

## State Regulatory Sector Response

### September 2018 AC Hot Topic

#### Generation Outage Coordination

#### QUESTIONS

1. *How should MISO and stakeholders refine or change roles (including authority), transparency, and expectations to improve outage coordination? What are the barriers to improving transparency around planned outages, including notification times, adherence to submitted outage schedules, and outage flexibility?*

The OMS continues to support the review of potential improvements to address how planned and maintenance outages are scheduled throughout the planning year for reliability reasons. The OMS has previously acknowledged and addressed this need by supporting increased transparency around planned outages of both generation and transmission,<sup>1</sup> but stopped short of stating that MISO needs new authority in this area. The OMS continues to believe that MISO should identify and articulate a compelling need before any new authority is considered. The OMS does not support granting MISO any additional authority in this area at this time.

Currently MISO has the authority to analyze generator outage requests, and recommend outage scheduling changes if needed for system security and reliability. Generator owners/operators with facilities larger than 10MW are required to provide their planned and maintenance outage schedule for a rolling 24-month period, with nuclear generators required to do so for 36 months. A generator owner/operator that voluntarily reschedules an outage request pursuant to a request from MISO may be able to recover eligible costs associated with rescheduling, if the request was timely submitted, or it was not timely submitted, but was accepted by MISO.<sup>2</sup> If a generator owner/operator refuses MISO's request to reschedule an outage, and the outage creates a documented reasonable expectation of a system emergency or certain circumstances that could compromise the reliability of the Transmission System, in some situations,<sup>3</sup> MISO can change the outage request priority to Forced in the outage scheduling system. MISO follows similar processes for transmission outage requests, but has the additional authority to grant (or reject) final approval of the transmission outage request.

The Hot Topic prompt suggests that MISO's general outage request and coordination processes are not the cause of any system security or reliability concerns. Rather, the OMS understands MISO's concern to be situations in which generators request outages on a much

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<sup>1</sup> June 2016 OMS Hot Topic Response

<sup>2</sup> MISO BPM-008-r13, at 4.8.1.

<sup>3</sup> If the the outage request: (i) provides less than one year's advance notice; (ii) has not yet been approved by MISO; and (iii) causes a scheduling conflict, MISO will change the request priority to Forced (*See id.*)

shorter timeframe, including planned outages with a less than one-week notification period. MISO's outage priority categories for outage scheduling are: Planned, Urgent, Forced, and Emergency.<sup>4</sup> Despite MISO's notice requirements for planned outages, MISO routinely accepts generator requests for untimely, short-notice "planned outages."

It is important that generator owners maintain flexibility to take shorter duration outages, with correspondingly shorter notification lead times, in order to properly maintain their units. However, the OMS suggests that further consideration and discussion regarding how outages are classified would be helpful to fully understand the nature of planned and maintenance outages vs. forced and emergency outages. For example, MISO and the IMM have recently shared information on "short-term planned outages." These outages can have the same impact as a forced outage in terms of system operations, but although MISO has no way of knowing when they will occur or how to account for them in the future, they are treated as "planned" outages. It is a difficult task to easily distinguish between the different types of outages, but understanding the notification time given prior to an outage being taken is helpful information regardless of the driver behind the outage.

The amount of accompanying information that is included with shorter-lead time outage requests should be examined as a potential area to increase transparency. The OMS understands that NERC reporting requirements may be a barrier to increasing transparency because the requirements may not compel generator owners to share information about the nature of their outage. MISO should review how short-term planned outages have been reported in the Generating Availability Data System (GADS) with stakeholders. This information could serve as the foundation for identifying if new outage categories are needed to more accurately capture the driver behind an outage.

Another mechanism for consideration is a system of voluntary rescheduling of outages after MISO has identified a reliability issue. Once a reliability issue is identified, other generators that have already received approval for their outages could voluntarily reschedule if they have the ability to do so. This path may be more expensive than the current situation due to the fact that the eligible costs of rescheduling the voluntary unit could be greater than the last unit studied that caused the reliability issue.

## *2. Is there a more direct role for economic incentives to play in coordinating outages?*

Economic incentives are currently incorporated into outage coordination in two ways: 1) if a unit is requested to be rescheduled due to system reliability reasons, the generator is eligible to be compensated for eligible costs; and 2) if an outage request is made less than one year in advance and a reschedule request is refused by a generation owner, and the rescheduling refusal causes one of a list of enumerated scheduling conflicts, MISO can designate the outage as Forced, impacting the units unforced capacity value.<sup>5</sup> The first of these two approaches is the

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<sup>4</sup> BPM-008-r13, section 4.1.

<sup>5</sup> MISO Business Practice Manual 008, section 4.8.1.

only direct approach, but it is hardly an incentive, as it only covers costs that were caused by the rescheduling of an outage. The second incentive is indirect (and more of a disincentive) since it impacts a generator's capacity rating, which then reduces the generator's value to an LSE and corresponding capacity payments (from the auction or otherwise).

The OMS supports additional indirect economic incentives in coordinating outages. As stakeholders begin to investigate a seasonal capacity construct once again, a key question will surround the treatment of planned and maintenance outages during seasonal peak periods. Accounting for generators planned and maintenance outages during peak periods can occur in two areas: 1) the Loss of Load Expectation (LOLE) study, which determines the Planning Reserve Margin Requirement (PRMR), and 2) the calculation of a unit's outage rate, which determines its capacity rating. When determining the PRMR, incorporating additional outage categories has the impact of increasing the reserve requirement, leading to an increase in capacity needed system-wide.<sup>6</sup> When planned and maintenance outages are factored into the calculation of a unit's capacity rating, an incentive is created to be available during peak periods. An increase to the PRMR can impact all market participants, even those who own units that are not taking outages during peak periods. Accounting for a specific unit's planned and maintenance outage behavior within their capacity rating creates a more direct performance incentive, that also produces a greater level of visibility into a generator's operating characteristics. The OMS looks forward to analyzing these options with stakeholders in the near future.

In addition to providing greater transparency into why generator owner/operators request outages outside the notice requirements of MISO's rules, and discussing whether additional outage categories would be useful, MISO and its stakeholders should discuss whether MISO's notice requirements should carry more weight, *i.e.*, whether there should be direct economic penalties associated with certain untimely requests. A short-notice outage that is required for unit maintenance is closer to a forced outage than how MISO has defined a "planned" outage, but is essentially treated as a planned outage. While MISO currently has the ability to change the outage priority of certain untimely requests from planned to forced, the process does not currently include any disincentives for untimely requests that create near-term coordination problems for MISO and other generators, but do not rise to the level of creating a reasonable expectation of unacceptable system conditions. The OMS reiterates that generator owners need to be provided with enough outage flexibility to properly maintain their facilities, but suggests that there is a real difference between how timely-noticed planned outages and short-notice outages impact MISO's ability to coordinate generator outages. MISO and stakeholders should consider whether to address that difference by further refining the outage categories and notice requirements associated with each category.

3. *How should resource adequacy be changed or enhanced in consideration of generation outage behavior, including both planned and forced outage rates?*

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<sup>6</sup> MISO Capacity Accreditation Workshop, April 22, 2016, see slide 3:

<https://cdn.misoenergy.org/20160422%20Capacity%20Accreditation%20Workshop%20Item%20004%20LOLE%20Study%20Impacts128747.pdf>

The OMS continues to support investigation of a seasonal capacity construct. A seasonal construct would bring reliability benefits to the MISO system. As the fuel mix within MISO changes, with corresponding changes in fleet operating characteristics, it will be increasingly important to have transparency into generator performance and availability on a more granular level. Changing to a seasonal construct would provide greater visibility into the resources that regulators and their utilities have determined are necessary to maintain resource adequacy throughout a given year. Additional levels of reliability could be reached through seasonal testing requirements in place of the current annual generation verification testing. Economic benefits can also be realized by reducing the reserve requirement for lower load, non-summer seasons. The approach is reasonable, leaving decisions with regulators and increasing overall flexibility. For example, a seasonal construct will address concerns around availability of demand response outside of the summer months and firm fuel decisions could be made on shorter time intervals throughout the year.

Although incorporating additional outage types could increase the planning reserve margin requirement, as discussed in question 2 above, there are several factors that could help alleviate this concern. First, the recent trend of the increasing Planning Reserve Margin Requirement (PRMR) is driven by more than increased forced outage rates. Another driver is the decrease in forecasted peak demand, which leads to a higher PRMR percentage, but does not lead to an increase in the number of resources needed (i.e., a higher percentage of a lower peak number may still be less total MWs required). Second, non-summer seasonal reserve requirements will be lower, and therefore incorporating planned and maintenance outage rates during these seasons will not lead to an overall increase in resource need. Lastly, since the increase in outage rates (forced, planned, and maintenance) is likely related to the increasing average age of the fleet, as resources retire, this trend will reverse itself, leading to lower reserve margin requirements.

On a related note, the OMS continues to oppose any “pay for performance” mechanism in MISO's capacity construct.<sup>7</sup> What has been implemented in eastern ISOs is not needed in MISO for a variety of reasons, especially with the implementation of a seasonal construct. The issues with performance and the incentive to invest in maintaining a resource's ability to come online are not as large an issue in MISO since regulated LSEs have the obligation to serve load.<sup>8</sup>

4. *Should MISO consider changes to transmission planning assumptions to better reflect actual system conditions in light of increasing level of coincident outages across the system?*

MISO currently uses the NERC TPL-001-4 standard for the baseline transmission planning assumptions and transmission owners can utilize additional, more stringent, local planning criteria as necessary. The current MISO transmission planning assumptions properly capture the reliability need of the footprint, covering many diverse local needs.

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<sup>7</sup> See OMS September 2016 Hot Topic, pg. 2. Available here: [http://misostates.org/images/stories/Filings/HotTopics/2016/Item\\_7\\_OMS\\_Hot\\_Topic\\_Comments\\_FINAL.pdf](http://misostates.org/images/stories/Filings/HotTopics/2016/Item_7_OMS_Hot_Topic_Comments_FINAL.pdf)

<sup>8</sup> The Illinois Commerce Commission supports the evaluation of market-based approaches to address planned generator outages in MISO's capacity construct.

In addition to this reliability planning, MISO can consider changing planning assumptions for economic reasons. Recently the MISO IMM provided his analysis of the impact from generation and transmission outages on the energy market. As we know, real time outages will be different from the theoretical outages that MISO assumes in its planning. Depending on the severity of the differences, it can cost consumers from negligible amounts to very significant amounts of money in the energy market. The IMM's analysis is a good start of the overall study required to fully understand this issue. In addition, any change should be vetted in the stakeholder process without rushing through. The OMS is not opposing MISO's consideration of the practical aspect of its planning assumptions; however, OMS urges MISO to have proper studies and discussions in the stakeholder community before it commits to new assumptions.