

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)."¹ 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).² 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.³ FERC acted again a few years later to establish uniform rules for the interconnection of new generators.⁴ The issue of where FERC's authority extended to bind various utilities to these rules was a major discussion point in those proceedings.

¹ See Minnesota Session Laws Chapter 136, Article 4, Sec. 21.

² 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.

³ See FERC Orders 888 and 889 issued April 24, 1996.

⁴ 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.⁵ 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.⁶ 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.”⁷

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.”⁸ (Emphasis added)

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

⁵ FERC also issued supplemental Orders 2003A, 2003B, 2003C, and 2006A and 2006B.

⁶ An OATT is an Open Access Transmission Tariff, per FERC Order 888.

⁷ FERC Order 2003, para 20.

⁸ 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.¹²⁸ 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.”⁹

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.”¹⁰

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.¹¹

⁹ FERC Order 2003, para 804.

¹⁰ FERC Order 2003, para 813.

¹¹ 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.”¹²

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.”¹³

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).”¹⁴

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 muddied the waters by pointing out that these local distribution facilities are sometimes used for jurisdictional service transactions in interstate commerce. FERC further muddied the discussion of the reach of its Rule in another comment:

¹² FERC Order 2003, para 805.

¹³ FERC Order 2003, para 808.

¹⁴ FERC Order 2003, para 803.

“Regarding the arguments that the NOPR LGIP and NOPR LGIA¹⁵ 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.”¹⁶

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.¹⁷

Order 2003C

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

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

¹⁶ FERC Order 2003, para 806.

¹⁷ 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.”¹⁸

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.

¹⁸ 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.”¹⁹

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.”²⁰

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.

¹⁹ Order 2006, para 8.

²⁰ 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.”²¹

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.”²²

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.

²¹ Order 2006A, para 90.

²² 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.”²³

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.²⁴ 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:

²³ Order 2003, para 23.

²⁴ 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.²⁵ 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.²⁶ 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.

²⁵ See discussion on p. 4.

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

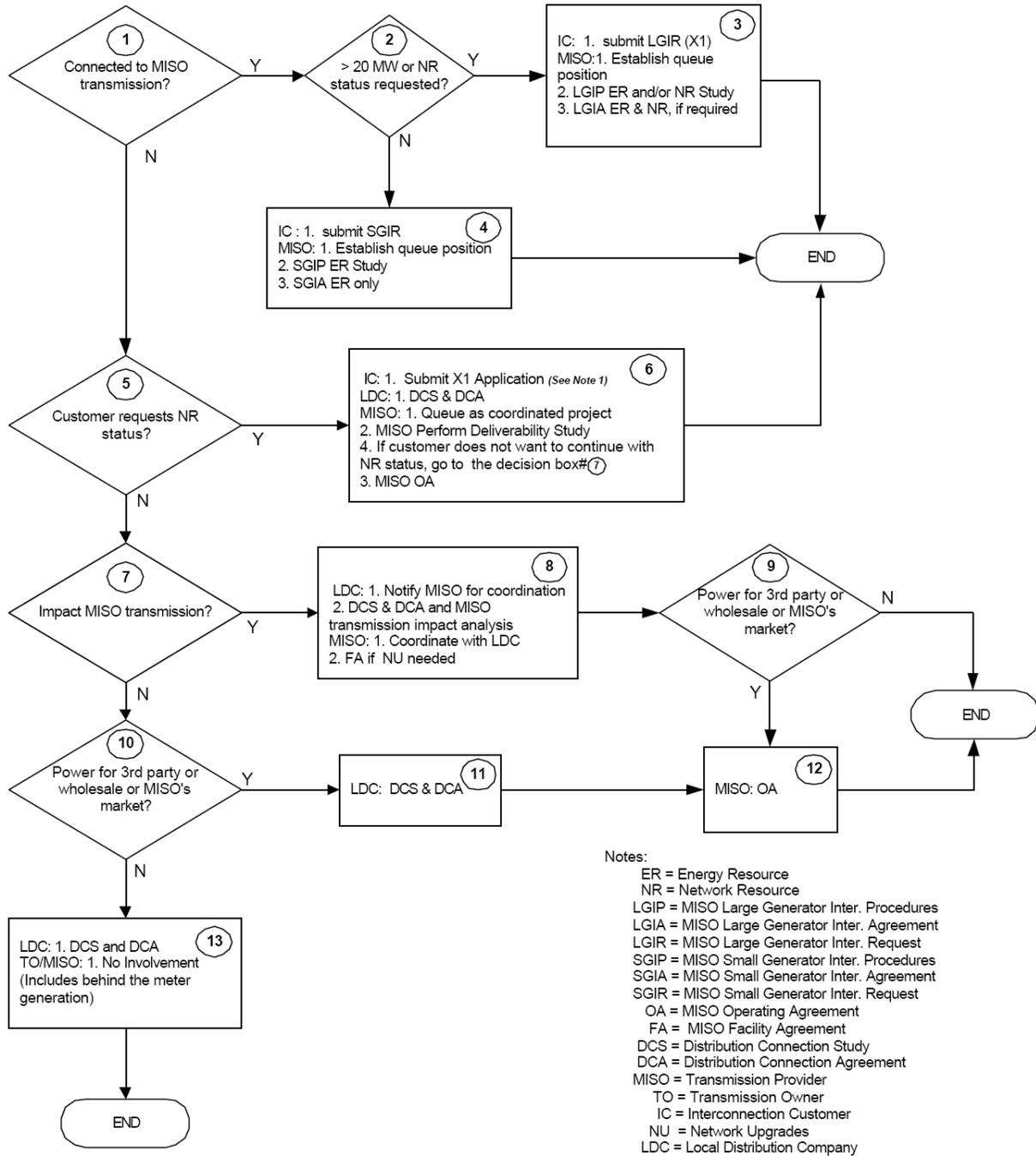
RECOMMENDATIONS

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%20G1%20Study%20&%20Agreement%20Options_rev2.pdf?action=download&_property=Attachment