through other sources.

With increased retirements from environmental compliance, the projected timeline of thermal unit retirements becomes increasingly important. Using what has been learned from current SSR examples may necessitate a more conservative approach to retirement assumptions, leading to possible different unit additions or transmission solutions in the planning process.

MISO is currently working to address stakeholder comments related to how suspended units and units that have filed attachment Y documentation participate in the PRA.

On a related matter, OMS believes that MISO needs to continue making changes to the interconnection process to prevent the unnecessary overbuilding of transmission by ensuring proper capacity credit is granted to new generators. The conditional deliverability testing

⁶ OMS does not know of any evidence that would support the existence of such a problem in MISO.

process needs to be updated to ensure that new thermal generation, with an executed GIA, will receive credit for capacity that is deliverable to the grid during the summer peak.

Winter Resource Adequacy

Turning the focus toward the future, consider winter readiness and resource adequacy impacts to winter readiness while addressing the following questions:

1. Are the current resource adequacy processes sufficient to address the recurrence of an extreme weather event? What gaps exist, and to the extent that you believe gaps exist, what measures can be taken to address them?

The current resource adequacy processes may need to be modified slightly in order to address the recurrence of an extreme weather event. The seasonal construct discussed in response to question 1-b in the first section is a modification that can account for variations in fuel availability or firmness, demand side resource availability, and common cause failure modes. These assessments can then be used to consider potential changes in operating procedures or incorporated into probabilistic resource adequacy models.

2. From the resource adequacy perspective, what is your sector's evaluation of the resource investment needed to minimize the impacts of these low-probability, high-risk events?

This situation is known as High Impact Low Frequency (HILF) event. The “risk” is the probability of the event multiplied to the consequence (cost, damage, etc.) Without delving deeper into risk mitigation and the management of moving the severity curve, let it be noted there are different techniques to reduce the severity of such independent weather events. Our sector believes that instead of just investing more in generation or transmission for HILF events, MISO should enhance unit operations and market rules with modifications. This is to address very few hours of the year that have high, cumulative consequences. To address forced outages, for example, additional units can be brought online at minimum output levels to ensure that adequate capacity is available. In addition, units that experienced start-up trouble during the winter of 2013-2014 could add insulating materials and may already be making these changes in response to past events. Some are changing generation crew locations temporarily. MISO could also coordinate intra- and inter-regional flows in preparation for extreme weather, accounting for the geographic reach of the event. This is sort of a mutual aid to prevent the cascading of power delivery failures brought on by generally predictable locations and conditions. The specifics are random by site and failure mode and all utility investments can be set to back each other with the likely local failures. We do not need to over build to events that are not likely to happen in the equipment's lifetime. Depending on the primary failure modes, different procedures can mitigate secondary failure modes.

The OMS is aware of the “Pay for Performance” concept that is now in place for ISO New England and has recently been proposed by PJM (“Capacity Performance”). Since these are new ideas aimed at robust forward capacity auctions, it is premature to judge their value today as applied to MISO. As the MISO Board of Directors is aware, these two eastern RTOs contain mostly restructured states while MISO has mostly traditionally regulated states, so a tool for the eastern RTOs may not be the right solution for MISO. As these forward capacity markets

continue to mature, their relevance to MISO states may become more appropriate, but at this time these tools are not applicable.

Impact of changing resource mix on resource adequacy

Several contributing factors are leading the MISO footprint into a period of significant resource changes. These factors include:

- Environmental regulations
- Integration of the southern region
- Renewable portfolio standards
- Fuel-cost changes
- Seams coordination

The most notable change is the retirement of coal-fired generation resources that are being replaced in part by natural gas-fueled generation. This has also increased the focus on demand side management implementation during events, allowing load to be reduced to supplement generation-based resource adequacy.

1. With resource adequacy in mind, what activities or processes can MISO facilitate and/or implement to maintain and improve reliable operations during this evolution?

OMS believes that MISO can form special task teams with Subject Matter Experts to facilitate knowledge for all stakeholders, related to risk assessment during this period of uncertainty.

Stakeholders could increase their understanding of neighboring regions and their operations, planning assumptions, and business models. For instance:

- How is their system modeled? – examine the reasonableness of assumptions of capability of generation, transmission, and demand side programs;
- Understand the neighboring regions joint operating agreements with MISO.

2. What hurdles do you see as MISO's members prepare and respond to this evolution?

The main hurdles that OMS sees are the uncertainty surrounding the implementation of the Clean Power Plan and the build out of the necessary natural gas infrastructure. With states having the flexibility to choose their own implementation plans, generator dispatch may be complicated by differences between individual state emission reduction needs.

3. Is your sector concerned that the change in fuel mix poses a risk to reliable operation of the transmission system? If so, why, and what, if anything, should MISO do to reduce the risk?

The change presents a challenge but it is manageable with transparency of planning of generation (including how gas is procured), DSM programs, and intra- and inter-RTO transmission. The speed at which the fuel mix changes occur will be directly related to the amount of risk to reliable operation of the bulk power system.