



John R. Bear
President and CEO
317-249-5400

November 25, 2014

The Honorable Gina McCarthy
Administrator
U.S. Environmental Protection Agency
EPA Docket Center (EPA/DC)
Mail Code 28221T
Attn: Docket ID No. EPA-HQ-OAR-2013-0602
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Administrator McCarthy:

The Midcontinent Independent System Operator, Inc. (MISO) submits the following comments on the U.S. Environmental Protection Agency's proposed rule to adopt carbon emission guidelines for existing electric utility generation plants. We appreciate the time you and your staff spent with us and others seeking to understand the proposed rule's potential impacts on electric system reliability.

MISO is an independent, not-for-profit organization established to promote the common good and general welfare through reliable and efficient delivery of electricity. We maintain reliable operation of more than 65 thousand miles of electric transmission lines in 15 U.S. states and the Canadian province of Manitoba. We provide open access to all users of the electric transmission system on a non-discriminatory basis. MISO ensures reliability through coordinated regional economic dispatch of power plants and forward-looking planning.

MISO takes no position on the overarching question of whether EPA should regulate carbon emissions from existing power plants. That is a matter beyond MISO's role as an independent regional transmission organization. Since we provide reliability coordination for a large area in North America, MISO has an interest in presenting information about how the proposed rule's compliance requirements could impact electric system reliability.

The 2020-2029 Interim Performance Requirements in the Proposed Rule Should Be Eliminated to Allow Adequate Time to Reliably Achieve Compliance

Application of the 2020-2029 interim emissions performance period and the associated interim emissions performance levels established in the proposed rule (the "interim performance requirements") will negatively impact reliability and resource adequacy in the MISO region starting in 2020. The interim performance requirements create an untenable and infeasible timeline for reliable compliance, and would cause states and MISO member companies to make decisions on a severely truncated timeline. MISO proposes that EPA eliminate the interim performance requirements when the final rule is issued. Instead, EPA should allow states to submit plans for EPA's approval that specify interim compliance objectives to best fit their circumstances.

Sufficient time is required to engage in rational planning, construction and integration of cost-effective resource and infrastructure solutions that maintain reliable and efficient delivery of electricity. With adequate time, parties can work collaboratively to identify and develop cost-effective, long-term solutions to public policy requirements. As an example, the MISO Multi-Value Transmission Projects (MVPs) resulted from years of stakeholder work to develop cost-effective solutions to meet state-driven public policy requirements, such as renewable energy standards. The MISO Board of Directors approved the MVP portfolio in 2011 after five years of planning and stakeholder discussion. Many of the resulting transmission projects are still in the development, regulatory approval and construction phases. Once complete, the MVPs will provide value to consumers for many years to come.

While the apparent intent of the interim performance requirements is to provide compliance flexibility, the practical outcome is that significant action would be required by 2020 in order to achieve the interim emissions performance levels. Without early action, it will not be possible to accomplish the averages with action in later years. MISO's initial analysis of the proposed rule shows that nearly 80 percent of the total emission reductions must be met by 2020.

The interim performance requirements also must be considered in the context of the proposed rule's state plan submission and approval process. The earliest a state plan could be approved is 2017. Approval of a single state plan will be challenging, and coordinated approval of many state plans by this time presents further difficulties. In the likely event that states request additional time, it is possible that many states will not have approved plans until 2019. Since action will be needed by 2020 to achieve the interim emissions performance levels, there will not be nearly enough time to plan for the replacement capacity, transmission upgrades, and natural gas delivery infrastructure that will be needed to maintain reliability and resource adequacy. Without sufficient time to plan, cost-effective decisions for the long term will be sacrificed.

The interim performance requirements are likely to have a negative impact on electric system reliability. This reliability concern encompasses several components that together define the concept of "reliability." First, there must be enough energy (measured in megawatt-hours), available to meet demand, on a regional and local level. Second, local transmission ancillary services, such as voltage support (VARs) and frequency support (Hz), are needed to maintain a reliable transmission system and move energy on the electric system. These ancillary services can be provided by electric generating units or components of the transmission system. Third, resource adequacy must be ensured, which means that there must be enough generation capacity (in megawatts) to serve peak demand plus with capacity in reserve to account for unexpected circumstances such as generation and transmission outages (the planning reserve margin). Finally, reliability requires that the operation of generating units and the transmission system are flexible enough to be able to call on generating units and move energy, with ancillary services, where it is needed at a moment's notice. All of these components must be constantly monitored and balanced by the system operator to ensure reliability of the electric system.

The MISO region already faces identified reliability challenges associated with EPA's Mercury and Air Toxics Standards (MATS). The MISO region relies on coal-fired generation as the predominant electricity resource. MISO has been conducting quarterly surveys with our generation owners for three-and-a-half years to assess potential impacts of the MATS rule. The

survey results show that between 10 and 12 gigawatts of coal-fired generation capacity will retire by 2016 to meet the MATS requirements. As a result, resources available to the MISO region will be at, or potentially below, the planning reserve margin starting in the summer of 2016. MISO expects that resource availability will remain close to the planning reserve margin for the foreseeable future. This erosion of the reserve margin increases the likelihood that MISO will need to manage high electricity demand situations by use of emergency operation procedures. The probability of a loss of load event becomes greater than the MISO region has ever experienced. Furthermore, we know that additional generation retirements needed to comply with the proposed rule are expected to require a one-for-one capacity replacement at the time of the retirement to maintain electric system reliability.

Compliance with the interim performance requirements will force actions to be taken by 2020. MISO's initial analysis indicates that up to 25 percent of the remaining coal capacity in MISO – which equates to 14 gigawatts – could potentially retire in order to comply with the proposed rule. This impact is in addition to the 10 to 12 gigawatts of retirements expected due to MATS. To avoid reliability and resource adequacy issues, retiring capacity will need to be replaced at the time it comes offline. Yet to comply with the interim performance requirements, a significant amount of retirements – approximately 11 gigawatts – would need to occur in the 2020 timeframe. This is well before sufficient replacement capacity can be placed into service.

New combined cycle natural gas generation is the most probable option to replace retiring coal-fired plants and comply with the proposed rule. MISO has observed that the process to get this type of unit into operation typically takes at least five years from a developer's decision to proceed. The current natural gas delivery and storage system in much of the MISO region was not developed to support use of natural gas electric plants as base load generation. Therefore, new natural gas infrastructure is very likely to be necessary to support new natural gas-fired generation. Likewise, in many circumstances, additional electric transmission infrastructure will be needed to reliably interconnect the new generation to the electric grid, further increasing the time needed to construct new generation. MISO's experience with electric transmission expansion planning demonstrates that six to ten years are needed to develop comprehensive plans that account for future uses of the system to optimize transmission expansion.

Aside from the time needed to develop the best resources and infrastructure necessary to integrate those resources, time is also needed to gain regulatory approvals. The sizable investments required for new generation and transmission infrastructure require a high level of certainty in order to obtain financing and regulatory approvals. If state plans are not finalized until 2017 at the earliest and in 2018 or 2019 for many, then regulatory certainty will not exist soon enough to reliably achieve the interim performance requirements.

Using 2018 as a starting point for finalization of state plans, and a six year timeline for new infrastructure, new generation capacity would not be available until 2024 under the best circumstances, and well beyond that under more realistic assumptions. Without those capacity additions, the MISO region will face serious resource adequacy issues, which translate into reliability issues. Notably, the North American Electric Reliability Corporation has identified potential reliability concerns surrounding the proposed rule, including concerns that the proposal will result in problems related to load and resource balance, voltage support and frequency

support. MISO has performed preliminary studies that validate these concerns for our region starting in the 2020 timeframe. The interim performance requirements create an unrealistic timeframe for action.

EPA appears to recognize this concern, with the October 28, 2014 Notice of Data Availability identifying commenters' concerns and inviting comment on proposals to potentially modify the interim performance requirements. EPA proposes to address concerns by providing credit for actions taken before 2020, and phasing in Building Block 2 (natural gas unit re-dispatching) over time. These proposals indicate a directional improvement, but do not fully address the concerns with the interim performance requirements. Moreover, these approaches may introduce additional complexity by creating more variables that will not be finalized until state plans are approved in the 2017-19 period. A better approach would be to eliminate the interim performance requirements. EPA can achieve visibility as to how states will make incremental progress toward meeting the final performance level through review and approval of state plans.

At best, the truncated timeline created by the interim performance requirements will force state regulators and generation owners to make hasty and perhaps uncoordinated decisions. This will erode the value of MISO's transmission planning process and reduce the overall value of economic dispatch of the system, thereby unnecessarily increasing electric costs to consumers. At worst, this timeline will force decisions that pit environmental compliance against electric reliability. Additional time to develop and implement compliance strategies will allow for better planning, including the ability for MISO to work with stakeholders and regulators on the development of plans and to implement process changes and market rules to preserve the benefits of economic dispatch while maintaining reliability. The process of making these changes will take time, requiring stakeholder input and Federal Energy Regulatory Commission approval to evaluate whether changes result in just and reasonable rates.

MISO requests that EPA eliminate the interim performance requirements in the final rule. Consistent with the language in the proposed rule that allows states to propose "other periods that ensure regular progress," EPA should allow states to submit plans for EPA's approval that specify the interim compliance objectives that best fit their circumstances. This approach will provide EPA with reasonable assurance that states are on a path to achieving compliance with their final performance levels. EPA should also consider a reliability safety valve to address reliability concerns that may arise during implementation of the final rule. MISO supports the reliability safety valve concept in the ISO/RTO Council's comments on the proposed rule.

Flexibility in Implementation Options Will Preserve Reliability and Optimize Efficient Outcomes

EPA included a number of provisions in the proposed rule that are designed to give states and electricity generators a certain amount of flexibility to decide for themselves how to best reduce carbon emissions. MISO urges EPA to retain and expand on those flexible compliance options in the final rule. Flexibility will be crucial to preserving reliability of the electric system and allowing for more cost-effective implementation.

The draft rule includes the option for states to work with each other to develop “multi-state approaches that reflect the regional structure of electricity operating systems that exists in most parts of the country and is critical to ensuring a reliable supply of affordable energy.” Prior to EPA’s issuance of the draft rule, the ISO/RTO Council shared a discussion paper with EPA, in which the Council encouraged EPA to allow states to adopt region measurement mechanisms for determining compliance. Regional and interregional coordinated dispatch has a proven track record of efficiently achieving reliability.

In addition to efficient and reliable operations, maintaining the flexibility for individual state, multi-state and regional compliance strategies maximizes the potential to yield cost savings. MISO’s preliminary analysis of the draft rule suggests that implementation flexibility through multi-state or regional compliance could possibly provide more opportunities for cost savings when compared to less flexible approaches. For these reasons, MISO urges EPA to retain the provisions that are in the proposed rule allowing the states the flexibility to use multi-state and regional compliance strategies.

EPA also has provided states the opportunity to request an extension of time (up to two years, or June 30, 2018) to develop and submit multi-state plans. Even with this extension of two years, it may be very difficult for states to consider and implement multi-state and regional approaches. More time may be warranted to allow sufficient opportunities for states to develop the partnerships, programs and agreements necessary to support multi-state and regional implementation strategies. It also underscores the need to remove the interim performance requirements, because there simply will not be enough time following EPA’s approval of multi-state plans to achieve the initial necessary reductions.

MISO urges EPA to remove the 2020-2029 interim emission performance period and levels from the final rule to allow sufficient time for reliable and efficient implementation of compliance strategies. We also encourage a final rule that provides structured flexibility to support a variety of compliance strategies to preserve reliability of the electric system. A fundamental requirement for continued electric system reliability and resource adequacy is an implementation timeline and approach that allow for sound resource and infrastructure planning.

Sincerely,

A handwritten signature in black ink, appearing to read "JRB", with a horizontal line extending to the right.

John R. Bear
President and CEO