



September 13, 2017

The Honorable Fred Upton, Chairman  
Committee on Energy and Commerce  
Subcommittee on Energy  
2125 Rayburn House Office Building  
Washington, D.C. 20515

*Re: July 26, 2017 hearing – response to additional questions for the record*

Dear Chairman Upton,

Thank you for the opportunity to testify at the hearing entitled “Powering America: A Review of the Operation and Effectiveness of the Nation’s Wholesale Electricity Markets,” that the Subcommittee on Energy held on July 26, 2017.

Attached are my responses to the additional questions for the record that you and other members of the subcommittee posed in your letter of August 29, 2017.

MISO appreciates the subcommittee’s interest in wholesale electricity markets. Please do not hesitate to contact me should you have any questions regarding the attached responses to the additional questions for the record. You may also contact Kurt Bilas, MISO’s executive director of government relations, in our Washington, D.C., office, at

[REDACTED]

Sincerely,

[REDACTED]

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cc: The Honorable Bobby Rush, Ranking Member, Subcommittee on Energy  
Ms. Elena Brennan, Legislative Clerk, Committee on Energy and Commerce

Attachment: Richard Doying, MISO, questions for the record

Testimony of Richard Doying  
Executive Vice President and Chief Operations Officer  
Midcontinent Independent System Operator, Inc. (MISO)

Responses to Members' written questions for the record  
for the House Committee on Energy and Commerce Subcommittee on  
Energy's hearing entitled "Review of the operations and effectiveness of  
the nation's wholesale electricity markets," held on July 26, 2017

These responses submitted on September 13, 2017

## **Questions from the Honorable Fred Upton**

- 1. It has been more than 7 years since FERC embarked on its efforts to promulgate new transmission planning reforms which resulted in Order No. 1000. Your RTO is designated as “Order 1000 planning regions.” Now that you have had real-world experience with these reforms, do you think FERC’s efforts at reforming transmission planning and cost allocation have succeeded, failed, or landed somewhere in between?**

While MISO is aligned with the ultimate goals of Order 1000 and believes its regional planning principles largely reflect MISO’s historical planning approach, MISO is still assessing the impact of the interregional requirements and the elimination of the Right of First Refusal on the overall transmission planning process in the region.

On the interregional front, Order 1000 did help bring different RTOs/ISOs together for enhanced inter-regional planning, and it also provided a more standardized forum for planning opportunities with our non-RTO/ISO neighbors. However, the apparent metric used for determining effectiveness—number of interregional projects—does not tell the whole story, and has the potential to drive unintended consequences, including the selection of an interregional project over the more cost-effective regional alternative. Additionally, regional differences in how regions plan, operate, and share the costs of transmission upgrades remain a challenge.

In MISO we have found that big regional projects tend to be cyclical. That means that on the regional front, we are just now beginning to observe the practical impacts the elimination of the Right of First Refusal is having on stakeholder alignment and consensus-building in the planning process.

The largest challenge to regional transmission planning is developing a robust business case that aligns and accurately allocates the costs of a given project to its beneficiaries. Order 1000 did not change that fundamental need, but did create new business interests and create different paradigms for projects with cost allocation versus those without. In so doing, Order 1000 may have made it more challenging to achieve the type of stakeholder consensus that RTOs/ISOs desire and need for region-wide transmission projects.

It was this type of consensus that was crucial to the achievement of the Multi Value Projects, a group of transmission projects whose benefits exceed \$20 billion—more than three times their costs. The MVP process was launched before Order 1000 took effect, and we achieved great success in collaboration with our stakeholders in planning numerous projects that enhanced reliability, reduced energy costs and created a host of other benefits across our region.

FERC has an ongoing proceeding evaluating the impacts of Order 1000, and we look forward to continuing to participate in that process to help ensure our policies support the development of transmission investment that can bring value to customers.

**2. You mention that MISO has a robust process for engaging with stakeholders. Can you elaborate more on this?**

MISO places a high value on an effective stakeholder process, which gives energy companies, regulators, advocacy groups and other interested parties a voice in how MISO designs and manages the wholesale electricity markets and the transmission system. The ideas that flow from the stakeholder process have helped MISO to fulfill its mission enabling the reliable delivery of low-cost energy through efficient, innovative operations and planning.

**a. How does MISO make sure they are receiving input from stakeholders in a meaningful way?**

The importance of our stakeholder process is evidenced by the fact that its origins lie in one of our foundational governing documents: the Transmission Owners (TO) Agreement. The agreement established several of our original stakeholder groups, including the Advisory Committee, which is at the center of our governance structure and reports directly to our Board of Directors. The TO Agreement established the Advisory Committee as a “forum for its members to be apprised of MISO’s activities,” and directed it to provide the Board with “information and advice” on “policy matters of concern” to its members and industry constituents.

As defined in the TO Agreement, 25 representatives participate in the Advisory Committee from the following diverse sectors: State Regulatory Authorities, Independent Power Producers, Transmission Owners, Transmission Dependent Utilities, Power Marketers, Public Consumer Advocates, Environmental/Other Stakeholder Groups, Eligible End-Use Customers, Coordinating Members, and Competitive Transmission Developers.

Long-term Subcommittees reporting to the Advisory Committee focus on Resource Adequacy, Markets, Reliability, Cost Allocation, and Transmission Planning. Each Stakeholder group, referred to as an Entity, has a specific charter and work plan. The Steering Committee also reports to the Advisory Committee and ensures that each Entity remains relevant to Stakeholders and adheres to the scope of its charter. MISO’s effective Stakeholder process is agile; short-term and longer-term Entities are created to address specific issues currently impacting MISO members, market participants, and stakeholders. These Entities sunset when they accomplish their goals.

MISO is committed to facilitating an effective process and incorporating stakeholder input by:

- Publicly posting meeting agendas in advance to allow participants to determine if and how best to participate.
- Nearly all Stakeholder meetings are conducted by video conference, WebEx or similar technology, and with conference call capabilities.
- Meeting presenters and hosts are available in multiple locations across the footprint for most meetings.

- Stakeholders may ask questions during all Stakeholder meetings and in public comment portions of all open Board of Director meetings.
- MISO invites feedback from Stakeholders on many presentations, and that feedback is posted and recapped at ensuing meetings.
- MISO hosts an “Informational Forum” eight times per year to share MISO information and operational data with Stakeholders, and to solicit feedback on current topics of interest.
- All 10 Stakeholder Sectors are encouraged to participate in a “Hot Topic” discussion three times per year. Stakeholders can suggest topics for discussion and write white papers to explain their views in detail. The topic is then discussed with the Advisory Committee and directly with the MISO Board of Directors.

**3. Lately there has been a lot of discussion about States providing financial assistance to support specific generator units. Is MISO currently working on any changes to its markets to accommodate State policies?**

MISO’s markets reflect the longstanding role of States with respect to energy, environmental, and policy choices regarding generation. While States have myriad policy interests, MISO is continuing to work proactively with States and Stakeholders to ensure regional resource adequacy needs are achieved in the changing landscape. For example, MISO is currently working the State of Michigan as it proactively develops State planning processes that will support Michigan’s long-term resource adequacy needs. In addition to supporting Michigan’s energy legislation, MISO remains committed to helping the State as it develops and refines its resource adequacy policies through State regulatory proceedings.

As another example, Illinois recently introduced zero-emission subsidies to help nuclear plants that were struggling to compete to remain viable, which our process will respect and enable. Ongoing coordination between MISO and the States is critical to continue to accommodate various State policies and meet long-term regional reliability needs.

**a. How does MISO accommodate various, or even conflicting State policies in its market design or planning?**

Because MISO’s region encompasses all or part of 15 States and part of Canada, and includes both traditionally regulated and retail choice areas, this is a challenge we regularly face. Part of our market enhancement process is to work closely with State regulators and other Stakeholders to understand the various policies, requirements and needs that must be accommodated through our market design. Through this collaborative process we are able to navigate the complexities of multiple jurisdictions to achieve our goal of reliable, non-discriminatory operation of the electric system.

MISO’s Tariff calls for the integration of State-sponsored policies into its wholesale markets. It is MISO’s role to recognize policies enacted by the States and develop the wholesale mechanisms required to assure resource adequacy and reliability in a complementary manner. This may include any unique features a State deems appropriate due to policy considerations. Because

the vast majority of utilities in MISO's footprint arrange for supply resources to serve their demand well in advance of MISO's residual capacity auction, State policy programs designed to serve each State's consumer needs are common initiatives that MISO's market processes are designed to accommodate.

We also have experience accommodating state policy in the planning horizon. After several years of planning primarily for reliability and market efficiency, it became clear that certain State policies—specifically, the adoption of renewable portfolio standards in the Midwest—were leading to new requirements for generation resources, specifically wind. In 2007 MISO began collaborating with Stakeholders to enhance our planning process to account for project benefits beyond those driven by reliability and/or market efficiency, including public policy requirements. Four years of study and analysis work culminated in the first portfolio of Multi-Value Projects being approved by MISO's Board of Directors in 2011, at a cost of \$5.6 billion. Multi-Value projects are transmission projects which deliver reliability, public policy and economics benefits across the MISO region and under a range of potential resource mix scenarios.

**4. Your RTOs and ISOs play a central role in operating the wholesale electricity markets and (with the exception of ERCOT) your primary regulator is the Federal Energy Regulatory Commission. Do you believe that FERC is appropriately engaged in overseeing wholesale electricity markets?**

FERC's sworn commissioners and its career staff are very knowledgeable about the wholesale electricity markets and the challenges they face. The issues confronting the energy industry are multi-faceted and complex, so it should not be surprising that our views sometimes differ from FERC's. Nevertheless, we appreciate the high levels of professionalism, preparedness and attention to detail that FERC commissioners and staff bring to their work. FERC demonstrates its engagement in overseeing the wholesale electricity markets in numerous ways, such as by convening technical conferences on key issues, and by issuing Notices of Proposed Rulemakings (NOPRs) that allow RTOs/ISOs and other industry stakeholders to express their views on matters of concern. MISO appreciates FERC's engagement on those and other fronts.

**a. Are there additional areas of regulatory oversight that requires the attention of this subcommittee?**

We very much appreciate the role that Congress played in laying the groundwork for the establishment of RTOs and ISOs, and this subcommittee's ongoing interest in fostering reliable and efficient wholesale electricity markets. We hope the subcommittee will continue to support the regional market model, and we stand ready to come before you again as you go about your work of improving U.S. energy policy.

## **Questions from the Honorable John Shimkus**

**1. If, as we learned at the hearing, markets were structured to build only the least expensive generation, we would build nothing but gas plants right now.**

**a. Is that correct? Is that what's happening?**

Although a large amount of new natural gas-fired generation is being built in the MISO region, other types of generation are also being built, such as wind projects and other renewable-energy resources. Energy-efficiency initiatives and “demand-side” programs that compensate customers for reducing their electricity use are also growing in popularity. And while the MISO region does not yet have a high penetration of emerging technologies such as energy storage and distributed energy, we expect more of those types of resources to be built in the future.

**b. If not, how do you explain other generation sources entering the market?**

As I discussed at the July 26 hearing, in the MISO region, load-serving entities (LSEs) and State regulatory agencies (where applicable) are responsible for ensuring that enough resources will be available to meet demand while also maintaining an adequate supply of reserves. MISO's markets are structured to incentivize reliability at the least cost, without regard to resource type. Thus, decisions about what kinds of new generation to build are made by LSEs and States, not MISO.

There are several reasons why LSEs and States may choose to build new generation resources that are something other than gas-fired units. For example, some States have adopted policies to obtain a certain amount of their total generation from renewables. Similarly, some utilities have voluntarily embarked on corporate initiatives to add more renewables to their fleets. States and LSEs may also decide to build non-gas resources in an effort to increase the diversity of their assets in terms of fuel mix and technology, which they may view as enhancing the overall reliability of their fleets. States and LSEs may also see various financial opportunities from building non-gas resources.

As a reminder, MISO does not favor certain fuels or generation technologies over others, as we are required by FERC to provide equal and non-discriminatory access to the electric transmission system. But importantly, MISO's markets do implicitly place value on different generators based on their offered cost and the requirements of the system at any point in time. Under the provisions of its Tariff, MISO dispatches resources in order of their “economic merit,” meaning the lowest-cost resources are called up first, followed by the next-lowest cost, etc., until demand is met. In practice, this means certain resources may run almost all the time, while others, such as renewables, run when they are available, and still others may run only once or twice a year, when they are needed to meet peak load.

## **Questions from the Honorable Billy Long**

- 1. RTO development began in late 1999 with ISO development soon to follow. Both organizations help to monitor our electric power system. There are still a number of gaps in our electric system where problems could occur. What are your thoughts about the creation of another RTO that could include the states of Nevada, Arizona, Colorado and other western states? Should it be an RTO or an ISO?**

As a general matter, we believe that the nation's RTOs and ISOs have created tremendous value for their members and the States in which they operate, and, by extension, the tens of millions of homes and businesses within those states. Given the strong track record that the nation's RTOs/ISOs have compiled since the late 1990s, it is reasonable to conclude that the establishment of another RTO in the Western U.S. could foster those same types of benefits.

As I mentioned at the July 26 hearing, MISO created about \$3 billion in benefits for its members in 2016 alone, and about \$18 billion in cumulative benefits over the course of the last decade. Those benefits come from operating the grid on a regional basis, which results in enhanced reliability, more efficient use of the region's existing transmission and generation assets, and a reduced need to build new assets. Theoretically, the Western U.S. could realize those same kinds of benefits if another RTO/ISO was established there, although obviously, the particular members and states involved in any such effort would have many details to work out. That would include determining whether the new regional grid operator should function as an RTO or an ISO, or both simultaneously, as MISO does.

That said, MISO also recognizes that some electricity-industry entities and governmental jurisdictions may not want to join an RTO or an ISO, and we respect that view. MISO believes that RTO/ISO membership should remain voluntary, which is one of the reasons why we work so hard to address the needs of our members.

- a. How are you planning to manage the growing surplus of generation in your respective regions?**

There is currently a "surplus" of generation in the MISO region that exceeds the minimum level of resources needed to serve load. But even though this surplus did increase slightly between 2016 and 2017, it has generally been shrinking in recent years compared to its historical levels, not growing.

We partner with the State regulatory agencies in our footprint on an annual survey of Load-Serving Entities to obtain visibility into the future supply and demand picture. The 2017 iteration of that survey indicates that in the 2018-2022 timeframe, the MISO region as a whole will have about 0.5% to 6% more generation capacity than we need to serve expected load while also maintaining adequate reserves for emergency situations. The survey also indicates that while some parts of the region may not have enough local resources to serve their needs, they will be able to acquire excess capacity from elsewhere in the footprint—which is one of the chief benefits of ISO/RTO membership.



For many years, the reserve margin in the MISO region was significantly larger than it is today. But in recent years, our reserve margin has generally been declining due to plant retirements driven largely by low natural gas prices, environmental regulations and other factors. We did see a slight uptick this year compared to 2016, but that was driven largely by a reduction in forecasted electricity demand as opposed to new generation coming online.

But importantly, despite ongoing evolution of the region's mix of generating resources, our reserve margin continues to exceed all regulatory and industry benchmarks for system reliability. Specifically, our regional reserve margin projections for the next five years range from 16.3% to 21.6%, which is higher than our minimum reserve margin requirement of 15.8%.

MISO works closely with its Stakeholders to ensure reliability as the region's mix of generating resources evolves. The ability to maintain adequate reserve margins reflects the good job the region's energy providers and State regulatory authorities are doing in planning for the future and building sufficient capacity to meet regional reliability targets, while also realizing the benefits to consumers of avoiding adding too much generation capacity. Overbuilding the system in that way would increase electricity prices for consumers, because in the MISO region, States allow utilities that build new generation to recover their costs by raising their rates. A smaller reserve margin that still ensures system reliability helps to keep power prices in our region as low as possible.

#### **Questions from the Honorable Frank Pallone, Jr.**

- 1. Consumer advocates have identified the resource imbalance between the stakeholder members of the RTO/ISO Boards and the small consumer community as a major barrier to having meaningful representation of consumer viewpoints included in decisions about grid operation and capital project evaluation and approvals. What mechanisms, reductions in costs of stakeholder participation, or other support does your RTO/ISO provide to the small consumer community to facilitate their participation in RTO/ISO governance?**

MISO is committed to its stakeholder process and providing multiple ways in which all Stakeholders and the public can and do participate in meetings. As mentioned above, nearly all meetings are held by conference call and hosted in all four MISO regional locations. WebEx or similar technology and conference capabilities allow participants to be remote and yet fully engaged in discussions. Our Stakeholders can be a part of the meeting while saving travel time and expense and maximizing productivity.

**2. You indicated at the hearing that MISO had a formal structure (e.g., committee or liaison position) for obtaining input on consumer views and concerns on grid management. Please provide detail about how consumer views are incorporated into decision-making at your RTO/ISO.**

**a. Do consumer advocates have voting representation on the Board?**

Pursuant to its governing documents, MISO's Board of Directors is independent of any of MISO's Stakeholders. However, the Board receives input from the Advisory Committee, which is comprised of representatives from MISO's 10 stakeholder sectors—one of which is the Public Consumer Advocates Sector. Two of the Advisory Committee's 25 members come from the Public Consumer Advocates Sector, allowing them to provide direct input to the Board.

Consumer advocates can also influence the composition of the Board by being selected to serve on the Board Nominating Committee. Two of the nominating committee's five members are chosen from the Stakeholder community, which, as noted above, includes the Public Consumer Advocates Sector.

**b. Do consumer advocates participate actively in the development and approval of grid planning?**

The Planning Advisory Committee is one of the primary sub-committees reporting to the Advisory Committee in the Stakeholder governance process. This committee provides guidance and input on MISO's transmission planning activities and reviews and recommends transmission plans for approval by MISO's Board of Directors. Within the Planning Advisory Committee, all 10 sectors of Stakeholders have equal weighting, including the Public Consumer Advocates.

**c. Are there funds available to support full-time staff that serve the interests of consumer advocates? If so, what is the source of those funds?**

MISO's annual budget includes travel funds for members of the Public Consumer Advocate sector. In addition, MISO provides extensive training opportunities for staff and senior consumer advocate leadership, policy/issue support, and access to our subject-matter experts to support the work of the sector, all paid from the MISO operating budget. MISO also provides financial and issue support to the State Regulatory Authorities sector (the retail regulators for each jurisdiction).