

**MPSC Staff Strawman Proposals
for Improvements to Interconnection Procedures**

**DRAFT Document
for Discussion at June 19, 2007 Meeting of
30 kW & Larger Interconnection Procedures Workgroup**

INTRODUCTION

MPSC Staff has reviewed all comments received to date. In the following strawman proposal, Staff has attempted to accommodate, as best as possible, all comments. Staff presents this strawman proposal with the intention of leading to a productive dialogue and consensus on as many aspects of the proposal as possible.

Staff has categorized all comments into the following major categories:

1. Timelines, and ideas for developing reasonable and achievable timelines;
2. Interconnection costs, and ideas for assuring project developers will pay reasonable and actual costs;
3. Consultations with transmission utilities, and ideas about who will be responsible for consulting with transmission utilities, under what circumstances, etc.; and,
4. Identifying areas of opportunity for distribution system interconnections, where interconnection costs will be as low as possible and even where interconnection of distributed generation could reduce or avoid utility system costs.

In addition to those issues, Staff is researching:

5. Other miscellaneous issues raised in comments, but not covered in one of the previous four topic areas (including: insurance requirements and liabilities; pre-approved equipment lists; etc.); and
6. Possible power factor requirements for interconnected distributed generators.

Here are preliminary MPSC Staff recommendations for consideration. It should be noted that although the focus of this work group is on interconnections for systems 30 kW and larger, many of the concepts being discussed here could also be applicable to systems smaller than 30 kW.

As a matter of general perspective regarding the recommendations that will ultimately issue from this workgroup process, MPSC Staff has a preference for recommendations that can be adopted by consensus, and will improve the existing interconnection procedures to the extent possible, without having to await a new rulemaking proceeding to alter the existing rules. The Commission already noted, however, that some recommendations may require rulemaking, and established a new docket for that purpose, Case No. U-15239.¹ Thus, MPSC Staff has attempted in the following recommendations

¹ February 27, 2007 Order in Cases Nos. U-15113 and U-15239, pp. 6, 7, 9, 10.

to identify whether it believes each recommendation does or does not require rules changes prior to implementation.

MPSC Staff invites review and comment on these recommendations, and will present this information for discussion at a June 19, 2007 meeting at MPSC Offices, Hearing Room A, scheduled for 10 a.m. to noon.

1. Timelines, and ideas for developing reasonable and achievable timelines:
 - 1.1 Developers or customers may request pre-application meetings with the utility. The pre-application meeting will allow the project developer and/or customer to seek preliminary guidance from the utility regarding engineering and design alternatives, including preferred locations for interconnection (see section 4 in this list, on page 4).
 - 1.2 Utilities will note the date when an application for interconnection is received, and the utility will notify the applicant within 3 business days, in writing, that the application has been received.
 - 1.3 Utilities will notify the applicant in writing within 10 business days of the date the application is received, if the application has been determined to be incomplete. If the application is determined to be incomplete, this notification will explain to the applicant what information is missing and will provide adequate direction to the application to allow them to correct any deficiencies in the application.
 - 1.4 In general, for the time being and until any changes in timelines are completed through a rulemaking procedure, MPSC Staff recommends that the currently adopted interconnection procedures timelines be utilized, with the utility response time tolled during periods when the project is delayed due to events that are outside of the utility's control. Tolling of the utility response time will, in all cases, require notification from the utility to the applicant, in writing, explaining: (a) the date further action on the interconnection process has been delayed; (b) the reason for delay; (c) the party whose action or inaction has resulted in the reason for delay; and (d) what is required to resolve the issue and re-start the interconnection process. When the issue is resolved, then the utility will again notify the applicant, in writing, of the date when the problem or issue has been resolved and the interconnection process continues.
 - 1.5 Utility companies could stock some equipment that will be commonly used in interconnections. Utilities should first develop lists of commonly used equipment, and work with suppliers to reduce the time required to obtain equipment when it is ordered. Then, to the extent that the costs of stocking equipment are reasonable and prudent, utilities should do so.

MPSC Staff believes action can be taken to implement recommendations 1.1 through 1.5, prior to completing any formal revision of the interconnection rules. Formal revisions to the rules to accommodate these proposed recommendations will be developed as needed, for presentation in Case No. U-15239.

2. Interconnection costs, and ideas for assuring project developers will pay reasonable and actual costs
 - 2.1 Utilities will develop conceptual cost estimates for representative installations, based on generic interconnection parameters (subject to change based on actual circumstances for a specific project).
 - 2.2 Utilities shall maintain a list of qualified contractors as required by R 460.487(5).
 - 2.3 Utilities shall be required to obtain from qualified contractors three bids for the completion of interconnection work, and the customer shall be required to pay the amount associated with lowest of the three bids. The utility may utilize its own personnel to complete the interconnection work, but may not charge the customer more than the amount associated with the lowest of the three competitive bids.

MPSC Staff believes action can be taken to implement recommendations in 2.1 through 2.3, prior to completing any formal revision of the interconnection rules. Formal revisions to the rules to accommodate these proposed recommendations will be developed as needed, for presentation in Case No. U-15239.

3. Consultations with transmission utilities, and ideas about who will be responsible for consulting with transmission utilities, under what circumstances, etc.
 - 3.1 Utilities should determine whether distribution level interconnections are likely to affect the transmission network. If effects on the transmission system are anticipated, then the utility should notify both the Midwest Independent System Operator (MISO) and the transmission owner (TO) of the interconnection request.

Both MISO and the TO should be notified if the interconnected distributed generator: (a) is larger than 2 MW; or (b) will be capable of producing generation in excess of the minimum load on the distribution circuit. The utility shall notify the applicant, in writing, both that it has determined there is a need to notify MISO and the TO, and when the utility has completed that notification. Such notification to the three parties shall take place within not more than 10 days of the utility's receipt of a completed interconnection application.

- 3.2 As part of the notification provided under item 3.1 above, the distribution utility should inform MISO and the TO of the distribution utility's study schedule and the date by which the distribution utility needs information from MISO and the TO, to coordinate studies and consider transmission impacts, if needed. Within the timeframe requested, it is expected that MISO and the TO will notify the distribution utility whether they will be a participant in the study or do not believe additional analysis of the transmission system impacts is warranted at that time.
- 3.3 The utility should request that MISO and the TO: (a) acknowledge receipt of the notification within not more than three business days; and (b) notify the utility of their interest in participating in system studies within not more than 10 business days.

MPSC Staff believes action can be taken to implement recommendations 3.1 through 3.3, prior to completing any formal revision of the interconnection rules. Formal revisions to the rules to accommodate these proposed recommendations will be developed as needed, for presentation in Case No. U-15239. Staff notes that MPSC does not have regulatory authority over MISO or Michigan transmission owners, who are the subject of recommendation 3.2 and at least partly of recommendation 3.3. Staff understands that MISO and TOs are ready and willing to cooperate with this proposed procedure, and Staff seeks guidance from interested parties about this recommendation.

4. Identifying areas of opportunity for distribution system interconnections, where interconnection costs will be as low as possible and even where interconnection of distributed generation could reduce or avoid utility system costs.
 - 4.1 MPSC Staff believes this recommendation must be considered for three different types of interconnection location decisions: (1) on or adjacent to the premises of a single customer; (2) within a small prescribed area defined by the applicant or system developer; and (3) within larger areas identified by the utility company. Whenever possible, the utility company should provide information suitable for decision making regarding (1) and (2) at or as soon as possible following a pre-application meeting with the applicant and/or developer. Information regarding the third type of location decision should be developed by the utility and made available to all interested parties, with updates no less frequent than every 24 months.
 - 4.2 For type (1) decisions, the utility shall notify the customer of interconnection options and the likely costs associated with interconnecting at any reasonable point on or very near to the customer's premises.
 - 4.3 For type (2) decisions, the applicant or system developer will be responsible for letting the utility know the general area where an interconnection is proposed, and/or a choice of possible locations. For example, a project

might be proposed for installation anywhere within an area that is a specific distance from a specified point on the utility network, or another project might be proposed for installation at any of several multiple properties all owned or controlled by one entity.

For both type (1) and (2) decisions, the utility shall determine whether system studies are required in order to determine specific information adequate to provide the applicant or developer with reasonably accurate information upon which an interconnection location decision can be made. If the utility determines that further study is required, then the utility should notify the applicant or developer of that fact, and provide a schedule for the completion of that study.

4.4 For type (3) decisions, the utility should develop a map that indicates locations that are most suitable for the interconnection of distributed generation and are most likely to minimize interconnection costs. MPSC Staff is aware of similar efforts at Pacific Gas & Electric (reported in Lovins, et al., 2002, *Small is Profitable*), Commonwealth Edison, and Consolidated Edison, 2006, DSM 'Load Relief' RFP).

MPSC Staff believes action can be taken to implement recommendations 4.1 through 4.4, prior to completing any formal revision of the interconnection rules. Formal revisions to the rules to accommodate these proposed recommendations will be developed as needed, for presentation in Case No. U-15239.

5. Other miscellaneous issues raised in comments

5.1 Liability insurance. Comment from one developer is that additional liability insurance is unnecessary. MPSC Staff notes that insurance provisions are not presently included in Michigan's interconnection rules, but the Commission did approve the interconnection procedures document which explains that insurance and liability will be among those subjects covered in the utility interconnection and operating agreement.

It would be imprudent for a generator not to have ample insurance coverage, but MPSC Staff does not believe the existing rules allow the utility company to require any specific coverage. Interconnection contracts may include a statement to the effect that the generator acknowledges and accepts their potential liability in the event of an accident, however.

MPSC Staff recommends that all interested parties review the Wisconsin PSC Chapter 119 Rules for Interconnecting Distributed Generation Facilities, part PSC 119.05, and consider whether the Wisconsin insurance and indemnification provisions should be applicable for Michigan, too. (See http://www.michigan.gov/documents/mpsc/30_and_Larger_April_20_Comments_194118_7.pdf, pp. 9-10.)

- 5.2 Streamlining engineering studies. Recommendation is that utilities should make a determination quickly, whether studies are needed. MPSC Staff supports this concept, and believes this goal can be met by incorporating the recommendations listed under 1 through 4, above.
- 5.3 Simplified one-line diagrams. Recommendation is that the one-line diagrams required by utilities are presently too complex and should allow for further simplification. MPSC Staff seeks further clarification on this issue, and invites interested parties to submit more specific information.
- 5.4 Standby rates. Recommendation is that standby rates are presently excessive and should be lowered. MPSC Staff notes this issue is beyond the scope of the interconnection procedures process being investigated in U-15113, and suggests that interested parties address this issue in utility rate cases or other appropriate venues. MPSC Staff notes it believes that MISO Midwest Market rates are now available to provide backup power to customers, as needed, in lieu of purchasing standby and backup service from the utility company.
- 5.5 Criteria/Standards for Grid Interface Equipment. Comments state that requiring utility grade equipment is unnecessary and that industrial grade relays should be sufficient. MPSC Staff believes that decisions about equipment specifications should be determined by the appropriate national or international standards. IEEE 1547 specifies the performance that an interconnected system must meet. For customer-purchased equipment, the requirement should be for the interconnected system to meet performance specifications – subject to utility verification through a witnessed test –, and the customer should have discretion regarding equipment grade.

Comments also recommend that interface equipment be standardized, insofar as that is possible. This issue is addressed in recommendations 1.5 and 2.1.

- 5.6 Payments/Ownership of Interface Equipment. Recommendation is that the customer should be compensated for the residual value of interconnection equipment, if any, if the customer has paid for the installation of equipment which later turns out not to be needed for that customer's installation (if the generator ceases operation, for example). MPSC Staff recommends that current accounting practices be reviewed in order to determine the practicality of implementing this type of recommendation.
- 5.7 Utility financial self-interest. Recommendation is to consider how financial incentives can be changed to make utility cooperation with interconnections to be in the financial interest of the utility. MPSC Staff notes this issue is beyond the scope of the interconnection procedures process being investigated in U-15113, and suggests that interested parties address this

issue in utility rate cases or other appropriate venues.

6. Possible power factor requirements for interconnected distributed generators

MPSC Staff recommends Michigan apply the general standard that the power factor requirements for distributed generators should match the requirements for customer loads, for the rate under which the distributed generation customer is served. MPSC Staff recommends Michigan utilize this language from the recently approved Maryland interconnection standards:

Reactive Power

The Interconnection Customer shall design its Small Generator Facility to maintain a composite power delivery at continuous rated power output at the Point of Interconnection at a power factor within the power factor range required by the [utility's] applicable tariff for a comparable load customer. [The utility] may also require the Interconnection Customer to follow a voltage or VAR schedule if such schedules are applicable to similarly situated generators in the control area on a comparable basis and have been approved by the Commission. The specific requirements for meeting a voltage or VAR schedule shall be clearly specified in Attachment 4. Under no circumstance shall these additional requirements for reactive power or voltage support exceed the normal operating capabilities of the Small Generator Facility.