

## MGA MID-GRID 2035 Phase 2 Kick-Off Meeting – April 23, 2020

### Key Takeaways

#### Prevalent Themes:

##### **Transmission Planning Needs to be Flexible and Scalable.**

Conditions are changing rapidly, meaning planning processes must adapt to those changes. Technological changes from the capabilities of inverter-based resources, energy storage, DER adoption, and load growth from electrification present new challenges and the uncertain rate of adoption of these technologies poses investment risk associated with large transmission investments that can take up to ten years to plan and build. A phased approach may help mitigate this risk and manage costs. Scalability should be baked into transmission solutions so future needs can be quickly addressed. A repeatable process that stitches together a variety of studies can help ensure the region is on track every two to three years. While many supported this notion of a phased approach, some stakeholders cautioned that this approach could risk losing the current leadership of the governors, which is needed to address the regional challenges. Others worry that a phased approach may be too narrowly focused on localized issues, and may displace the needed attention and work to successfully address regional challenges.

##### **A Variety of Solutions Will be Needed to Address the Complex Challenges that Lie Ahead.**

Stakeholders urged states and grid planners to consider a variety of solutions to meet current and future needs and opportunities. First, support was expressed for maximizing the value of current infrastructure using dynamic line ratings and improved situational awareness. When new infrastructure is needed, stakeholders support the evaluation of multiple options, including load shifting and other demand-side, non-wires, and transmission solutions at various voltage levels. One stakeholder pointed out that these solutions have different lead times, and to be able to evaluate them side-by-side, these conflicts in planning and implementation timelines must be captured and fed into the relevant planning processes.

##### **We Must Work to Ensure that States at RTOs Edges Get the Full Value of Transmission Investments.**

Participants recognized that states along seams and at the edges of the RTO footprints are at risk of not receiving the full benefits of RTO membership, and specifically transmission investments designed to respond to policy or other drivers from more fully-connected states may fail to address the needs of “edge” states. Stakeholders voiced support for equity considerations in any cost allocations discussions to help address this concern, but this issue warrants further discussion.

##### **Competition for Transmission Investments Can Help Manage Costs but Makes Planning More Challenging.**

There is significant disagreement among stakeholder over the tradeoffs of the Order 1000 competitive requirements for transmission infrastructure. Proponents argued that competition significantly improves cost outcomes for customers. Others argue that these requirements are one of the most significant impediments to a path forward on the region’s transmission needs. The idea was put forward that states may want to explore an agreement between parties to request a waiver for these requirements based on voltage level or some other attribute.

Stakeholder mentioned two reports on this topic, which have been posted to the MGA’s website and available:

- [Brattle Group Study – Cost Savings Offered by Competition in Electric Transmission](#)
- [Building New Transmission -Experience To-Date Does Not Support Expanding Solicitations](#)

#### Persistent/Key Issues

##### **Seams**

Many stakeholders and panelists highlighted the need to continue to work to address seams issues in earnest. For corporate entities looking to sign PPAs to meet their goals, price risk materializes when VPPAs don’t end up being as profitable as expected because the RTOs are not well-connected. States highlighted the persistence of seams issues noting that many states have multiple RTOs and the seams may be a limiting factor in achieving their own goals.

Stakeholders urged the RTOs to work to better align their processes, methodologies, metrics, and assumptions about the future. Stakeholders also noted that Affected Systems Studies are a major bottleneck between the RTOs and must be addressed. Stakeholders are encouraged by the improvements in relationships and working dynamics between the RTOs in the recent past and would like to see continued improvement and collaboration.

### **Siting**

Siting of transmission lines is a major challenge for many states. Existing right of ways (ROWs) will be important for both regional and interregional projects. We can mitigate the challenge by maximizing the use of non-wires solutions and existing ROWs, but still need to recognize the legitimate concerns for property rights and local communities and offer benefits to those impacted. One solution is to pair transmission with other infrastructure, such as broadband internet, to provide additional, local benefits to impacted communities. Continued engagement and support from corporate and residential customer representatives, and their active engagement with local communities, will be critical to achieving success.

### **Attributes**

As existing generators retire, some attributes they have inherently provided (stability) or will need to provide in growing quantities (flexibility) to the grid will need to be provided by other resources and/or solutions. Risk emerges if all states and utilities assume others will provide these services in the absence of market mechanisms to incent innovation and supply. While leaving the door open for new technologies to provide needed services, states and RTOs can collaborate to identify what services are needed, quantify the amount needed, and determine where they are needed. Importantly, long-term visibility is desired as to when each needed service may become scarce to help states and their utilities prioritize the right needs in a timely manner.

### **Optionality**

Stakeholders discussed the importance of optionality, though a clear definition did not emerge. Some consider optionality from a physical network versus radial transmission service perspective, in which the benefit of optionality is improved reliability and reduced congestion. Others consider optionality from a resource planning perspective in which transmission connectivity can enable states and utilities the ability to choose electricity supply resources from a variety of locations to meet their customers' needs. Still others consider optionality from a planning process perspective in which solutions are evaluate from the perspective of their implications for future options in the face of uncertainty. In this case, a solution that provides benefit under a wide variety of potential scenarios would provide more optionality than one that only provides benefit under a narrow set of circumstances. Many stakeholders agreed with the notion that optionality helps mitigate uncertainty and risk and in that way can be an insurance policy against an uncertain future. Questions remain including how "optionality" may be formalized into something states and RTOs can incorporate into transmission planning. As utilities and states are increasingly emphasizing the need to compare a variety of solution options, potential mismatches of generation, distribution and transmission planning timelines may limit the value of optionality.

### **Key Takeaways**

#### **A Strong Sense of Urgency Emerged from Participants.**

Stakeholders called for the development of "need by" dates for specific solutions to help determine if current planning process will be able to deliver the needed results in a timely manner. Corporate customers' timelines for their own goals are generally shorter than utility or state goals (many 100% renewable energy by 2030). The timing of these goals is important to these companies and they are currently unable to procure needed resources in the MISO region due to queue timing and upgrade cost uncertainty. These risks have these companies looking elsewhere to sign deals. Many stakeholders expressed the need for MGA, the states, and the RTOs to move swiftly despite uncertainty around technological changes and their implications for load growth and shape and resource capabilities. The decisions we make now will shape the ability of the region to create jobs and economic development opportunities for many years to come. Moreover, these challenges, including the seams issues, are immensely complex and work to address them should begin as soon as possible.

### **Move Forward on Near-Term Opportunities Now, While Developing a Long-Range Plan.**

Many stakeholders voiced support for an approach that can accommodate and support current initiatives, including the Michigan Capacity Import Limit/Capacity Export Limit study, the North Region Economic Transfer Study, and the MISO North-South Constraint study, while stitching together other studies to develop a long-range transmission plan for the region. A probabilistic, risk-based approach could be used to understand how certain solutions provide value across a wide array of scenarios, thus identifying uncertainties that have the greatest impact on the value of that solution. A “phased” approach could then be applied to reevaluate the region’s needs every two to three years and move forward on solutions, as needed. Moreover, the longer-term view of needs could enable anticipatory steps, such as transmission corridor development, to minimize the lead time of larger solutions when they are needed. Stakeholders recommended a variety of studies and process to be considered, including:

- Attachment Y (generation retirement reliability) studies,
- MISO’s Renewable Integrated Impact Assessment (RIIA),
- CapX2050 Report,
- The RTO’s annual planning process studies,
- Interconnection studies, and
- Studies conducted by the U.S. Department of Energy and National Renewable Energy Laboratory on seams integration.

### **Cost Allocation Will Need to Evolve into a More Flexible Construct to Fit the Region’s Needs**

Stakeholders recognized that the time-consuming process of developing new cost allocation agreements is not in line with the urgent need for transmission planning and investment and urged MGA and the states to move forward with opportunities that can fit into existing cost allocation approaches today. Looking toward the future, stakeholders believe a more flexible cost allocation scheme is needed. It should focus on determining beneficiaries and should not be subjected to rigid project categories, as well as provide flexibility over time to ensure costs are assigned to project beneficiaries.

### **Stakeholders Identified Specific Opportunities for States to Help Move these Issues Forward**

Several specific opportunities were identified for states and the MGA to act on the Vision Statement and support an optimized transmission system for the region. These include:

- Articulating the expected demand for renewable energy in each state and where those resources may come from (as a percentage of peak capacity and/or energy) to mitigate uncertainty and risk,
- Define the role of the regulator in helping determine the “top-down, future-back” perspective to support exploration and development of a long-range transmission plan,
- Identify complimentary opportunities among states (matching supply and demand opportunities),
- Engage corporate customers to better understand their goals, implications for economic development and grid planning, and ensure these are captured in long-range planning efforts,
- Develop standardized siting processes,
- Help align state and RTO planning processes, including pushing the RTOs to better align their processes with those of the other RTOs, and
- Help illuminate what the cost implications could be if no action is taken today.

### **Next Steps**

Stakeholders recommended the following as near-term, follow on actions for the states and MGA:

- Support ongoing sub-regional studies the RTOs are doing that support the long-term regional vision,
- Develop a list of similarities or complimentary objectives the states have to provide RTOs clear direction on planning priorities and objectives,
- Continue to have a goal-oriented dialogue and not get bogged down in technical details, and
- Follow-up with RTOs consistently to ensure they are responding to states’ needs and work with the RTOs to identify those variables that will cause the most harm if we “get them wrong” in planning studies.