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08 - 0540

To: Representative Bill Hilty, Chair  
House Energy Finance and Policy Division

Senator Yvonne Prettnner-Solon, Chair  
Senate Energy, Utilities, Technology and Communications Committee

From: Edward Garvey  
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Minnesota Office of Energy Security

RE: Potential For and Barriers to State Jurisdiction Over Interconnecting Dispersed  
Generation Projects

#### **Introduction:**

One of the major barriers facing new wind-energy projects—or any new generation project—is the delay in interconnecting new generation into the electrical transmission grid. The vast majority of new energy projects in Minnesota need interconnection preapproval from the federally-regulated regional transmission organization (RTO) entity called the Midwest Independent Transmission System Operator, Inc. (MISO). At this time, MISO is experiencing a backlog in interconnection requests, much of which is due to a lack of sufficient existing transmission capability to support the explosion of wind-powered electric generation projects proposed in response to State policies, such as Minnesota's new Renewable Electricity Standard enacted in 2007.

MISO recognizes that challenges associated with its interconnection process exist and is actively developing a reform proposal to address those issues. MISO's proposal is currently expected to be filed with the Federal Energy Regulatory Commission (FERC) in or around May 2008 with FERC approval expected in the coming months after a notice and comment administrative proceeding.<sup>i</sup>

The 2007 Minnesota Legislature required the State Reliability Administrator at the Office of Energy Security (OES) to investigate alternatives to the MISO interconnection approval process. Specifically, the "2007 Next Generation Energy Act" requires the Reliability Administrator to:

"Assess the potential for and barriers to interconnecting dispersed generation projects to locations on the electric grid where a generator interconnection would not be subject to the interconnection rules of the Federal Energy Regulatory Commission or the Midwest Independent System Operator."

The barriers to state level interconnection are essentially two-fold: legal/jurisdictional and technical. There seems to be some consensus among interested stakeholders that there is some opportunity, from a legal standpoint, for exercising state jurisdictional authority over interconnection to lower-voltage and possibly middle-voltage transmission lines on the electric grid, where that state jurisdiction does not conflict with federal law, rule or order. However, it is not yet clear how many projects may be able to take advantage of a state-level interconnection process. Moreover, technical interconnection issues to ensure reliability and safe operation of the electric grid may make widespread use of a State-level interconnection process problematic or significantly limit its benefits.

#### **Legal analysis:**

MISO Transmission and Energy Markets Tariff (TEMT). FERC has determined that MISO is responsible to manage all interconnections to the transmission grid for its member transmission owners under processes set forth in the MISO TEMT. In Minnesota, Great River Energy, ITC Midwest, Minnesota Power, Otter Tail Power, Southern Minnesota Municipal Power Agency and Xcel Energy are all transmission owner members of MISO. All generation interconnections to their transmission systems are administered by MISO, not the individual utility.

FERC Mandated Generator Interconnection Procedures. Notwithstanding the number of wind generator interconnection requests in the current queue, MISO has an obligation to follow the interconnection processes under FERC Order No. 2003 (for facilities larger than 20 MW) or FERC Order No. 2006 (for facilities 20 MW or less) to determine the impact on the regional transmission system and the network upgrades to the transmission system are necessary to interconnect the new generation. MISO does study proposed wind generators in groups to expedite their process as provided in these FERC mandated procedures. In addition, if a generator or customer (such as a utility) requests that the new generation be designated as a Network Resource under the TEMT, MISO must conduct separate deliverability studies to determine if additional network upgrades are required for a delivery service request for each new generator.

Distribution or transmission? As a general rule, a facility that is a distribution facility, serving local, end-use, retail customers, is subject to State jurisdiction, through the Minnesota Public Utilities Commission (MPUC). A facility that is a transmission facility, serving wholesale or interstate customers, is subject to federal jurisdiction, through the FERC and MISO.<sup>iii</sup> While the MPUC technically retains jurisdiction over generation interconnections to “local distribution” lines, MISO under its FERC mandate is responsible for determining whether and under what conditions most new electricity generation projects—including wind-energy projects—can connect into the transmission system.

FERC derives its authority from the Federal Power Act, a federal statute. The Act grants FERC jurisdiction to interstate commerce—both as to the transmission of electricity and the wholesale interstate power market. In addition, the U.S. Supreme Court has affirmed that it is FERC, not State commissions, which must make the factual and legal determinations to define FERC jurisdiction, even if those decisions change the scope of State jurisdiction.<sup>iv</sup>

As an initial threshold matter, FERC has stated that its interconnection rules apply when a customer that plans to “transmit electric energy in interstate commerce” requests interconnection to a facility that is subject to an Open Access Transmission Tariff (OATT) at the time the request is made.<sup>v</sup> Otherwise, FERC has no jurisdiction over “local distribution” facilities.<sup>vi</sup>

Unfortunately, FERC has not provided clear guidance on whether there is a threshold nominal voltage level or other test that clearly defines the line between FERC-jurisdictional “transmission” and State-jurisdictional “distribution.” Under FERC’s seven factor test, a number of other criteria come into play in a very fact-specific analysis, including:

- The voltage of the line involved.
- The nature of the sale of the energy from the proposed generation project.
- The relationship of power flows from the proposed project and the size of local loads.

*Voltage.* In Minnesota, facilities are presumptively defined as distribution facilities at voltages below 50 kV, and are presumptively defined as transmission facilities at voltages above that threshold. The presumption may be rebutted by technical engineering studies to determine the actual function of such facilities.<sup>vii</sup>

Absent a generator request for Network Resource status under the TEMT or other factors giving rise to MISO jurisdiction, generation facilities seeking to interconnect to lines below 50 kV may not be subject to MISO interconnection guidelines, but may interconnect with the local distribution under distributed interconnection policies and procedures adopted by the MPUC. The utility facility owner would coordinate their interconnection with MISO.

Although the MPUC has determined facilities above 50 kV to be presumptively transmission, MISO has only required its transmission owner member utilities to transfer operational control of facilities above 100 kV. This means that if a Minnesota generation facility seeks to interconnect in Minnesota to lines above 100 kV, that generation project must enter the MISO interconnection process.

Thus, there is some ambiguity as to the jurisdiction authority over generation interconnection with transmission facilities between 50kV and 100 kV. Courts have not determined with particularity where State jurisdiction over generation interconnection ends and federal jurisdiction begins. A key to the jurisdictional analysis seems to be the nature of the transaction for the sale of the power from the dispersed generation project.

*Nature of the sale of energy.* In Order No. 2003, FERC asserted jurisdiction over interconnection customers who intend to “transmit electric energy in interstate commerce” and over interconnections where the customer plans to interconnect to a facility of any voltage that is subject to an existing “Open Access Transmission Tariff” (OATT), and engage in a sale for resale in interstate commerce.<sup>viii</sup>

Some argue that, under FERC Order 2003 and related Orders, FERC indicated it has jurisdiction when:

- (1) there is a previous interconnection;
- (2) there is a previous wholesale transaction subject to an OATT, and
- (3) the new proposed interconnection is “for the purpose of making sales for resale in interstate commerce.”

In other words, these commentators argue that, if the new proposed interconnection is not for making sales for resale in interstate commerce, but rather, is for making sales at retail, FERC/MISO interconnection may not apply. Under this analysis, these facilities may be subject to State-level interconnection rules.<sup>ix</sup>

However, more recent FERC orders in the “PJM cases” seem to indicate that only the first two steps are necessary to invoke FERC/MISO jurisdiction.<sup>x</sup>

*Power flows and local loads.* Currently in Minnesota, jurisdiction also depends on whether the power flows from the proposed generation would “impact” the high-voltage transmission system, e.g., flow out of the local system and onto the high-voltage transmission network. Even those interconnections that might otherwise fall under State jurisdiction must still determine whether they may “impact” the MISO-administered transmission network. In this case, an operating agreement with MISO may still be required due to MISO’s transmission congestion management and regional generator dispatching responsibilities under the TEMT.

The MPUC has defined a standard “minimum load/maximum capacity” definition of potential impact on MISO transmission to be employed in the absence of actual power flow data or modeling. In its recent Distribution Interconnection Orders, the MPUC stated in relevant part that:

“if the Generation System will be selling energy on the wholesale market or the Generation System’s total Nameplate Capacity is greater than the expected distribution system minimum load, then the Applicant shall contact MISO (Midwest Independent System Operator) and follow their procedures.”<sup>xi</sup>

Thus, if the proposed generation system capacity is greater than the distribution system’s minimum load, the interconnection of that proposed generation facility is subject to FERC/MISO interconnection procedures.

The white paper provided by Matrix Energy Solutions proposes an alternative test of when a generation interconnection may impact MISO. Matrix Energy Solutions suggests evaluating the extent that power flows from a distribution system within the existing FERC approved transmission service reservation for the local load serving entity would be the more appropriate test for the MPUC to apply, rather than the size of the distribution system's minimum load.<sup>xii</sup>

Matrix Energy Solutions also makes the argument that FERC itself has implied that its interconnection jurisdiction does not apply where the energy "neither crosses State lines nor enters the interstate transmission system."<sup>xiii</sup> Thus, the argument is that "if a generator is small enough that it never reduces power flow into the distribution system to zero, it cannot be said to have power enter the interstate power system."<sup>xiv</sup> However technical studies and load flow models are necessary on a case-by-case basis to make this determination.

Other stakeholders disagree that this is the proper test to apply. In order to implement this change, the State Legislature or, perhaps more appropriately, the MPUC would need to reconsider the issue with the input of technical and regulatory experts.

*Coordination with MISO.* As noted above, the issue of when a new State-jurisdiction interconnection request may "impact" the MISO-administered transmission system is the subject of some debate. However, as a practical matter, MISO also has broad reliability and congestion management responsibilities that are relevant to the legal jurisdictional issues. Regardless of jurisdiction, the interconnection of new generation must be fully analyzed and understood in order to maintain system reliability and safety. Thus, while it may be possible for various lower-voltage interconnections to avoid the MISO queue, MISO's broad planning, reliability and congestion management responsibilities require MISO to analyze or oversee nearly all interconnection approvals at some level.

For those generation projects that are not required to enter the MISO queue for interconnection, the local utility operating the facility that the generation project is to interconnect with is required to coordinate interconnection with MISO, and, potentially, participate in technical engineering studies to determine power flows and system impacts, and enter into a facility agreement with the interconnection customer to ensure the customer will pay for any necessary upgrades to the transmission system required to mitigate system impacts. These are generally small generators having only a local impact and a small distributed generation benefit to the State.

While entering the MISO queue may not be required in these circumstances, determining more specifically what "coordination" is required with MISO is an important issue. If coordination with MISO for State-jurisdictional interconnections proves to involve similar requirements to that currently experienced by projects in the MISO interconnection queue, the benefits of a State-level interconnection process would be vastly reduced or eliminated.<sup>xv</sup>

The development of a State-level review process for State-jurisdictional interconnections will require close MISO cooperation and participation. Since MISO is a federal, rather than state, regulated entity and because it is unknown whether MISO has the resources or interest to

participate in the development of such a standardized state-specific review process as an alternative to their own interconnection processes, assumptions should not be made that MISO could or would devote the necessary resources for such an endeavor or how FERC may view this in light of their federal generator interconnection policies and mandates under the Federal Power Act.

Finally, it must be noted that the scope or magnitude of the opportunity for State-level interconnection—how many projects could actually benefit from State-level interconnection—is not currently known.<sup>xvi</sup> Any process or program established for State-level interconnection should be commensurate with identified opportunities and analysis of the economies of scale required for wind and other renewable generation in order to meet Minnesota's renewable energy standards.

Given the foregoing discussion, the Minnesota Office of the Reliability Administrator recommends the following:

- **Minnesota, through decision by the Minnesota Public Utilities Commission (MPUC) or by legislative action, could further consider the benefits and impacts associated with State exercise of jurisdiction over intra-state generator interconnection to lower-voltage transmission lines where State jurisdiction will not conflict with federal law, rule or order, and is necessary to facilitate the cost-effective, timely, reliable and safe interconnection of dispersed renewable generation in Minnesota.**
- **Any such exercise of jurisdiction should be closely coordinated with MISO, to the extent that MISO can and will devote resources to such coordination, and accord with procedures identified in recommendation #3 below.**
- **The Minnesota Reliability Administrator will convene and facilitate technical working groups in the summer and fall of 2008 to identify, develop and implement appropriate procedures to ensure coordination between MISO and Minnesota electric utilities on state-level interconnections.**

Lastly, the Office of the Reliability Administrator cautions that MISO and the Office of the Reliability Administrator agree that streamlining MISO's interconnection process will not, in itself, be sufficient to solve the existing interconnection congestion and issues currently experienced. New transmission facilities must be built in order to permanently alleviate the interconnection issues. Streamlining the interconnection process without constructing additional transmission infrastructure will only lead to a faster "no" for interconnection requests no matter what interconnection method or other tools are used.

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Endnotes:

- <sup>i</sup> The current MISO interconnection "first come, first served" MISO interconnection process is mandated by FERC Order No. 2003. MISO is expected to propose a "first complete, first served" process.
- <sup>ii</sup> The 2007 legislation requires the reliability administrator to draft this report "in consultation with interested stakeholders." In October, 2007 the OES staff requested input from utilities, non-governmental organizations, and other interested stakeholders regarding potential changes to State oversight of generation interconnection processes. Although a number of parties responded, three responses in particular stand out as exceptionally helpful, and are included as: Appendix A – Matrix Energy Solutions whitepaper; Appendix B – Leonard Street & Deinard legal memorandum in response to Matrix whitepaper; and Appendix C – Rick Gonzalez's technical comments on State level interconnections.
- <sup>iii</sup> MISO and other regional transmission organizations (RTOs) were created to foster wholesale electricity markets. In the mid-1990's, the FERC also issued a series of landmark "open access" orders (Order No. 888 and its progeny) to encourage development of a competitive wholesale electricity market in the U.S. In these orders, FERC required electric utilities to allow fair, non-discriminatory use of their high-voltage transmission facilities. (FERC 1996). Then, in 1999, FERC encouraged the development of RTOs that would take over operational control (not ownership) of the high-voltage transmission system from utilities under their jurisdiction. (FERC 1999). The purpose of these new regional organizations was, in part, to further reduce barriers to the use of the utility-owned transmission system by non-utility owned electricity generation projects by creating regional administration of the open access tariffs mandated by Order No. 888. In Minnesota, the FERC-approved regional transmission organization is the Midwest Independent Transmission System Operator, Inc. (MISO). All access to the transmission systems of Minnesota utilities that are MISO members -- including the utilities' own uses to serve their retail customers -- is now administered by MISO.
- <sup>iv</sup> See Leonard, Street Memo, page 3, citing *FPC v. S. Cal. Edison Co.* 376 U.S. 205, 210 (1964).
- <sup>v</sup> FERC Order 2003, paragraph 84.
- <sup>vi</sup> FERC Order 2003, paragraph 803.
- <sup>vii</sup> In June, 2002, the Minnesota Public Utilities Commission (MPUC) determined:
- that lines with voltages below 50kV are likely providing a distribution function, unless studies support they are providing a transmission function, and lines with voltages with voltages above 50kV are likely providing a transmission functions, unless studies support they are providing a distribution function. (MPUC Docket No. E999/CI-99-1261)
- <sup>viii</sup> An OATT is the tariff that lays out the terms and conditions for use and operation of a FERC-jurisdictional utility's transmission facilities.
- <sup>ix</sup> Matrix White Paper, p. 6.
- <sup>x</sup> See Leonard, Street Memo p. 5, citing *PJM Interconnection, LLC*, 114 FERC 61,191 at P.14.
- <sup>xi</sup> Phase II Report of the Technical Standards Workgroup Regarding Distributed Generation, Docket No. E999/CI-01-1023, Attachment 1, page 1.
- <sup>xii</sup> Matrix White Paper, p. 12.

<sup>xiii</sup> FERC Order 2003, paragraph 808.

<sup>xiv</sup> Matrix White Paper, p. 13.

<sup>xv</sup> For an excellent analysis of these issues, see comments of Rick Gonzalez, provided as Appendix C.

<sup>xvi</sup> In the 2007 session, the legislature ordered a study of the transmission impacts of 1200 MW of dispersed renewable generation capacity spread throughout the State. That study is nearing completion and could potentially provide some insight as to the magnitude of opportunities for State interconnection into lower-voltage substations in the State. Phase I of that study, analyzing the impacts of 600 MW of dispersed renewable generation, is due in June of this year. The second phase, analyzing the impacts of an additional 600 MW of dispersed generation, will be due in September of 2009.



**A WHITE PAPER**  
**ON**  
**UNTANGLING FERC & STATE JURISDICTION**  
**INTERCONNECTION ISSUES**  
**AND**  
**OPPORTUNITIES FOR DISPERSED GENERATION**

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## INTRODUCTION

Opportunities for interconnection of non-utility owned generators to the power system grid have evolved dramatically over the last decade. Both the State of Minnesota and the Federal Energy Regulatory Commission (FERC) have implemented standardized interconnection policies governing these non utility generators within this time frame.

In the last legislative session, the Minnesota legislature required an investigative report by the State's Reliability Administrator regarding "the potential for and barriers to interconnecting dispersed generation projects to locations on the electric grid where a generator interconnection would not be subject to the interconnection rules of the Federal Energy Regulatory Commission or the Midwest Independent System Operator (MISO)."<sup>1</sup> This requirement, along with the new Renewable Energy Standards, has focused attention on the legal jurisdictional issues raised by distribution interconnections, the whole collection of interconnection regulations both state and federal, and what opportunities the state may have to support the interconnection of dispersed generators.

This paper will identify what structures are in place regarding interconnections, where the jurisdiction lines have been drawn, and what opportunities exist for state assertion of additional authority over generator interconnections.

## INTERCONNECTION POLICY HISTORY

In 1978 congress passed the Public Utilities Regulatory and Policy Act (PURPA).<sup>2</sup> This law for the first time required utilities to open up their grid system to certain non-utility generators, in particular small renewable and cogeneration facilities. Minnesota responded to this law by enacting legislation Minn. Stat. § 216B.164, and Minn. Rules Chapter 7835. There are numerous case histories showing that states have the rights to go beyond what was required by the federal laws regarding the rates that are paid under these laws. Minnesota Law sets up a statewide uniform contract for these interconnections and establishes average retail utility energy buy back rates for qualifying facilities under 40 kW capacity.

In the EPACT 1992 congress passed legislation that further opened up access to the grid for non utility owned generators. FERC responded to this law by establishing rules, for managing the access to the grid and the wholesale power transactions on the interstate power system.<sup>3</sup> FERC acted again a few years later to establish uniform rules for the interconnection of new generators.<sup>4</sup> The issue of where FERC's authority extended to bind various utilities to these rules was a major discussion point in those proceedings.

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<sup>1</sup> See Minnesota Session Laws Chapter 136, Article 4, Sec. 21.

<sup>2</sup> See Public Law 95-617, Statutes at Large, volume 92, page 3117, and the Federal Energy Regulatory Commission regulations, Code of Federal Regulations, title 18, part 292.

<sup>3</sup> See FERC Orders 888 and 889 issued April 24, 1996.

<sup>4</sup> See FERC Order 2003 for Large Generators issued July 24, 2003, and Order 2006 for Small Generators issued May 12, 2005.

In 2001, the Minnesota legislature enacted Minn. Stat. § 216B.1611 to establish the terms and conditions that govern the interconnection and parallel operation of on-site distributed generation. That law required Minnesota utilities to create tariffs modeled after a generic tariff developed by the Minnesota Public Utility Commission, that include a standard interconnection agreement that sets forth the contractual conditions under which a company and a customer agree that one or more facilities may be interconnected with the company's utility system, and a standard application for interconnection and parallel operation with the utility system.

### **FERC's Description of the Limits of its Authority over Interconnections**

FERC derives its authority from the Federal Power Act. That Act only gives FERC jurisdiction over interstate commerce; this is usually interpreted as the wholesale (interstate) power market. FERC recognized that the interconnection of new generators to the large power grid could interfere with power flows associated with existing wholesale power transactions and so began Rulemaking proceedings. Its landmark Orders 2003 for large generators and Order 2006 for generators of 20 MW or less were the primary results from those efforts.<sup>5</sup> FERC declared its intent to establish guidelines for interconnections to ensure the fair, competitive and reliable operation of the wholesale power market.

#### *Order 2003*

In Order 2003 FERC stated:

“The Commission has identified interconnection as an element of transmission service that is required to be provided under the OATT.<sup>6</sup> Thus, the Commission may order generic interconnection terms and procedures pursuant to its authority to remedy undue discrimination and preferences under Sections 205 and 206 of the Federal Power Act.”<sup>7</sup>

FERC further described its intent as follows:

“The Commission concludes that there is a pressing need for a single set of procedures for jurisdictional Transmission Providers and a single, uniformly applicable interconnection agreement for Large Generators. A standard set of procedures as part of the OATT for all jurisdictional transmission facilities will minimize opportunities for undue discrimination and expedite the development of new generation, while protecting reliability and ensuring that rates are just and reasonable.”<sup>8</sup> (Emphasis added)

Jurisdictional Transmission Providers are FERC regulated entities charged with implementing the Open Access to transmission provisions previously ordered by FERC. Jurisdictional

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<sup>5</sup> FERC also issued supplemental Orders 2003A, 2003B, 2003C, and 2006A and 2006B.

<sup>6</sup> An OATT is an Open Access Transmission Tariff, per FERC Order 888.

<sup>7</sup> FERC Order 2003, para 20.

<sup>8</sup> FERC Order 2003, para. 11.

transmission facilities are those elements of the transmission system carrying wholesale power transactions. FERC indicated the applicability of the interconnection rules as follows.

“This Final Rule applies to interconnections to the facilities of a public utility's Transmission System that, at the time the interconnection is requested, may be used either to transmit electric energy in interstate commerce or to sell electric energy at wholesale in interstate commerce pursuant to a Commission-filed OATT.<sup>128</sup> In other words, the standard interconnection procedures and contract terms adopted in this Final Rule apply when an Interconnection Customer that plans to engage in a sale for resale in interstate commerce or to transmit electric energy in interstate commerce requests interconnection to facilities owned, controlled, or operated by the Transmission Provider or the Transmission Owner, or both, that are used to provide transmission service under an OATT that is on file at the Commission at the time the Interconnection Request is made. Therefore, the Final Rule applies to a request to interconnect to a public utility's facilities used for transmission in interstate commerce. It also applies to a request to interconnect to a public utility's "distribution" facilities used to transmit electric energy in interstate commerce on behalf of a wholesale purchaser pursuant to a Commission-filed OATT. But where the "distribution" facilities have a dual use, i.e., the facilities are used for both wholesale sales and retail sales, the Final Rule applies to interconnections to these facilities only for the purpose of making sales of electric energy for resale in interstate commerce.”<sup>9</sup>

The FERC in Order 2003 also reached a discussion of the interaction of the new Interconnection Rules with the previously established interconnection procedures for QFs under PURPA Laws:

“The Commission's Regulations govern a QF's interconnection with most electric utilities in the United States, including normally nonjurisdictional utilities. When an electric utility is obligated to interconnect under Section 292.303 of the Commission's Regulations, that is, when it purchases the QF's total output, the relevant state authority exercises authority over the interconnection and the allocation of interconnection costs. But when an electric utility interconnecting with a QF does not purchase all of the QF's output and instead transmits the QF power in interstate commerce, the Commission exercises jurisdiction over the rates, terms, and conditions affecting or related to such service, such as interconnections.”<sup>10</sup>

The FERC clearly stated that interconnections of QF facilities where all the power is sold to the local utility remain state jurisdictional interconnections. However, if any portion of the QF output is sold in the wholesale market to another entity, the FERC would assert jurisdiction over that transaction for that portion of the QF output. Note there are no caveats regarding size or location of the QF imbedded in this paragraph.<sup>11</sup>

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<sup>9</sup> FERC Order 2003, para 804.

<sup>10</sup> FERC Order 2003, para 813.

<sup>11</sup> FERC also affirmed this interpretation in Order 2006A, para 102.

In response to other issues raised by parties the FERC made statements in Order 2003 about the limits of the application of its Rule:

“In response to SoCal Edison and PG&E, we clarify that we are not asserting jurisdiction over a hook-up between a retail customer and a Transmission Provider when a retail customer installs a generator that will produce electric energy to be consumed only on site.”<sup>12</sup>

And also:

“Regarding EEI’s comment about the Commission’s authority over an interconnection for the purpose of making sales of electric energy for resale using “distribution” facilities when the energy neither crosses state lines nor enters the interstate transmission system, this question is moot because the Commission is not here extending its jurisdiction to any facility that is not already under its jurisdiction, pursuant to a Commission-filed OATT at the time the interconnection request is made.”<sup>13</sup>

These comments are relevant to state authority issues. The Commission did not extend its interconnection authority to behind the meter interconnections or to other intrastate transactions that did not impact the interstate transmission system.

The interaction between the FERC interconnection rules and the distribution system became a subject of much comment and clarification throughout the rulemaking proceedings. In Order 2003, the FERC declared:

“At the outset, it is important to clarify several terms when discussing the question of jurisdiction. “Local distribution” is a legal term; under FPA Section 201(b)(1), the Commission lacks jurisdiction over local distribution facilities. “Distribution” is an unfortunately vague term, but it is usually used to refer to lower-voltage lines that are not networked and that carry power in one direction. Some lower-voltage facilities are “local distribution” facilities not under our jurisdiction, but some are used for jurisdictional service such as carrying power to a wholesale power customer for resale and are included in a public utility’s OATT (although in some instances, there is a separate OATT rate for using them, sometimes called a Wholesale Distribution Rate).”<sup>14</sup>

The FERC indicated that local distribution facilities are legally defined in the FPA, and that FERC did not have authority over these facilities. The FERC however muddled the waters by pointing out that these local distribution facilities are sometimes used for jurisdictional service transactions in interstate commerce. FERC further muddled the discussion of the reach of its Rule in another comment:

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<sup>12</sup> FERC Order 2003, para 805.

<sup>13</sup> FERC Order 2003, para 808.

<sup>14</sup> FERC Order 2003, para 803.

“Regarding the arguments that the NOPR LGIP and NOPR LGIA<sup>15</sup> are designed for interconnection to a transmission system and not a "distribution" system, we expect that the majority of interconnections to jurisdictional "distribution" or other jurisdictional low voltage facilities will be made by generators no larger than 20 MW. These Small Generators will be interconnected using the standard procedures and agreement adopted in the Small Generator rulemaking. We are proposing rules in that proceeding to accommodate the interconnection of Small Generators, mostly to jurisdictional "distribution" (not "local distribution") and low-voltage facilities. However, in response to WEPCO's argument, we conclude that under some circumstances (e.g., interconnection to facilities below 69 kV) the Interconnection Studies in the Final Rule LGIP may be inappropriate to analyze some Large Generator Interconnection Requests. In such a case, we will allow the Transmission Provider to use modified Interconnection Studies, subject to Commission approval. The Commission expects that interconnection requests of this kind will be rare and, as a result, we do not at this time incorporate a standard study specifically designed for interconnections to low-voltage or "distribution" facilities into the Final Rule LGIP. Accordingly, a Transmission Provider may use the studies it deems appropriate to properly study the Interconnection Request, subject to Commission approval. The Commission therefore requires that a Transmission Provider, upon receipt of a request for jurisdictional interconnection to a jurisdictional "distribution" or low voltage facility, file with the Commission an amendment to the LGIP in its OATT that describes the Interconnection Studies applicable to such requests.”<sup>16</sup>

Although this paragraph is targeted a discussion of a relatively rare situation that might occur if a large generator would try to interconnect to a lower voltage facility, under 69 kV here, the discussion by FERC generates terms such as “jurisdictional distribution” as opposed to “local distribution,” and also the term “other jurisdictional lower voltage facilities.” The FERC clearly sees that they have some jurisdiction over interconnections on some facilities that are not clearly “transmission” facilities. FERC also declared that the Small Generator Interconnection Rules would more likely address interconnections to these types of facilities since FERC expected most of the interconnections to those types of facilities would be made by projects 20 MW or less.

After FERC issued Order 2003, the courts rendered opinions about FERC's jurisdictional reach. FERC subsequently clarified its perceived authority in its supplemental rules.<sup>17</sup>

#### *Order 2003C*

Supplemental Order 2003C incorporated the courts decisions, and FERC made the following statement about its jurisdiction:

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<sup>15</sup> NOPR means Notice of Proposed Rulemaking, LGIP means Large Generator Interconnection Procedures, LGIA means Large Generator Interconnection Agreement.

<sup>16</sup> FERC Order 2003, para 806.

<sup>17</sup> See *Detroit Edison Co. v. FERC*, 334 F.3d 48, 51 (D.C. Cir. 2003); accord *Transmission Access Policy Study Group v. FERC*, 225 F.3d 667, 696 (D.C. Cir. 2000) (TAPS).

“When a "local distribution" facility is used to transmit energy sold at wholesale as well as energy sold at retail, we previously have called this a "dual use" facility because it is used both for sales subject to Commission jurisdiction and for sales subject to state jurisdiction. Under Order No. 2003, if such a facility is subject to wholesale open access under an OATT at the time the Interconnection Request is made, and the interconnection will connect a generator to a facility that would be used to facilitate a wholesale sale, Order No. 2003 applies and the interconnection must be subject to Commission-approved terms and conditions. Because the Commission's authority to regulate in this circumstance is limited to the wholesale transaction, we conclude that we do not have the authority to directly regulate the facility that is used to transmit the energy being sold at wholesale. In other words, while the Commission may regulate the entire transmission component (rates, terms and conditions) of the wholesale transaction – whether the facilities used to transmit are labeled "transmission" or "local distribution" – it may not regulate the "local distribution" facility itself, which remains state jurisdictional. We believe this properly respects the boundaries drawn in the FPA.”<sup>18</sup>

Here the FERC asserted authority over even local distribution facilities but for only the limited purpose of regulating the entire transmission component (rates, terms and conditions) of the wholesale transaction. It distinguished that it cannot regulate the distribution facility itself, which remains under state jurisdiction, but it could regulate a wholesale power transaction occurring on such a facility.

Another important distinction brought out here by FERC is that regarding interconnections to such facilities, if such a facility is subject to wholesale open access under an OATT at the time the Interconnection Request is made, **and** the interconnection will connect a generator to a facility that would be used to facilitate a wholesale sale, Order No. 2003 applies and the interconnection must be subject to Commission-approved terms and conditions.

There is a two part criteria here wherein both circumstances must exist before the FERC would assert jurisdiction over a pending interconnection. First, as FERC previously indicated in Order 2003, the local distribution system must somehow already have been made subject to wholesale open access provisions, presumably from a prior existing wholesale power transaction. Second, the pending interconnecting generator must intend to participate in a wholesale power transaction. The premise here was perhaps that a second interconnection had the potential to interfere with the prior existing transaction power flows. This paragraph leaves unaddressed what happens if the pending generator interconnection does not intend to participate in a wholesale power transaction.

The term "dual use" facility used by FERC is important. It points out that there are facilities that can be used both for sales subject to FERC jurisdiction and for sales subject to state jurisdiction.

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<sup>18</sup> Order 2003C, para 53.

## *Order 2006*

In May of 2005 the FERC issued Order 2006 covering Small Generator interconnections, affecting generating facilities that would be 20 MW or less. The FERC again discussed the applicability of its Rule regarding certain facilities:

““Distribution” is a vague term, usually used to refer to non-networked, often lower voltage facilities, that carry power in one direction. Commission-jurisdictional facilities with these characteristics are referred to as “Distribution Systems subject to an OATT” throughout this Final Rule. This Final Rule’s use of the term “Distribution System” has nothing to do with whether the facility is under this Commission’s jurisdiction; some “distribution” facilities are under our jurisdiction and others are “local distribution facilities” subject to state jurisdiction. This Final Rule does not violate the FPA section 201(b)(1) provision that the Commission does not have jurisdiction over local distribution facilities “except as specifically provided. . .” This is because the Final Rule applies only to interconnections to facilities that are already subject to a jurisdictional OATT at the time the interconnection request is made and that will be used for purposes of jurisdictional wholesale sales. Because of the limited applicability of this Final Rule, and because the majority of small generators interconnect with facilities that are not subject to an OATT, this Final Rule will not apply to most small generator interconnections. Nonetheless, our hope is that states may find this rule helpful in formulating their own interconnection rules.”<sup>19</sup>

FERC reemphasized the distinctions of jurisdiction elucidated in Order 2003C, but also stated that they thought this rule would have limited applicability “because the majority of small generators interconnect with facilities that are not subject to an OATT.” This brings up the question about exactly which facilities are subject to an OATT.

In this Small Generator Interconnection proceeding the FERC also addressed the following comment made by MISO:

“In response to Midwest ISO’s desire to process all interconnections (whether to Commission-jurisdictional or non-Commission-jurisdictional facilities) under its tariff, we note that the Commission does not have the authority to order states to use Midwest ISO’s tariff to process interconnections with state or other non-jurisdictional facilities. However, we encourage the states and others to use the Commission’s interconnection rule or the NARUC Model as a starting point for developing their own interconnection rules.”<sup>20</sup>

FERC clearly did not endorse sending all generating interconnection requests to MISO. It recognized the authority of states over interconnections to non jurisdictional facilities. It went even further by encouraging states to assert their jurisdiction over interconnections by creating their own rules and offered the NARUC Model to states as an appropriate starting point.

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<sup>19</sup> Order 2006, para 8.

<sup>20</sup> Order 2006, para 490.



## *Order 2006A*

Order 2006A was issued in November 2005, provided additional clarification on the FERC position on jurisdictional issues. In response to comments on Order 2006, FERC discusses a comment received on jurisdiction over interconnections:

“Con Edison asserts that Order No. 2006 impermissibly bases jurisdiction on the “intent” of a generator, rather than its actions. Because jurisdiction can change based on the use of a facility or the generator’s intent, the Parties would not know whether Order No. 2006 applies until after the fact. Con Edison poses a hypothetical case where a generator intending to sell at wholesale interconnects with a previously state jurisdictional line under state rules. A second generator interconnecting with the same line, but not seeking to sell power at wholesale, would be obliged to interconnect under the Commission’s rules. Thus, Con Edison contends, the generator seeking to sell at wholesale interconnects under state law, while the generator seeking to sell at retail would be forced to interconnect under federal law. Similarly, if the first generator decides not to sell at wholesale, the second generator would have to interconnect under state rules, even if it intends to sell at wholesale.”<sup>21</sup>

This comment posed a hypothetical situation that addresses precisely the issues left unanswered in Order 2003C, regarding the interactions between state and FERC jurisdiction. FERC responded to this comment as follows:

“Con Edison is correct that an Interconnection Customer interconnecting its generator with an electric facility used exclusively to make retail sales, but not currently available for transmission service under an OATT, will do so under state interconnection rules. It does not matter whether the Interconnection Customer intends to sell power at wholesale or retail. However, Con Edison appears to misunderstand what would happen if the Interconnection Customer seeks to interconnect with a facility carrying both energy sold at wholesale and energy sold at retail and plans to sell power only at retail. In that case, because there is no wholesale sale involved, the interconnection would be subject to the state’s rules.”<sup>22</sup>

This statement by FERC distinguishes that even though a line may already carry FERC jurisdictional transactions, an interconnection to that line could and should be done under state rules if the generator intends to sell power at retail (i.e. to the local utility under state tariffs).

### **FERC Separation of Interconnection from Energy Delivery Issues**

One principal test that is often put forward as evidence of transmission impacts is whether power sometimes flows out into the transmission system from the distribution side and therefore “impacts” wholesale power transactions.

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<sup>21</sup> Order 2006A, para 90.

<sup>22</sup> Order 2006A, para 99.

FERC distinguished in its rules that an interconnection approval did not grant the right to move the power from the point of interconnection to a customer located somewhere "out there" on the grid.

"The Commission has also clarified that an Interconnection Customer need not enter into an agreement for the delivery component of transmission service to interconnect with a Transmission Providers' Transmission System. At the same time, Interconnection Service or an interconnection by itself does not confer any delivery rights from the Generating facility to any points of delivery."<sup>23</sup>

A separate transmission service request procedure, with its own queue was set up in Order 888 to manage requests to move power across the transmission system. An interconnection request can be made without declaring any intended destination for the power to be generated.

### **State of Minnesota Existing Assertion of Authority over Interconnections**

The state in 2001 created under Minn. Stat. § 216B.1611, a statewide distributed generation interconnection policy for generators in sizes up to 10 MW. The 10 MW limit is a limit the state imposed on itself in statute. The law requires regulated utilities, municipal utilities, and cooperative utilities to develop distributed generation tariffs to provide for the low-cost, safe, and standardized interconnection of these facilities.

The language of the law does not spell out that the required tariff's shall apply to any certain portion of the utility system, such as distribution facilities or transmission facilities, but rather focuses on establish the terms and conditions that govern the interconnection and parallel operation of "on-site distributed generation."

Earlier, in 1981, the state established requirements that apply to all Minnesota electric utilities, including cooperative electric associations and municipal electric utilities to interconnect "qualifying facilities" (QF). This law was created in response to the federal PURPA Laws. The Minnesota Public Utilities Commission established rules, Chapter 7835, to implement the state law.<sup>24</sup> The rules cover rate for energy delivered issues and also contain some requirements regarding interconnections.

### **7835.2900 INTERCONNECTION PLAN.**

The utility may require the qualifying facility to submit an interconnection plan not more than 30 days prior to interconnection in order to facilitate interconnection arrangements. If such a plan is required, it must include no more than:

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<sup>23</sup> Order 2003, para 23.

<sup>24</sup> Minn. Rules Chapter 7835 defines "Qualifying facility" as a cogeneration or small power production facility which satisfies the conditions established in Code of Federal Regulations, title 18, section 292.101 (b) (1), (1981), as applied when interpreted in accordance with the amendments to Code of Federal Regulations, title 18, sections 292.201 to 292.207 adopted through Federal Register, volume 46, pages 33025-33027, (1981).

- A. technical specifications of equipment;
- B. proposed date of interconnection; and
- C. projection of net output or consumption by the qualifying facility when available.

The specific technical standards that these QF's have to meet are left rather ambiguous in the rules.

#### **7835.4800 DENIAL OF INTERCONNECTION APPLICATION.**

Except as hereinafter provided, a utility must interconnect with a qualifying facility that offers to make energy or capacity available to the utility. The utility may refuse to interconnect a qualifying facility with its power system until the qualifying facility has properly applied under part 7835.2900 and has received approval from the utility. The utility must withhold approval only for failure to comply with applicable utility rules not prohibited by this chapter or governmental rules or laws. The utility must be permitted to include in its contract reasonable technical connection and operating specifications for the qualifying facility.

There are no upper size limits for QF's specified in Minnesota QF law, but the Federal laws contained an 80 MW upper limit to the definition of "small power production facility." The Minnesota Rules 7835.9910 contains a specific uniform statewide contract that is to be used for facilities under 40 kW size.

There are no references in either Minnesota statute or rule that would limit the applicability of the QF law to any specific portion of the utility owned transmission or distribution system.

A little known and perhaps still unused provision of Minn. Stat. 216B.164, subd. 4(c) is its Wheeling Provisions.

"For all qualifying facilities having 30-kilowatt capacity or more, the utility shall, at the qualifying facility's or the utility's request, provide wheeling or exchange agreements wherever practicable to sell the qualifying facility's output to any other Minnesota utility having generation expansion anticipated or planned for the ensuing ten years. The commission shall establish the methods and procedures to insure that except for reasonable wheeling charges and line losses, the qualifying facility receives the full avoided energy and capacity costs of the utility ultimately receiving the output."

This statute apparently offers opportunities for intrastate wheeling of power transactions.

## **MISO Authority Under Other FERC Orders**

The MISO was created in response to FERC Order 2000, as a Regional Transmission organization (RTO). FERC encouraged the formation of RTOs to carry out the provisions of its previous Orders 888 and 889 that established open access policies for non utility owned generators to the wholesale interstate power market. Today, most of Minnesota's retail customers are served by utilities that have decided to join the MISO organization.

MISO manages the open access requirements to the transmission system for its members and manages a regional day ahead and real time power market. Part of the MISO activities includes taking over operational control of some of the transmission facilities of the MISO members.

The MISO Charter requires its members to transfer operational control of member owned transmission facilities with voltage levels of 100 kV and above. The actual transfer to MISO of operational control of transmission facilities by Minnesota utilities has been limited to lines with voltages above 100 kV. In Minnesota these are 115 kV, 161 kV, 239 kV, 345 kV, and 500 kV lines. The state utilities have all created itemized lists of the lines that they have given over to MISO operational control. There are no 69 kV or 41.6 kV lines on those lists.

For the transmission facilities under MISO operational control, the MISO becomes the "Transmission Provider" under FERC Interconnection Rules, while the member utilities remain as "transmission owners." Minnesota's utilities become "customers" of MISO when it comes to reserving use of transmission facilities to serve their own native loads. These load serving utilities are considered "network customers" and they have "network service" transmission usage reservations on the MISO operated bulk power system network to serve their retail loads.

## **UNTANGLING INTERCONNECTION JURISDICTIONAL ISSUES**

FERC had to establish boundaries where its rules would be applicable or not in their interconnection proceedings. In the course of making those rules the states were very vocal in reminding FERC that it had no jurisdiction over the distribution system or the retail provision of electric service. FERC basically claimed the higher voltage "transmission" grid as their jurisdiction, and the local distribution system which is primarily a retail service function, as not in their jurisdiction for interconnections.

### **Location Issues**

The Minnesota legislature requested information regarding interconnections at Locations on the electric grid where a generator interconnection would not be subject to the interconnection rules of the Federal Energy Regulatory Commission. FERC statements in its orders about application of the rules at various locations show that the power system can be discussed in terms of transmission facilities, dual use facilities, and distribution facilities.

Because utilities that are MISO members have transferred facilities of 115 kV and above to MISO as part of their OATT compliance choices, these facilities could be declared to fit the category of transmission facilities used for interstate commerce. However, since FERC declared

that QF interconnections remain under state authority, an area of investigation remains regarding how QF connections at or above 115 kV would/should be managed.

In Minnesota, the power system includes lines that can be considered dual use facilities. Examples of these are in the voltage class of 41.6 kV and 69 kV. These lines are primarily used in network configurations but are not under MISO's operational control. FERC has indicated that interconnections to these facilities may or may not be FERC jurisdictional depending on the type of transaction that the interconnecting entity intends to enter into. If the power contract is to be in a wholesale power market, the FERC would assert jurisdiction over the interconnection. If the power is to be sold at retail, the interconnection is non FERC jurisdictional and under state authority.

The state of Minnesota never directed its utilities to send all interconnections on the 69 kV or 41.6 kV lines to MISO or any other RTO. FERC specifically encouraged states in Order 2006 to develop interconnection rules for these retail power sales interconnections.

MISO has put together an interconnection flow process for various types of interconnections. It clearly shows a procedure for interconnections to the distribution system and to the local load serving utility. See a copy of this diagram attached. When there is a potential for transmission impacts from these distribution connections the MISO requires only that the study work be "coordinated" with MISO, not that the interconnection must enter the MISO Queue.

On the local distribution system, the state would appear to have automatic jurisdiction unless the particular facility has some prior existing wholesale power transaction and a new interconnecting entity wants to participate in the wholesale power market.

### **Power Contracts**

FERC also does not regulate power exchanges between retail utilities and their customers located on their assigned service territory distribution system. Evidence of this is in the PURPA rules where FERC has recognized a state's right to set net energy billing rates above avoided cost values required by federal law.

Our CBED tariffs, that specify front-end loading pricing and 20 year time frames, are a similar transaction between a retail load serving utility and its customers. So when there is an interconnection request for a CBED tariff project that interconnects to the distribution system it would/should not be under FERC's jurisdiction. However, the CBED priority now in statute only grants a priority for the power purchase agreement, not an interconnection priority.

### **Transmission System Impacts**

Load flow changes happen all the time on the transmission system. These variations in power flow on the transmission system take place within the network transmission service arrangements that are in place for load serving purposes. The transmission system effectively cannot distinguish whether the power flow was reduced for a given transmission service reservation because someone turned off a light or supplied power for the light from a local power source. To

the extent that power flows from a distribution system sited generator can be considered to take place inside the existing transmission service reservation for the local load serving utility, the system impacts should be minimal.

Additionally FERC distinguished in its Order 2003 that transactions where power flows from a transaction do not enter the interstate power system it is not subject to the FERC Interconnection Rules.<sup>25</sup> If a generator is small enough that it never reduces power flow into the distribution system to zero, it cannot be said to have power enter the interstate power system.

## TECHNICAL CONSIDERATIONS

Technical Standards for interconnections are in place at both the state and federal level. State assertion of authority for interconnections would not have to create new reliability standards but rather could simply conform to those already in place.

## FEASIBILITY ISSUES

It appears that the state could approve thousands of MW on the customer side of the transmission/distribution substation if the impacts from those interconnections are considered as reducing the flows on the existing transmission service reservations that are in place to serve the local utility's load.

The recently completed West Central CBED Transmission Study developed data regarding the statewide capacity of existing substations to inject power into the 115 kV system from lower voltage facilities.<sup>26</sup> The totals for each transmission planning zone shown below indicate substantial transformer capacity exists for distribution sited generation in Minnesota.

West Central Zone	3585 MW
Southwest Zone	1182 MW
Southeast Zone	4000 MW
Northwest Zone	2602 MW
Northeast Zone	2383 MW
Total	13,752 MW

Although it is unlikely that all this injection capability can be utilized if even 20% of this total can be developed on lines below 115 kV there would be 2,750 more MW of generation added to the Minnesota system.

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<sup>25</sup> See discussion on p. 4.

<sup>26</sup> See: <http://www.capx2020.com/documents.html>

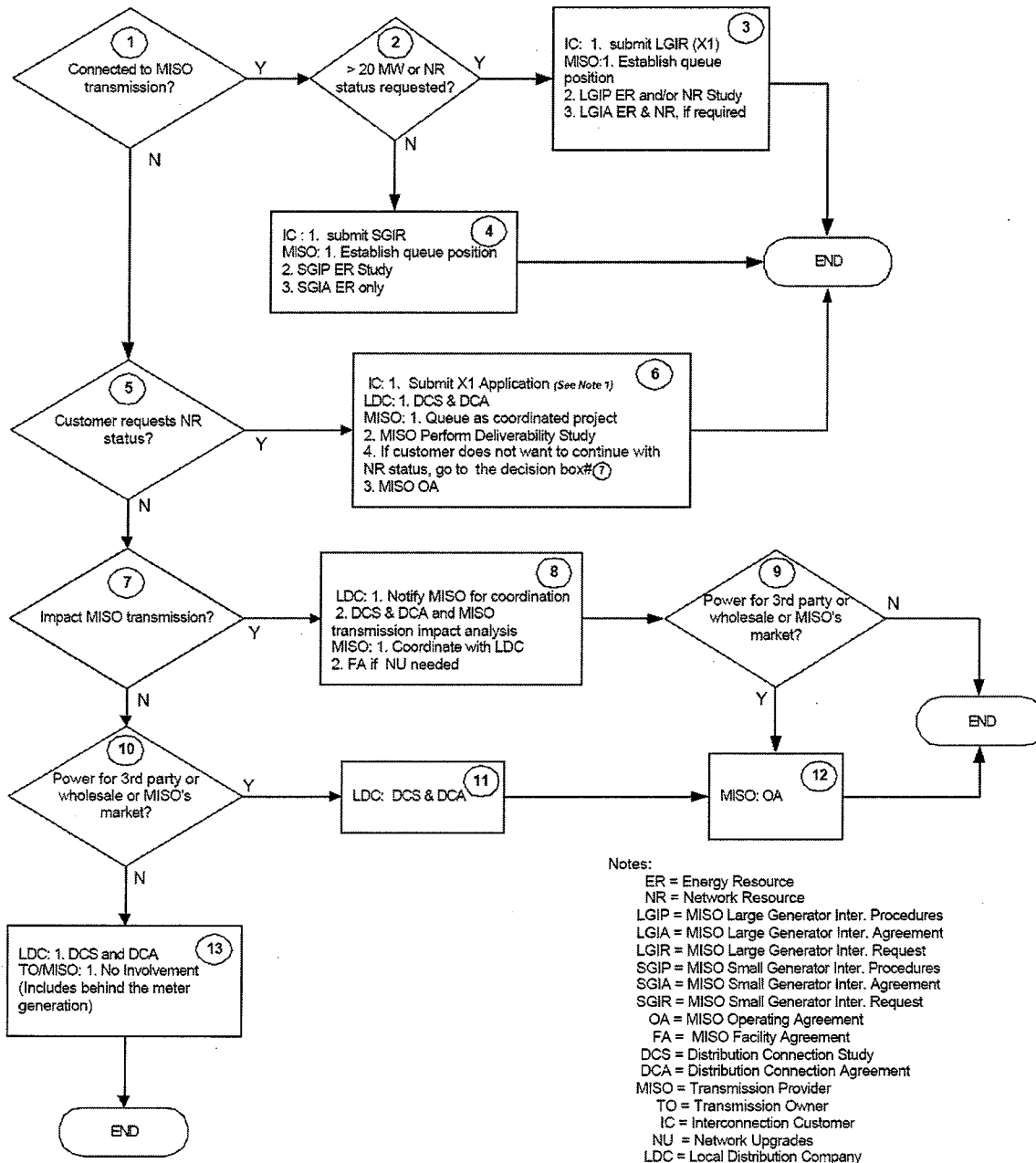
## RECOMMENDATIONS

The following observations and recommendations can be made regarding potential for and barriers to state jurisdiction of interconnection procedures.

- 1) Although the state has standard interconnection procedures in place for onsite generation, the rules do not have sufficient scope to cover the interconnection of dispersed generation resources at MW levels that are possible on "dual use" facilities.
- 2) CBED contracts, as retail tariffs can be connected under state jurisdiction to dual use facilities. State level interconnection rules should be developed for these and other retail tariff transactions.
- 3) The state should set up a state level queue system for distribution interconnections that would operate in parallel with the transmission interconnection queue that MISO operates, the state level queue studies would "coordinate" with MISO as necessary.
- 4) The queue process should be a two tiered process where an initial request would be put in preliminary queue where the feasibility of the interconnection would be analyzed. If an interconnection request passed the feasibility test it would stay in the preliminary queue until such time as it got a power purchase agreement. Then it would move to the final queue where the system impacts would be completely analyzed.
- 5) Since load serving utilities have in place transmission service reservations to serve load, they should insist that impacts to MISO from the power flow from a CBED generator should be considered to be made under the umbrella of that prior existing approved usage of the transmission system. As a practical matter most always the flows in those load serving reservations would be reduced by the addition of additional local generation. It would be rare that the flow directions would actually zero out or reverse.

This is a complicated legal and regulatory subject. It appears that the state can expedite review of CBED interconnections with its own queue process and also avoid the can of worms of MISO impacts with properly sized generators, connected to the distribution system, and selling to their local utility.

## Generator Interconnection Study & Agreement Jurisdiction in MISO footprint



### Special Cases:

QF connecting to-- A) Transmission: submit request to MISO B) Distribution: submit request to LDC. LDC coordinates with MISO  
Gen connecting to non-MISO facilities (e.g. muni) located within MISO local balancing authority-- submit request to Muni TP. Muni TP to coordinate with MISO

Note 1: MISO tariff does not currently allow for generators connecting to non-MISO facilities (e.g. distribution system) to qualify as an NR under LGIP. However, this option is available for information purposes only.

[http://www.midwestmarket.org/publish/Document/3b0cc0\\_10d1878f98a\\_-7e1a0a48324a/Visio-MISO%20GI%20Study%20&%20Agreement%20Options\\_rev2.pdf?action=download&\\_property=Attachment](http://www.midwestmarket.org/publish/Document/3b0cc0_10d1878f98a_-7e1a0a48324a/Visio-MISO%20GI%20Study%20&%20Agreement%20Options_rev2.pdf?action=download&_property=Attachment)



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M E M O R A N D U M

**TO:** Glen Skarbakka and Donna Stephenson

**FROM:** Jim Bertrand and Brian Meloy

**RE:** White Paper on Interconnection Issues and Jurisdiction

**DATE:** January 31, 2008

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We have had an opportunity to review Mike Michuad's White Paper on Untangling FERC and State Jurisdiction Interconnection issues and Opportunities for Dispersed Generation ("White Paper"). As discussed below, Mr. Michuad's analysis with respect to the jurisdictional divide is reasonably accurate and serves to highlight the complexity of the issue.

**I. Executive Summary**

Mr. Michaud's jurisdictional analysis relies primarily on the Federal Energy Regulatory Commission's ("FERC" or "Commission") statements in Order Nos. 2003<sup>1</sup> and 2006<sup>2</sup> -- the Commission's Orders on the Standardization of Generator Interconnection Agreements and Procedures. Since the issuance of these Orders, FERC has delineated its jurisdiction as follows:

- (1). FERC does not have jurisdiction over a generator interconnecting to local distribution facilities that are unavailable for jurisdictional transmission service under a FERC-approved Open Access Transmission Tariff ("OATT") when the interconnection request is made.

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<sup>1</sup> *Standardization of Generator Interconnection Agreements and Procedures*, Order No. 2003, 68 *Fed. Reg.* 49,845 (Aug. 19, 2003), *FERC Statutes and Regulations, Regulations Preambles 2001-2005* ¶ 31,146 (2003), *order on reh'g*, Order No. 2003-A, 69 *Fed. Reg.* 15,932 (Mar. 26, 2004), *FERC Statutes and Regulations, Regulations Preambles 2001-2005* ¶ 31,160 (2004), *order on reh'g*, Order No. 2003-B, 70 *Fed. Reg.* 265 (Jan. 4, 2005), *FERC Statutes and Regulations, Regulations Preambles 2001-2005* ¶ 31,171 (2004), *order on reh'g*, Order No. 2003-C, 70 *Fed. Reg.* 37,661 (June 30, 2005), *FERC Statutes and Regulations, Regulations Preambles 2001-2005* ¶ 31,190 (2005); *see also* *Notice Clarifying Compliance Procedures*, 106 *FERC* ¶ 61,009 (2004).

<sup>2</sup> *Standardization of Small Generator Interconnection Agreements and Procedures*, Order No. 2006, 70 *Fed. Reg.* 34,190 (June 13, 2005), *FERC Statutes and Regulations, Regulations Preambles 2001-2005* ¶ 31,180 (2005), *order on reh'g*, Order No. 2006-A, *FERC Statutes and Regulations, Regulations Preambles 2001-2005* ¶ 31,196 (2005); *see also* *Standardization of Small Generator Interconnection Agreements and Procedures, Notice of Proposed Rulemaking*, 68 *Fed. Reg.* 49,974 (Aug. 19, 2003), *FERC Statutes and Regulations, Proposed Regulations 1999-2003* ¶ 32,572 (2003).

- (2). FERC can assert jurisdiction over generator interconnections to local distribution facilities, only when there is a pre-existing interconnection **and** a wholesale transaction over the facilities prior to the new interconnection request being made.

Accordingly, the critical inquiry is whether the local distribution facilities are used exclusively to deliver energy to retail customers at the time of the interconnection request.<sup>3</sup> The application of this standard is heavily fact dependent in at least two respects: (1) it must first be determined that the facilities with which the generator seeks to interconnect constitute local distribution facilities and not FERC-jurisdictional transmission facilities;<sup>4</sup> and (2) if the facilities are local distribution facilities, are they being used exclusively to deliver energy to retail customers at the time of the interconnection request (*i.e.*, not subject to a FERC-approved OATT).

With respect to the first inquiry, the Minnesota Public Utilities Commission has determined that facilities under 50 kV are presumptively distribution. Facilities over 50 kV are presumptively transmission. Within the Midwest Independent Transmission System Operator, Inc. ("MISO") footprint, service over all member transmission facilities – not simply those facilities under its operational control – is covered by the MISO OATT.

Accordingly, a generator seeking to interconnect to facilities below 50 kV can do so under State oversight if the facilities are used exclusively to deliver energy to retail customers at the time of the interconnection request is made – regardless of whether the new interconnection will facilitate a wholesale transaction. Whether a second generator seeking to interconnect to the same facilities may interconnect under State procedures, however, depends on whether the facilities are facilitating a wholesale transaction for the first generator (*i.e.*, whether the facilities are providing "Wholesale Distribution Service" under MISO's OATT). If so, then the second generator must interconnect under MISO's Tariff.

## **II. Discussion**

### **A. The State/Federal Jurisdictional Divide**

Initially, the Supreme Court has affirmed that it is FERC, not state commissions, which must make the factual and legal determinations to define FERC's own jurisdiction, even if those

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<sup>3</sup> See *Detroit Edison Co. v. FERC*, 334 F.3d 48, 51 (D.C. Cir. 2003) ("[W]hen a local distribution facility is used in a wholesale transaction, FERC has jurisdiction over that transaction pursuant to its wholesale jurisdiction under FPA § 201(b)(1).") and *DTE Energy Co. v. FERC*, 394 F.3d 954 (D.C. Cir. 2005).

<sup>4</sup> To determine what facilities would be under FERC's jurisdiction and what facilities would remain under the state's jurisdiction for purposes of retail stranded cost adders or other retail regulatory purposes, in Order No. 888 the Commission developed a seven factor test to determine what facilities are transmission and what facilities are local distribution facilities. The seven factors include: (1) local distribution facilities are normally in close proximity to retail customers; (2) Local distribution facilities are primarily radial in character; (3) power flows into local distribution systems; it rarely, if ever, flows out; (4) when power enters a local distribution system, it is not re-consigned or transported on to some other market; (5) power entering a local distribution system is consumed in a comparatively restricted geographical area; (6) meters are based at the transmission/local distribution interface to measure flows into the local distribution system; and (7) local distribution systems will be of reduced voltage.

decisions also delineate the scope of state jurisdiction.<sup>5</sup> Though some ambiguity remains, since the issuance of Order Nos. 2003 and 2006 the Commission has clarified its jurisdiction with respect to generator interconnections in the context of reviewing compliance filings made by Regional Transmission Organizations ("RTOs") and transmission owners ("TOs").

## 1. MISO's Order No. 2003 Compliance

The Commission explained its limited authority to assert jurisdiction over generators interconnecting to local distribution facilities in reviewing MISO's incorporation of FERC's Large Generator Interconnection Procedures ("LGIP") and Large Generator Interconnection Agreement ("LGIA") into its Tariff:

Midwest ISO LGIP and LGIA may apply to 'distribution' facilities only when such facilities are subject to the Midwest ISO OATT and the Interconnection Customer intends to make a wholesale sale in interstate commerce. This conclusion results in a relatively small amount of distribution facilities that will be subject to the LGIP and LGIA. Furthermore, the expression of the Commission's jurisdiction in Order Nos. 2003 and 2003-A does not extend the applicability of the LGIP and LGIA to 'distribution facilities' that are not subject to a Commission-approved OATT at the time the Interconnection Request is made, even if the Interconnection Customer intends to make a jurisdictional wholesale sale.<sup>[6]</sup>

Accordingly, the Commission determined that the LGIP and LGIA would not apply to distribution facilities not subject to the MISO OATT at the time the interconnection request is made – regardless of whether there is intent to make a wholesale sale or transmit in interstate commerce.<sup>7</sup> The Commission was careful to point out, however, that MISO's OATT also covers facilities not under MISO's operational control.<sup>8</sup> In particular, the Commission rejected MISO's proposed definition of "Transmission System" that included only facilities that are "controlled or operated by the Transmission Provider and Transmission Owner that are used to provide transmission service or Wholesale Distribution Service under the Tariff." The Commission concluded:

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<sup>5</sup> *FPC v. S. Cal. Edison Co.*, 376 U.S. 205, 210 n.6 (1964) (the determination of the jurisdictional status of facilities "involves a question of fact to be decided by the FPC as an original matter."); *see also*, *Western Massachusetts Electric Co.*, 61 FERC ¶ 61,182, at p. 61,661 (1992), *aff'd*, 165 F.3d 922, 926 (D.C. Cir. 1999).

<sup>6</sup> *See Midwest Independent Transmission System Operator, Inc.*, 109 FERC ¶ 61,085 at P 46 (2004) ("Order on Rehearing, Clarification, and Compliance Filing.").

<sup>7</sup> *Id.* at P 43.

<sup>8</sup> Mr. Michaud appears to suggest that only those transmission facilities that have been turned over to MISO's operational control are covered by the MISO OATT:

Because utilities that are MISO members have transferred facilities of 115 kV and above to MISO as part of their OATT compliance choices, these facilities could be declared to fit the category of transmission facilities used for interstate commerce. [White Paper at p. 12.]

This definition is unduly restrictive because Midwest ISO does not generally operate or control facilities operating at voltages below 100 kV, ***while service over such facilities is provided under the Midwest ISO OATT.*** Rather, the definition of Transmission System should include facilities that are ‘controlled or operated by the Transmission Provider or Transmission Owner that are used to provide transmission service or Wholesale Distribution Service under the Tariff.’<sup>9]</sup>

In this respect, the MISO Orders confirm that non-transferred transmission facilities as well as those distribution facilities used to provide Wholesale Distribution Service<sup>10</sup> under MISO’s Tariff are FERC-jurisdictional and covered by the MISO OATT.<sup>11</sup> A generator seeking to interconnect to such facilities (regardless of voltage) may be required to adhere to the MISO’s LGIP.

## 2. Case Specific Applications in PJM

More recently, the Commission evaluated its jurisdiction with respect to interconnections within the PJM Interconnection LLC (“PJM”) footprint. In *PJM Interconnection LLC*,<sup>12</sup> for

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<sup>9</sup> *Midwest Independent Transmission System Operator, Inc.*, 108 FERC ¶ 61,027 at P 87 (2004). Emphasis added. In approving the formation of MISO, the Commission specifically declined to determine that all facilities not turned over to MISO (i.e., less than 100 kV) are properly categorized as distribution, explaining:

We will not classify all facilities that are not subject to the control of the ISO as distribution. While the Ohio Commission is correct that this would obviate the need for application of the seven factor test to identify the T/LD split, we have no basis to conclude that all facilities below 100 kV are performing a distribution function.

*See Midwest Independent Transmission System Operator, Inc.*, 84 FERC ¶ 61,231, 62,172 (1998) (“Order Conditionally Authorizing Establishment of Midwest Independent Transmission System Operator and Establishing Hearing Procedures”).

<sup>10</sup> MISO’s Energy Markets Tariff reflects this distinction in the definition of jurisdictional “Distribution Facilities:”

Distribution Facilities: The low-voltage transmission facilities owned or controlled or operated by the Transmission Provider, or a Transmission Owner, or both, and used in a sale for resale of, or to transmit, electric energy in interstate commerce on behalf of a wholesale purchaser pursuant to a Commission filed Open Access Transmission Tariff (i.e., to provide Wholesale Distribution Service).

*See* Section 1.75 of MISO’s Energy Markets Tariff. Therefore, local distribution facilities providing “Wholesale Distribution Service” under Schedule 11 of MISO’s Tariff would appear to constitute facilities subject to the MISO OATT.

<sup>11</sup> As the Commission confirmed in Order No. 2003-B, “[w]e grant rehearing to clarify . . . a facility may be considered dual use only if it serves both state- and Commission-jurisdictional functions at the time the Interconnection Request is submitted. As a result, ***a dual use facility must be subject to an OATT.***” Order No. 2003-B at P 14. Emphasis added.

<sup>12</sup> *PJM Interconnection LLC*, 114 FERC ¶ 61,191 (2006), *order denying reh’g*, 116 FERC ¶ 61,102 (2006).

example, the Commission rejected interconnection agreements governing the interconnection of a 53 MW<sup>13</sup> ("West Brooklyn Facility") and a 30 MW wind generating facility ("Sublette Facility") to Commonwealth Edison's ("ComEd") local distribution facilities as beyond the Commission's jurisdiction. The facts are illustrative.

Under the filed agreements, the West Brooklyn Facility would be interconnected to a radial 34 kV line that runs three miles to a ComEd substation, where the output would be transformed to 138 kV and connected to a 138 kV radial distribution line that runs 19 miles to a substation that forms part of the PJM transmission system. The Sublette Facility would be interconnected to a 34 kV line that extended 20 miles in one direction to a substation that forms part of the PJM transmission system and seven miles in the other direction to a ComEd substation, where the Sublette output will be transformed to 138 kV and connect to a 138 kV radial distribution line that runs 19 miles to a substation that forms part of the PJM transmission system.

In evaluating whether the existing local distribution facilities were already facilitating wholesale transactions at the time the interconnection requests were made, the Commission noted that Mendota, a qualifying facility ("QF") under the Public Utility Regulatory Policies Act of 1978 ("PURPA"), was already interconnected to the same 138 kV line as the West Brooklyn and Sublette Facilities. In addition, Zahren Alternative Power Corporation, a waste gas QF, was interconnected to the same 34 kV line to which the Sublette Facility would connect.

In rejecting the interconnection agreements, however, the Commission noted that under Order No. 2003, it may assert jurisdiction over interconnections to local distribution facilities where: "(1) there is a preexisting interconnection; *and* (2) there is a wholesale transaction over these local distribution facilities prior to the new interconnection request being made."<sup>14</sup> In considering the impact of the existing QF interconnections, the Commission explained:

Where a QF sells its entire output to the interconnected utility, the utility is presumed to use the power purchased from a QF to serve retail load. And where the utility-purchaser of the QF output is selling the QF output at retail, no jurisdictional use of the utility-purchaser's distribution line takes place. Here, Mendota sells its entire output to ComEd and ComEd is presumed to use that power to serve retail load. Neither GSG nor the record in this proceeding present any evidence demonstrating that ComEd's distribution line is being used for wholesale transactions. Therefore, because wholesale transactions are not being conducted on ComEd's local distribution facilities pursuant to a Commission-approved OATT, the Commission does not have jurisdiction over GSG's proposed interconnections.<sup>[15]</sup>

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<sup>13</sup> It should be noted that the Commission's jurisdiction is neither expanded nor diminished based on the size of the interconnecting generator. In Order No. 2006 (pertaining to generators smaller than 20 MW), the Commission stated that its assertion of jurisdiction is identical to the jurisdiction asserted in Order No. 2003 (pertaining to generators greater than 20 MW). See Order No. 2006 at P 481.

<sup>14</sup> *PJM Interconnection LLC*, 114 FERC ¶ 61,191 at P 14, citing Order No. 2003 at P 804. Emphasis added.

<sup>15</sup> *PJM Interconnection LLC*, 116 FERC ¶ 61,102 at P 20.

The Commission contrasted this situation to a case where a utility transmits QF power in interstate commerce to a third party. In such a case, the Commission noted that “more than just an interconnection to accomplish a sale under PURPA is involved. Instead, a Commission jurisdictional transaction takes place, and both the transmission in interstate commerce and the agreements affecting or relating to such service are subject to the Commission's exclusive jurisdiction.”<sup>16</sup>

In another case, the Commission rejected interconnection agreements associated with the interconnection of two 0.87 MW landfill gas generators to PECO Energy Company's (“PECO”) local distribution system.<sup>17</sup> In order to determine whether FERC had jurisdiction over the interconnections, Commission Staff issued a data request to PJM requesting the following information:

- b) Please describe how PECO's distribution system, to which SECCRA will interconnect, is currently used. For example, *is there any Commission-jurisdictional delivery service currently being provided over these distribution facilities*, or are they currently used only for retail service?
- c) If these distribution facilities are currently used to provide Commission-jurisdictional service:
  - i) Please provide the docket numbers where the Commission approved the transaction.
  - ii) Please provide a one-line diagram of PECO's distribution system, coded to show any Commission-jurisdictional service currently being provided over the distribution facilities to which SECCRA will interconnect.<sup>[18]</sup>

As is apparent, the chief inquiry was whether “*there [is] any Commission-jurisdictional delivery service currently being provided over these distribution facilities.*” Based upon PJM's response, the Commission found that the distribution facilities to which the generators would interconnect were currently being used exclusively for retail service at the time the request for interconnection service was made, explaining:

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<sup>16</sup> *Id.* at P 21. Therefore, Mr. Michaud correctly concluded “that interconnections of QF facilities where all the power is sold to the local utility remain state jurisdictional interconnections.” White Paper at p. 3. *See also*, Order No. 2003 at P 814 (“[T]he Commission has jurisdiction over a QF's interconnection to a Transmission System if the QF's owner sells any of the QF's output to an entity other than the electric utility directly interconnected to the QF.”).

<sup>17</sup> *PJM Interconnection, L.L.C.*, 115 FERC ¶ 61,356 (2006).

<sup>18</sup> *See* the Commission's March 31, 2006 Deficiency Order in Docket No. ER06-611-000. Emphasis added.

In Order No. 2003, the Commission found that it does not have jurisdiction over an interconnection where the interconnection customer seeks to interconnect to a 'local distribution' facility that is unavailable for jurisdictional transmission service under a Commission-approved OATT at the time an interconnection request is made. Thus, under Order No. 2003, in order for the Commission to assert jurisdiction over interconnections to local distribution facilities, there must be a preexisting interconnection and a wholesale transaction over these local distribution facilities prior to the new interconnection request being made. In the absence of these requirements being met, and as discussed below, we find that the Commission lacks jurisdiction under Order No. 2003 over interconnections to these local distribution facilities.<sup>[19]</sup>

In this respect, the *PJM* cases represent a departure from the Commission's statement in Order No. 2006-A that "if the Interconnection Customer seeks to interconnect with a facility carrying both energy sold at wholesale and energy sold at retail and plans to sell power only at retail. In that case, because there is no wholesale sale involved, the interconnection would be subject to the state's rules."<sup>20</sup> Under the subsequently issued *PJM* cases, the critical element in determining jurisdiction was the status of the distribution facility at the time of the interconnection request. According to FERC, it does not have jurisdiction over a generator interconnecting to local distribution facilities that are unavailable for jurisdictional transmission service under a FERC-approved OATT when the interconnection request is made. FERC can assert jurisdiction over generator interconnections to local distribution facilities, only when there is a pre-existing interconnection and a wholesale transaction over the facilities prior to the new interconnection request being made.

### **3. Minnesota Generally Considers Facilities Below 50 kV to be Distribution Facilities.**

The Minnesota Public Utilities Commission has determined that lines over 50 kV located in Minnesota are presumptively transmission, unless demonstrated to be distribution assets after applications of relevant factors, including FERC's seven-factor test.<sup>21</sup> Minnesota utilities' Tariffs generally reflect this distinction with respect to the interconnection of distributed generation resources.<sup>22</sup> As such, while Mr. Michaud notes that the "state of Minnesota never

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<sup>19</sup> *Id.* at P 10.

<sup>20</sup> It should be noted that in reviewing ISO-NE's Order No. 2006 Compliance, the Commission similarly stated "where the distribution facilities have a dual use, that is, the facilities are used for both wholesale sales and retail sales, Order No. 2003 applies to these interconnections only for the purpose of making sales of electric energy for resale in interstate commerce." *ISO New England, Inc.*, 115 FERC ¶ 61,050 at P 14 (2006). Though inconsistent with the *PJM Orders*, this provides support for Mr. Michaud's conclusion that "C-BED contracts, as retail tariffs can be connected under state jurisdiction to dual use facilities." White Paper at p. 14.

<sup>21</sup> See ORDER ADOPTING BOUNDARY GUIDELINES FOR DISTINGUISHING TRANSMISSION FROM GENERATION AND DISTRIBUTION ASSETS, Docket E-999/CI-99-1261 (July 26, 2000).

<sup>22</sup> See e.g., Ottetail Power's interconnection requirements at <http://www.otpc.com/NewsInformation/GeneratorInterconnectTrans.asp>

directed its utilities to send all interconnections on the 69 kV or 41.6 kV lines to MISO or any other RTO”,<sup>23</sup> arguably, the presumption is that MISO generally has jurisdiction over the interconnection on facilities above 50 kV, (*i.e.*, 69 kV and above) and may have jurisdiction over facilities at lower voltages that provide Wholesale Distribution Service.<sup>24</sup>

### III. Conclusion

As is apparent from the discussion above, while the Commission’s recent delineation of its jurisdiction vis-à-vis the state is ostensibly clear, it is difficult to apply these jurisdictional principles in the absence of specific facts. This added complexity erects a barrier for states such as Minnesota that are attempting to develop dispersed interconnection procedures. However, in the face of this complexity, the rule of reason can be applied. As FERC noted, Order Nos. 2003 and 2006 should only apply to generator interconnections to local distribution facilities in very limited circumstance, *i.e.*, where there is a preexisting interconnection and wholesale transaction.<sup>25</sup> In Minnesota, local distribution facilities are presumptively defined as those facilities below 50 kV. For generators seeking to interconnect at facilities above 50 kV, any state standard must be flexible enough to reflect that additional analysis is likely necessary to determine the procedures that should be applied.

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<sup>23</sup> White Paper at p. 12.

<sup>24</sup> As the Commission noted in Order No. 2003, the “Final Rule applies to interconnections to the facilities of a public utility’s Transmission System that, at the time the interconnection is requested, *may be* used either to transmit electric energy in interstate commerce *or* to sell electric energy at wholesale in interstate commerce pursuant to a Commission-filed OATT.” Order No. 2003 at P 803. Emphasis added.

<sup>25</sup> In MISO, the delivery of purchased power over distribution facilities for resale is Wholesale Distribution Service under Schedule 11 of MISO’s OATT.



**From:** Rick Gonzalez

**Sent:** Mon 4/28/2008 6:04 PM

**To:** Matt Schuerger; Richard Hettwer; Daniel Kline; Dale Osborn; Gordon Pietsch; John Weber; Tom Wind; Durgesh Manjure; Natalie McIntire; David K. Duebner; J. Charles Smith; Mike Klopp; Jarred Miland; Mike Cronier; Lantto, Josh GRE/ER; Bill Quaintance; Jared Alholinna; Jason Weiers; Warren Hess; Amanda King; Larry L. Schedin; Tim Rogelstad; David Corbus; Tom McDermott; Tami Anderson; Dave Van House; Teresa Mogensen; Mike Michaud; Bartel, Tim MISC/MPC; Grant Gunderson

**Cc:** Mike Bull; Marya White; Bob Cupit; Michael Kaluzniak; Eric Laverty

**Subject:** Draft Jurisdiction Report: Rick's comments

Here's a quick summary of my observations, opinions, and conclusions on this topic:

1. There is only one power system. To suggest that there can be multiple "on-ramps" within the same geographic area, just at different voltage levels, each with different interconnection procedures, makes little sense. Although we all understand why our local government cannot issue a permit to build a driveway onto an interstate highway, it seems some of us want to suggest/believe that the state could authorize generation connections directly to the 69 kV transmission system, without regard to ensuring safety and reliability of existing or prior-queued uses of that interstate power system. To carry the highway analogy one step further, there is a rather obvious reason why each car has only one steering wheel, and one set of pedals.
2. The existing power system has been designed to get power from existing generation to existing loads. If you add new generation, you change flows throughout the system, regardless of what voltage level the new generation is connected at. To claim that the impacts (steady-state or dynamic stability) are only local is incorrect.
3. It is also incorrect to claim that if you connect a new generator to a substation or feeder whose load is always at least as great as the generator's output, that there is no impact on the external system. When you add generation to the system, you are displacing some other generation elsewhere. The fact that the displaced generation is remote means that flows throughout the transmission system have changed. It is tempting to assume that all the resulting flow changes will be beneficial, but this is not assured, and it is easy to give counter examples. This is why system studies are necessary.
4. The generation interconnection procedures as prescribed by FERC and implemented by MISO, WAPA, and others in their OATTs have some significant shortcomings and are certainly not well suited to the conditions we have at present in the Midwest. However, to suggest that circumventing the MISO interconnection process will somehow allow for significant amounts of new generation to be reliably connected sooner, is wishful thinking. The fundamental problem is that we do not have adequate transmission system capability to accommodate most of the proposed or potential new generation, nor do we have

agreement on how much capability we should be planning for, or when to implement it.

5. Making it easier to connect new generation in an essentially unsupervised manner outside of the organized interconnection process will not help; rather, it is an invitation to a "train wreck" type of situation with respect to system reliability, safety, and economy, and also is totally contrary to the chronological queue management concept mandated by FERC. What is the purpose of having a MISO interconnection queue if many can avoid it by requesting connection at 69 kV or lower?
6. In order to "coordinate" non-MISO low-voltage generation interconnection requests with MISO, it is necessary that you either wait for the electrically nearby MISO interconnection requests to have been studied, or initiate a combined study to study all requests in the same area simultaneously. This is exactly what the present "Group" studies achieve. Consequently, I don't see how it could be beneficial to have a separate interconnection process for "low-voltage" connections, if you still have to wait for the same MISO interconnection studies to be performed.

In summary, the concept of having some sort of alternative interconnection process certainly has a certain allure to it, given the frustrating situation we're in (and have created for ourselves with FERC's help). However, the physical realities of the power system do not yield to legalistic arguments regarding jurisdiction. Since the challenge is primarily a technical one, it is unlikely the solution will be found in the legal field.

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