

**BEFORE THE  
OFFICE OF ELECTRICITY DELIVERY AND ENERGY RELIABILITY  
DEPARTMENT OF ENERGY**

**Preparation of the 2012 Congestion Study )**

**COMMENTS OF THE MICHIGAN PUBLIC SERVICE COMMISSION**

Pursuant to the Notice of Regional Workshops and Request for Written Comments published in the Federal Register on November 11, 2011<sup>1</sup>, the Michigan Public Service Commission (“Mich PSC”) hereby submits its comments.

The Mich PSC appreciates the opportunity to comment on the transmission congestion questions posed by the Department of Energy (“DOE”) to Michigan in connection with the DOE National Electric Transmission Congestion 2012 Study. The Mich PSC, as the regulatory agency responsible for safe, reliable, and affordable electricity service within Michigan, has an interest in the study. While the Mich PSC does not perform its own internal transmission congestion studies, we do, to fulfill our responsibility, review and evaluate detailed studies performed by utilities under our jurisdiction, transmission owners, and regional transmission operators (“RTOs”) on transmission planning, resource planning and congestion issues. The Mich PSC, therefore, strongly recommends that the DOE review the various transmission planning and congestion studies already being done by other entities for our state as it compiles and performs its triennial nationwide study. Entities that perform studies of Michigan’s transmission system are listed at the end of these comments. Below, the Mich PSC addresses the four specific inquiries raised by DOE relating to the preparation of the 2012 Study.

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<sup>1</sup> 76 Fed. Reg. 70122 (Nov. 10, 2011).

**1) Pertinent studies that you think DOE should review as part of its evaluation of transmission congestion in your State or region.**

Many transmission congestion studies involving Michigan are done by utilities under our jurisdiction, transmission owners, and RTOs. The Mich PSC staff actively monitors most, and participates in some, of these studies. Given this, the Mich PSC suggests that the DOE review the various transmission planning studies as input into their 2012 Study. Especially relevant are the Midwest Independent Transmission System Operator's ("MISO") *Top Congested Flowgate Study*, which identifies the most significant congestion points in the MISO system, and MISO's *Loss of Load Expectation Study* ("LOLE").<sup>2</sup> PJM Interconnection, L.L.C. ("PJM") also performs studies that include the portion of southwest Michigan that is within the PJM service territory.

The Mich PSC also recommends that DOE review the *Michigan Wind Energy Resource Zone Board Report* that was completed in 2009<sup>3</sup> and resulting Mich PSC order<sup>4</sup>. Michigan Public Act 295 of 2008 ("PA 295") established the Wind Energy Resource Zone ("WERZ") Board to undertake a forward-looking planning approach for the interconnection of potential wind energy projects in Michigan. This task included assessing the potential for wind energy within Michigan's borders and conducting related studies. Although the Board was appointed by the Mich PSC, the Board exercised its powers and duties, and made its recommendations, independently of the Mich PSC. Mich PSC's response to question #2 provides additional details about this study.

The Mich PSC also recommends that the DOE consider the very useful studies performed by RTOs and other stakeholders as part of the DOE-funded Eastern Interconnection Planning Collaborative ("EIPC") and the Eastern Interconnection States Planning Council ("EISPC").

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<sup>2</sup> November 2011 LOLE Study:

<https://www.midwestiso.org/Library/Repository/Study/LOLE/2012%20LOLE%20Study%20Report.pdf>

<sup>3</sup> [http://www.dleg.state.mi.us/mpsc/renewables/windboard/werzb\\_final\\_report.pdf](http://www.dleg.state.mi.us/mpsc/renewables/windboard/werzb_final_report.pdf)

<sup>4</sup> <http://efile.mpsc.state.mi.us/efile/viewcase.php?casenum=15899&submit.x=0&submit.y=0>

**2) Actions Michigan agencies have taken since the publication of the 2009 study that you think DOE should be aware of as it prepares the 2012 study.**

As noted above, since the completion of the DOE National Electric Transmission Congestion 2009 Study, the WERZ Board established under Michigan's PA 295, completed a 2009 report<sup>5</sup> that identified a list of regions within the state with the highest wind energy harvest potential and conducted related studies.

The report pinpoints four main wind zones, all located in Michigan's Lower Peninsula. PA 295 also directed the Mich PSC, through a final order, to designate the Michigan region likely to be most productive for wind energy as the primary wind energy resource zone and possibly designate additional wind energy resource zones. The Mich PSC was to evaluate projected costs and benefits regarding long-term production capacity and long-term needs for transmission, along with ensuring that the designation of a wind zone did not represent unreasonable harm to public convenience, health, and safety; and that any adverse impacts on private property values would be minimal. PA 295 also instructed the Mich PSC to consider all of the following factors when considering the findings of the WERZ Board before issuing its final order determining the designation of a wind zone:

- (a) Average annual wind velocity levels in the region.
- (b) Availability of land in the region that may be utilized by wind energy conversion systems.
- (c) Existing wind energy conversion systems in the region.
- (d) Potential for megawatt output of combined wind energy conversion systems in the region.
- (e) Other necessary and appropriate factors as to which findings are required by the Mich PSC.

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<sup>5</sup> [http://www.dleg.state.mi.us/mpsc/renewables/windboard/werzb\\_final\\_report.pdf](http://www.dleg.state.mi.us/mpsc/renewables/windboard/werzb_final_report.pdf)

The Mich PSC formally accepted the WERZ Board's Final Report, and through a final order (U-15899 dated 1/27/10)<sup>6</sup> designated Region 4 (*i.e.*, the "Thumb" area of the state) as the primary wind energy resource zone and Region 1 (in Allegan County) as an additional wind energy resource zone. The Mich PSC found that these two regions of Michigan have the greatest potential for wind development and will provide ample wind resources to meet the state's renewable portfolio standard of 10% by 2015. ITC Holdings Corp. ("ITC"), Wolverine Power Supply Cooperative, Inc. ("Wolverine"), and Indiana Michigan Power Company, a subsidiary of American Electric Power Company ("AEP"), all participated in the U-15899 proceeding.

MISO relied on the results of the WERZ Board study as part of their *Regional Generation Outlet Study* ("RGOS") and their more recent assessment of a set of regional transmission projects, called the MultiValue Project Portfolio ("MVP") to facilitate the delivery of renewable energy across the MISO footprint to meet the renewable energy requirements of the MISO states. One MVP project located in the Thumb area is being constructed in the primary renewable wind zone identified by the WERZ Board and designated as a primary wind energy resource zone by the Mich PSC.

**3) Metrics Michigan agencies or others have used in gauging the existence or significance of transmission congestion in your State or region.**

Because the Mich PSC relies on the studies of others, we rely on the metrics the entities use in such studies when gauging the existence of transmission congestion in Michigan and the Eastern Interconnection. Some of the metrics used by MISO, PJM, and other RTOs, include binding hours, production cost savings and availability of financial transmission rights. For information on specific metrics, the Mich PSC recommends that the DOE review the metrics

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<sup>6</sup> MPSC case details: <http://efile.mpsc.state.mi.us/efile/viewcase.php?casenum=15899&submit.x=0&submit.y=0>

RTOs use when performing transmission planning expansion analyses and transmission congestion studies.

**4) Obstacles to the removal or mitigation of significant transmission congestion.**

In general, the time required for planning and building electric resources (both generation and demand response) and transmission infrastructure is the most significant obstacle for removing or mitigating transmission congestion. Where congestion is chronic, the lack of adequate deliverable resources or adequate transmission infrastructure is a significant obstacle to the mitigation of transmission congestion, because energy from available resources cannot economically get to the intended load if deliverable resources or existing transmission lines are overloaded or non-existent. The cost of achieving a robust reliable transmission system that can relieve congestion and deliver lower-cost energy is also a large barrier and in some cases, less economical than resource solutions. Specifically, the allocation of costs in relation to the benefits of transmission upgrades or expansions is a major concern for State Commissions as we try to balance the interests of ratepayers, utilities, and our state's economies. Considering Michigan's economy, we must ensure that energy consumers are not assuming unnecessary risk or paying for more than their share of benefits provided by infrastructure construction that is intended to relieve the congestion.

Michigan has some unique circumstances that create obstacles to the mitigation of transmission congestion. One is our unique geography: two peninsulas with primary land-based transmission interconnections with Ontario and PJM. A consequence of this is that the Upper Peninsula ("UP") receives a small portion of the MISO energy flow from the west, while the majority flows south around Lake Michigan through a significantly congested area in northern Indiana and Illinois. There is also some loop flow around Lake Michigan and considerable loop

flow around Lake Erie that impacts the Lower Peninsula. Within our state, insufficient transmission capacity (and sometimes inadequate generation resources) to accommodate unmitigated loop flows at peak hours can be a major obstacle to mitigating congestion, especially in the UP where a relatively small transmission infrastructure, corresponding to the UP's small load, exists today.

Using a UP example, when energy flows east from Wisconsin into the UP, the infrastructure in the eastern UP is unable to carry necessary energy to loads without causing numerous outages and overloads for UP customers. This combination of unique physical barriers, relatively small and widely dispersed load, as well the lack of a transmission infrastructure that can handle unmitigated loop flow, pose obstacles to effective mitigation and removal of transmission congestion.

Second, Michigan has two interconnected RTOs (MISO and PJM) serving our state. This presents the state with seams-related issues where the two RTOs abut, both within the state and with transfer capability across state lines. Administrative barriers and transmission transfer capability between MISO and PJM that can limit the ability of entities to effectively move energy and other energy products such as capacity efficiently across seams is another obstacle. Renewed work on a joint and common market, more efficient seams administration, and joint RTO planning for more robust transmission could alleviate seams-related congestion issues. The DOE should recognize these potential administrative and market solutions in its congestion study. The preferable solutions to removing or mitigating congestion therefore, are not limited to building transmission infrastructure.

Finally, Michigan has a hybrid system of regulation. Almost all of the transmission assets in Michigan have been divested to separate independent transmission companies regulated

by FERC. Our Mich PSC-jurisdictional utilities are typically integrated generation and distribution companies. In addition, a small portion of our load is on retail choice, which means their load is served with power sold from other resources and delivered by the incumbent utility. The other sources can include independent power producers in Michigan. This means that all possible solutions to deal with transmission congestion: generation, distribution, and transmission expansions and upgrades; energy efficiency; and demand response - are not considered in the same company or the same regulatory forum. Similar obstacles can occur in states that have divested generation or that have significant independent power generation or merchant transmission construction. The impetus toward regional transmission planning without a corresponding regional generation planning process can create obstacles to mitigating congestion and achieving optimal cost-effective solutions.

The Mich PSC thanks DOE for giving us an opportunity to provide comments for the National Electric Transmission Congestion 2012 Study.

The following is a list of entities whose transmission and/or resource planning and congestion studies have been valuable to the Mich PSC in the past and could provide DOE valuable insights.

- Consumers Energy
- Detroit Edison
- International Transmission Company
- American Transmission Company
- Wolverine Power Supply Cooperative
- Midwest ISO
- PJM

Respectfully Submitted,

**THE MICHIGAN PUBLIC SERVICE  
COMMISSION**

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