Statement of Paul S. Kelly, Director,
Federal Regulatory Policy, Northern Indiana Public Service Company
on behalf of the MISO Transmission Owners.

Review of Generator Interconnection Agreements and Procedures,
Docket Nos. RM16-12-000 and RM15-21-000
May 13, 2016 Technical Conference

I am Paul S. Kelly, Director of Federal Regulatory Policy for Northern Indiana Public Service Company (NIPSCO), and provide these comments on behalf of the MISO Transmission Owners in response to the Federal Energy Regulatory Commission's Notice of Technical Conference. I appreciate this opportunity to address the Commissioners and Commission Staff on the important issue of potential reforms to the *pro forma* generator interconnection procedures (GIP) and generation interconnection agreements (GIA), and in particular, the need for reforms to the GIA and GIP used by the Midcontinent Independent System Operator, Inc. (MISO), and other RTOs.

This statement addresses the general need (or lack thereof) for reforms to the GIAs and GIPs in RTO regions, and what factors the Commission should take into consideration to ensure that any reforms are just, reasonable, and appropriate for the individual RTO regions. As a participant in the panels addressing the following issues: (1) Certainty in Cost Estimates and Construction Time, and (2) Other Interconnection Queue Coordination and Management Issues, my statement responds to these issues.

The MISO Transmission Owners are a group of investor-owned transmission owners, stand-alone transmission companies, cooperatives, and municipals that own transmission facilities over which MISO provides transmission service. MISO is a Commission-recognized RTO that provides transmission services and administers day-ahead and real-time energy markets, and provides services across all or parts of fifteen U.S. states and the Canadian province of Manitoba.

I. General Comments

As an initial matter, the MISO Transmission Owners believe that many of the revisions proposed in the AWEA (American Wind Energy Association) June 19, 2015 Petition for Rulemaking to Revise Generator Interconnection Rules and Procedures[1] are unnecessary, and would improperly shift to the RTO, its transmission owners, and other transmission customers risks and costs that should reasonably be borne by the Interconnection Customer. While certain Interconnection Customers may face delays in the development of their projects, there has been no demonstration that there is a systemic problem with projects being canceled, delayed, or facing higher than reasonable costs because of inadequacies in the RTOs' GIPs. The fact of the matter is that

[1] Petition for Rulemaking of the American Wind Energy Association to Revise Generator Interconnection Rules and Procedures, Docket No. RM15-21-000 (June 19, 2015).

substantial amounts of new generation are being built and coming on-line.[2] Additionally, MISO and the other RTOs, in coordination with their stakeholders, have developed comprehensive GIPs and GIAs that are appropriate for their regions, and that are subject to ongoing review and refinement. Thus, the MISO Transmission Owners respectfully state that the better course would be for the Commission to reject the Petition and not issue a final rule in these proceedings. The Commission should instead allow the individual RTOs to incrementally revise their GIPs and GIAs if and as appropriate for their respective regions.

If the Commission does decide that reforms to the GIAs and GIPs are necessary, there are a number of over-riding principles and key factors the Commission must keep in mind in developing any such reforms. First, the Commission should avoid imposition of a one-size fits-all approach. Each RTO's GIP and GIA has been developed in consultation with its stakeholders and therefore crafted to meet the needs of its particular region. After the Commission's order rejecting MISO's recently proposed GIP reforms, MISO is now reconsidering the appropriate reforms in light of the Commission's guidance, and the Commission should allow the RTOs and their stakeholder groups to continue this work. If the Commission decides that specific reforms are needed in a particular RTO, it can address such issues on a case-by-case basis**.**

Second, the Commission should avoid imposing any reforms that improperly shift costs that are properly placed on the Interconnection Customer onto the RTO, its transmission owners, and other transmission customers. This includes cost caps on studies or interconnection costs, or the imposition of liquidated damages for the late performance of studies or study errors.[3] Such proposals are improper and contrary to established cost causation principles. Any costs above the capped level or associated with liquidated damages would need to be paid by someone, and because most RTOs are not-for-profit pass-through entities, costs allocated to them would be flowed through to the RTO's other customers or transmission owners (and eventually then to their ratepayers). Interconnection Customers are the primary beneficiaries of the network upgrades built to facilitate the interconnection of their generating facilities and of necessary interconnection studies, and they are the parties that are appropriately assigned these costs.

Additionally, many of the changes to the interconnection and study processes proposed by AWEA and its supporters are unlikely to provide Interconnection Customers with more accurate information, or with information that will help them in their decision-making process, and will not necessarily make the interconnection process "better" or any more efficient. For example, the proposed study deadlines and accuracy

---

2 *See* Comments of the MISO Transmission Owners in Response to Petition for Rulemaking Docket No. RM15-21-000, at 6 (Sept. 8, 2015).

3 As noted in the MISO Transmission Owners' Docket No. RM15-21 comments (at 9), the Commission has specifically rejected liquidated damages provisions except in instances when the Interconnection Customer has elected the Alternative Option. MISO Transmission Owners Comments at 9

requirements may increase costs without necessarily improving accuracy, especially if the Transmission Provider is obliged to hire additional staff or specialized (and potentially costly) consultants who have less knowledge of local area transmission systems in order to meet artificially strict deadlines. The use of standardized or per-unit costs and cost estimates is impractical, as costs of a particular interconnection or study can vary depending on site conditions, geography and land use, construction issues and unanticipated factors that arise as local and federal agencies and siting authorities review the project. Moreover, even standardized or per-unit costs can vary from year-to-year, and it would be burdensome to require the RTO or its transmission owners to update the estimates each year. Furthermore, estimates provided early in the process may not be as accurate due to factors or changes beyond the RTO's or transmission owner's control that affect the final costs.

II. Certainty in Cost Estimates and Construction Time

As discussed above, the Commission should not impose artificial study deadlines and accuracy requirements, as this may increase costs without necessarily improving accuracy. Moreover, early cost estimates are of limited value, as costs are subject to change due to factors or circumstances that may not be known at the time the preliminary estimates are provided. Providing Interconnection Customers with potentially inaccurate information could result in making premature and potentially uneconomic decisions about whether to proceed with or terminate a project, or whether to seek modifications to the project's size or scope.

In addition, a number of factors affect the accuracy of cost and schedule estimates. These include uncertain environmental, siting, and other conditions that may affect the costs of substations and other facilities. Also, additional factors include changes to the project or unanticipated factors that arise as local and federal agencies and siting authorities review the project, as well as general constructability, soil, and terrain conditions. Moreover, while cost certainty is highly dependent upon route certainty, routes are subject to change after GIA execution when the transmission owner goes through the state certification and condemnation process.

Moreover, while many cost changes and delays in this study process are due to restudies, the primary reason that restudies are undertaken is because a higher-queued Interconnection Customer has withdrawn from the interconnection queue, and the need for restudies can significantly affect the accuracy of any cost and schedule estimates. Such withdrawals are beyond the control of the RTOs and their transmission owners, and are an inherent business risk Interconnection Customers face.

With respect to how other queued facilities that may affect an Interconnection Customer's request are identified and when Interconnection Customers are made aware of such facilities, the MISO Transmission Owners state that MISO has taken steps to improve its interconnection process and lessen the number of speculative projects from the queue. This may allow for a better and earlier identification of speculative projects, and further reforms may make it easier for an Interconnection Customer to tell at an earlier date whether its project is viable. MISO also uses a study cluster process to identify projects that might affect one another. However, MISO and the other RTOs

undertake their studies based on the information available to them at the time, and RTOs cannot predict when and if a higher-queued project will ultimately decide to withdraw.

III. Other Interconnection Queue Coordination and Management Issues

With respect to coordinating interconnection requests with affected systems, MISO and its transmission owners have the responsibility for confirming the accuracy of information modeled by affected systems for interconnections with each transmission owner's system. RTOs also already have processes in place for coordinating with affected systems. To the extent additional changes are necessary, an RTO should have the discretion to develop the appropriate procedures for their regions, rather than having a specific process imposed on them.

With respect to the types of changes that should be allowed without changing a project's position in the interconnection queue, if a change results in a Material Modification as defined under the applicable tariff, the project should lose its place in the queue as set forth in the tariff. Changes that do not result in a Material Modification should not affect a project's position in the queue, but should not excuse the failure to comply with other tariff requirements, including all applicable deadlines and milestone requirements. The Interconnection Customer should be responsible for any increased costs arising from its changes in accordance with the applicable tariff again, recognizing that the Interconnection Customer is the primary beneficiary of the upgrades required to interconnect its generating unit. The MISO Transmission Owners also supported MISO's proposed reform (FERC Docket No. ER16-675), although rejected by the Commission subject to refiling as part of a better-crafted proposal, to allow a one-time MW reduction in what would have been Definitive Planning Phase (DPP) Phase I to allow some flexibility for Interconnecting Customers in the queue process. Finally, while the MISO Transmission Owners support clarifying what is a Material Modification as the term is vague and what qualifies is left to MISO's discretion, the clarification is better addressed through the MISO stakeholder process than a generic rulemaking.

To manage the effects of project withdrawals from the interconnection queue and possible best practices to keep the queue moving despite project withdrawal, the Commission should encourage and approve RTO efforts to speed up and unclog the generator interconnection queue while maintaining equity between the interests of Interconnection Customers, on the one hand, and transmission owners and their other customer, on the other. This could include measures to minimize unscheduled restudies and the use of appropriate off-ramps, decision points, and readiness requirements, as proposed by MISO in its Docket No. ER16-675 queue reform filing.

The Commission also asks how transmission providers, transmission owners, and interconnection customers coordinate during the interconnection process, and about possible areas for improvement. Ways to improve this process can include better coordination and alignment of the transmission expansion planning process and the generator interconnection process, and modifications to the tariff or applicable business practice manuals to identify how system impact and facilities study processes will ensure compliance with NERC reliability standards. RTOs can provide an Interconnection Customer with access to the various models used to study interconnection requests earlier

in the study process, to allow an Interconnection Customer to perform its own internal analysis for determining whether it is feasible to proceed with a project, potentially reducing the likelihood of later withdrawals of projects. However, the Commission should not impose a generic, one-size fits-all solution, and should recognize that many RTOs are considering reforms through their stakeholder processes that can identify solutions that best-fit their regions.

In addition, the Commission and the RTOs should avoid taking steps in the name of speeding up the interconnection process that harm reliability or study accuracy, or unreasonably shift costs from Interconnection Customers to transmission owners and other customers, or create compliance risks. While lessons can be learned from the methods employed by other RTOs/ISOs to create more efficient processing of generator interconnection queues, RTOs must retain the flexibility to use and adopt measures that are appropriate for their own regions. Differences between regions may include choices of modeling methodologies or can be more philosophical in nature. They can also include variances in the predominate line voltage, consideration for state regulatory processes and state policies, resource mixes and the development of different types of generation, including renewables. Each RTO's geography, transmission system, and social membership is different. The Commission must not force a one size fits all approach.

The Commission asks what technologies, tools, or administrative processes could improve the accuracy of cost and time estimates, reduce the processing time, or increase the efficiency of the interconnection queue process. In the long term, the development of large-scale quantum computing will provide a significant technological advance when performing the necessary interconnection studies. Today, each additional variable consumes finite resources in computational models that are inherently constrained by binary calculation methods. However, the ability for future models to leverage multi-state variables using qubits will allow the models to solve more quickly and optimally. Unfortunately, it is likely that we are at least 15-20 years away from commercially-available systems, and engineers still need time to review the results and provide solutions to the criteria violations, even after such technological advances are implemented.

For more near term considerations, it is important to recognize that the primary delay driver (and also very unpredictable) in MISO's queue is the cascading restudies required by higher queued withdrawals. GIA negotiation is often a significant delay driver. RTOs need to explore ways to break up large group studies such as MISO West DPP system impact studies into smaller clusters so that higher queued project withdrawals will impact fewer lower queued projects. Processes that eliminate speculative projects earlier that would otherwise move higher in the queue priority only to be later withdrawn are preferred. As an example, the MISO Transmission Owners supported MISO's recent proposal to bifurcate the DPP into three separate phases with linked milestone payments (and deposits) that incented higher probability projects to move through the proposed process. Conversely, as noted above, the proposal to use standardized or per-unit costs estimates would be unlikely to increase cost estimate accuracy, and may either increase costs or decrease accuracy, particularly for a RTO like MISO that covers such a wide geographic area.