

STATE OF IOWA
DEPARTMENT OF COMMERCE
UTILITIES BOARD

<p>IN RE:</p> <p>REVIEW OF ELECTRIC INTERCONNECTION OF DISTRIBUTED GENERATION FACILITIES RULES [199 IAC CHAPTER 45]</p>	<p>DOCKET NO. RMU-2016-0003</p>
---	---------------------------------

ORDER ADOPTING AMENDMENTS

(Issued December 28, 2016)

On July 22, 2016, the Utilities Board (Board) issued an “Order Commencing Rule Making” in Docket No. RMU-2016-0003. In that order the Board proposed changes to its “Electric Interconnection of Distributed Generation Facilities” rules, found in 199 IAC chapter 45. On August 8, 2016, the Board issued an order requesting comments on proposed forms and processes that were to be removed from the Board’s chapter 45 rules. On October 18, 2016, the Board issued an order requesting comments on potential rule changes that were proposed by Interstate Power and Light Company (IPL). Many of the rule changes proposed by the Board incorporated stakeholder input from Docket No. NOI-2014-0001.

The Board received comments from MidAmerican Energy Company (MidAmerican); Iowa Association of Electric Cooperatives (IAEC); the Office of Consumer Advocate (OCA), a Division of the Iowa Department of Justice; and IPL. The Board also received joint comments from the Environmental Law & Policy

Center, Interstate Renewable Energy Council, Inc., and the Iowa Environmental Council (Environmental Commenters). ITC Midwest LLC filed an appearance in the docket but did not provide comments.

The proposed revisions to chapter 45 were published in the Iowa Administrative Bulletin on August 17, 2016, and identified as ARC 2673C. The Board is adopting the proposed amendments with certain revisions based upon comments received by the Board. The revisions are discussed below. Those amendments proposed by the Board that received no comments, or only favorable comments, will be adopted as proposed. The specific amendments adopted by the Board are set out in the “Adopted and Filed” notice attached to this order and incorporated herein by reference.

A. Rule 199 IAC 45.1

IPL suggests the Board remove the definition for “draw out type circuit breaker” because the term will no longer be used in the rules. The Board will remove the definition of “draw out type circuit breaker.”

MidAmerican proposes the following revision to the definition of “disconnection device”:

“Disconnection device” means a lockable visual disconnect or other disconnection device, such as, but not limited to, a service disconnect, gang operated, or main disconnect breaker capable of isolating, disconnecting and de-energizing the residual voltage in a customer-

sited distributed generation facility or distributed energy storage facility subject to the requirements of Chapters 15 and 45.¹

Both IAEC and OCA support MidAmerican's suggestion to remove the phrase "such as, but not limited to, a service disconnect, or gang operated main disconnect, or breaker" and include the word "isolating." Both parties state that the change helps to clarify that the devices include only those that will disconnect the generating facility and not those that disconnect the main service. However, neither IAEC or OCA supports the inclusion of the term "customer-sited." Environmental Commenters support the Board's proposed definition.

Based on the comments received, the Board will adopt the following definition of "disconnection device":

"Disconnection device" means a lockable visual disconnect or other disconnection device capable of isolating, disconnecting, and de-energizing the residual voltage in a distributed generation facility.

B. Rule 199 IAC 45.2

IPL states that potential impacts to electrical systems not owned or operated by the interconnecting utility should be addressed and proposed the following revision to 199 IAC 45.2(1):

45.2(1) This chapter applies to utilities, and distributed generation facilities seeking to operate in parallel with utilities, provided the facilities are not subject to the interconnection requirements of an affected system, the Federal Energy Regulatory Commission (FERC), the ~~Midwest~~ Midcontinent Independent Transmission System Operator,

¹ Amendments proposed in the Board's "Notice of Intended Action" are shown by strikethrough and underline. Changes to the Board's proposed rules suggested by commenters are shown shaded in gray.

Inc. (MISO), the Southwest Power Pool (SPP), the Midwest Reliability Organization (MRO), Mid-Continent Area Power Pool (MAPP) or the SERC Reliability Corporation (SERC).

OCA states that the language proposed by IPL has the potential to increase customer costs and impose additional barriers for distributed generation. IPL notes that interconnection customers are currently responsible for the cost of feasibility, system, and facility studies. Therefore, the customer should also be responsible for the cost of an affected system study and any subsequent construction resulting from the installation of the distributed generation facility. IAEC and MidAmerican support IPL's proposed change.

The Board will adopt the change proposed by IPL.

C. Rule 199 IAC 45.3

1. 45.3(2) *Interconnection facilities*

Environmental Commenters generally support the Board's proposal to clarify the phrase "adjacent to the meter," but they believe there may be instances in which the placement of the disconnect device may require additional flexibility. They suggest the Board adopt the following language, to be included at the end of paragraph 45.3(2)(a):

In limited circumstances, where the distributed generation facility is not installed at the building with the electric meter and the applicant can demonstrate significant expense or difficulty in locating the disconnection device adjacent to the meter, the disconnection device may be located adjacent to the distributed generation facility and an additional placard must be placed at the electric meter to provide specific information regarding the distributed generation facility and the disconnection device.

The Board will not adopt the amendment proposed by Environmental Commenters. Iowa Code § 476.58(2)(a) requires that “a disconnection device be installed at a location that is easily visible and adjacent to an interconnection customer’s electric meter.” The amendment proposed by Environmental Commenters does not comply with this statutory directive.

IAEC suggests that subparagraph 45.3(2)(a)(1) be amended to require the customer to notify the electric utility before additional generation capacity is added to the system and require that the customer comply with the electric utility’s tariff, which may require a disconnect device. The Board will adopt subparagraph 45.3(2)(a)(1) as follows:

(1) If an interconnection customer with distributed generation facilities installed prior to July 1, 2015, adds generation capacity to its existing system that does not require upgrades to the electric meter or electrical service, a disconnection device is not required, unless required by the electric utility’s tariff. The customer must notify the electric utility before the generation capacity is added to the existing system.

2. 45.3(4) *Inspections and testing*

IPL asserts that subrule 45.3(4) require testing once every five years even if the manufacturer’s prescribed testing interval is greater than five years. Also, IPL recommends that this subrule require the operator to provide the test reports and maintenance records to the utility upon request. IPL proposes the following revisions:

The operator of the qualifying facility or AEP facility shall adopt a program of inspection and testing of the generator and its appurtenances and the interconnection facilities in order to determine necessity for replacement and repair. Such a program should include all periodic tests and maintenance prescribed by the manufacturer; however, if the periodic testing of interconnection-related protective functions is greater than five years or not specified by the manufacturer, it should occur at least every five years. The operator, upon electric utility request, shall provide all test reports to the electric utility documenting the existing settings as well as the "as found" and "as left" test results. All interconnection-related protective functions shall be periodically tested and a system that depends upon battery for trip power shall be checked and logged. Complete maintenance records shall be maintained by the operator and be made available upon request by the electric utility. Representatives of the electric utility shall have access at all reasonable hours to the interconnection equipment specified in subrule 15.10(3) for inspection and testing with reasonable prior notice to the applicant. If the electric utility discovers the applicant's facility is not in compliance with the requirements of IEEE Standard 1547, or any part of the foregoing, and the noncompliance adversely affects the safety or reliability of the electrical system, the electric utility may require disconnection of the applicant's facility until it complies with this chapter.

OCA supports IPL's suggested revisions because the additional requirements would help ensure public safety. Environmental Commenters state it would create an unnecessary expense to require more frequent testing than the manufacturer recommendations. Also, they state the reporting requirements would create a burden for system operators.

The Board will amend subrule 45.3(4) to incorporate some of IPL's suggestions. Inspecting the facility as prescribed by the manufacturer or once every five years should provide reasonable assurance that the facility is operating properly. It is also reasonable for the facility operator to maintain the test reports and provide

them to the utility if requested. However, it is unclear what records are included in the term “complete maintenance records.” The Board will not require operators to maintain those records or make them available to the utility. The Board will adopt the following amendments to subrule 45.3(4):

45.3(4) *Inspections and testing.* The operator of the distributed generation facility shall adopt a program of inspection and testing of the generator and its appurtenances and the interconnection facilities in order to determine necessity for replacement and repair. Such a program shall include all periodic tests and maintenance prescribed by the manufacturer. If the periodic testing of interconnection-related protective functions is not specified by the manufacturer, periodic testing shall occur at least once every five years. All interconnection-related protective functions shall be periodically tested, and a system that depends upon a battery for trip power shall be checked and logged. Test reports shall be maintained by the operator and made available upon request by the electric utility. Representatives of the utility shall have access at all reasonable hours to the interconnection equipment specified in subrule 45.3(2) for inspection and testing with reasonable prior notice to the applicant. If the utility discovers that the applicant’s facility is not in compliance with the requirements of IEEE Standard 1547, and the noncompliance adversely affects the safety or reliability of the electrical system, the utility may require disconnection of the applicant’s facility until the facility complies with this chapter.

3. 45.3(6) *Notification*

Environmental Commenters state Iowa Code § 476.58 requires owners of distributed generation facilities to provide information to fire department personnel; however, the Board’s proposed notice requirements go beyond the requirements of the statute and may lead to a patchwork of notice requirements across Iowa. They recommend the Board limit the requirements to a site map and limited supplemental information to ensure the distributed generation facility and disconnection device are

clearly identified. Also, they state the requirements should be standardized and should not allow fire departments to request information not provided for in the rules.

IPL proposes the addition of a new paragraph (d) to aid in the enforcement of the notification requirements:

d. An interconnection customer failing to comply with the foregoing requirements may be disconnected as provided in 199 IAC 20. The disconnection process details shall be provided in individual electric utility tariffs or the interconnection agreement.

IAEC is supportive of the Board's proposed rule as shown in the "Notice of Intended Action." IAEC believes local fire department personnel should be allowed to collect additional information within their jurisdiction that promotes safety.

OCA asserts the Board has ample statutory authority to require the information as proposed. However, OCA suggests the following revision:

45.3(6) Notification. When the distributed generation facility is placed in service, owners of interconnected distributed generation facilities are required to notify local paid or volunteer fire departments via U.S. mail of the location of distributed generation facilities and the associated disconnection device(s). The owner is required to provide any information related to the distributed generation facility as reasonably required by that local fire department including but not limited to:

The Board proposed subrule 45.3(6) in advance of a workshop held on October 6, 2015. Comments at the workshop were supportive of the Board's proposed rule. The Board will adopt subrule 45.3(6) as follows:

45.3(6) Notification. When the distributed generation facility is placed in service, owners of interconnected distributed generation facilities are required to notify local fire departments via U.S. mail of the location of distributed generation facilities and the associated disconnection device(s). The owner is required to provide any information related to

the distributed generation facility as reasonably required by that local fire department including but not limited to:

- a. A site map showing property address; service point from utility company; distributed generation facility and disconnect location(s); the location of rapid shutdown and battery disconnect(s), if applicable; property owner's or owner's representative's emergency contact information; utility company's emergency telephone number; and size of the distributed generation facility.
- b. Information to access the disconnection device.
- c. A statement from the owner verifying that the distributed generation facility was installed in accordance with the current state-adopted National Electrical Code.

4. Disconnections

In paragraph 45.3(2)(f) proposed by the Board, a customer's electric service could be disconnected for failing to comply with requirements in paragraphs 45.3(2)(a)-(e). Additionally, the Board's proposed subrule 45.3(4) includes a provision that allows the utility to disconnect the applicant's distributed generation facility if it was not in compliance with the requirements of the Institute of Electrical and Electronics Engineers (IEEE) standard 1547 and the noncompliance adversely affects the safety or reliability of the electrical system.

MidAmerican states the penalty for noncompliance should be disconnection of the distributed generation facility rather than the customer's electric service.

MidAmerican proposed the following revision:

45.3(2)(f) If an interconnection customer failing fails to comply with the foregoing requirements, the electric utility may require disconnection of the distributed generation facility or distributed energy storage facility until it complies with this chapter. ~~may be disconnected as provided in 199 Chapter 20.~~ The disconnection process details shall be provided in individual utility tariffs or in the interconnection

agreement. If separate disconnection of only the distributed generation facility or the distributed energy storage facility is not feasible or safe, the customer may be disconnected as provided in 199 IAC—Chapter 20.

MidAmerican also suggests the rules address reconnection of a distributed generation facility that has been disconnected for noncompliance. MidAmerican recommends the Board adopt the following:

Reconnections. If a customer's facility is disconnected due to noncompliance with section 45.3 of this chapter, the customer shall be responsible for payment of any costs associated with reconnection of the facility once it is in compliance with the rules.

IPL supports the Board's proposed rule but suggests moving the penalty for noncompliance to the end of the rule which would reinforce all requirements. IAEC is supportive of the Board's proposed rules but does not object to limiting the disconnection to the distributed generation facility when that can be accommodated with a separate disconnection device.

OCA states written notice and an opportunity to comply should be the first step when a customer is not in compliance with the rules. OCA encourages the Board to modify the language so that when a disconnection device is installed only the distributed generation facility would be disconnected for noncompliance. OCA asserts a customer's electric service should only be disconnected when it is not feasible to separately disconnect the customer's interconnected distributed generation facility. OCA also supports moving the disconnection language to the end of the rule and proposes the following revisions:

45.3(7) Disconnections. If an interconnection customer fails to comply with the foregoing requirements of this rule and facility's noncompliance adversely affects the safety or reliability of the electric system, the electric utility may require disconnection of the applicant's facility until the facility complies with this chapter. The disconnection process shall be specified in individual electric utility tariffs or in the interconnection agreement. If separate disconnection of only the distributed generation facility is not feasible or safe, the customer may be disconnected as provided in 199—Chapter 20.

The Board will strike proposed paragraph 45.3(2)(f) and similar language from subrule 45.3(4). The penalty for noncompliance will be moved to the end of rule 45.3 so that it applies to all requirements of rule 45.3. The Board will also adopt MidAmerican's proposed subrule regarding reconnections. The Board will adopt subrules 45.3(7)-(8) as follows:

45.3(7) Disconnections. If an interconnection customer fails to comply with the foregoing requirements of 45.3, the electric utility may require disconnection of the applicant's distributed generation facility until the facility complies with 45.3. The disconnection process shall be specified in individual electric utility tariffs or in the interconnection agreement. If separate disconnection of only the distributed generation facility is not feasible or safe, the customer's electric service may be disconnected as provided in 199—Chapter 20.

45.3(8) Reconnections. If a customer's distributed generation facility or electric service is disconnected due to noncompliance with 45.3, the customer shall be responsible for payment of any costs associated with reconnection once the facility is in compliance with the rules.

D. Rule 199 IAC 45.4

In the July 22, 2016, order, the Board proposed adding the newly drafted preapplication request process and supplemental review process to the Board's website rather than including those processes in the Board's rules. The Board also

proposed removing the interconnection request forms from the rules and including them on the Board's website so that they would be more accessible and less burdensome to modify.

The commenters assert the new processes should be included in the rules and that the interconnection fees, which are currently listed on the interconnection application forms, should also be included as part of the rules.

1. Preapplication Process

MidAmerican suggests the Board revise the initial paragraph of the preapplication process to include multi-turbine wind projects rather than just rooftop solar. MidAmerican also states the third-party customer-specific information should be protected in the utility-provided preapplication report. IPL supports the inclusion of the preapplication process in the rules, but states it does not currently have access to some of the data to be included in the preapplication report.

The Board will include the preapplication request process in the rules. The Board will adopt amendments to subrule 45.4(1) and new subrule 45.4(2) as shown below:

45.4(1) Applicants seeking to interconnect a distributed generation facility shall submit an interconnection request to the utility that owns the electric distribution system to which interconnection is sought. Applicants shall identify in the application if they are representing a group of customers that are located in the same vicinity and whether the application requires a group interconnection study. Applicants shall ~~follow the board-approved processes and use the board-approved interconnection request forms approved by the board and agreements that are provided on the board's Web site, <http://iub.iowa.gov>.~~ Applicants may request a preapplication report from the utility using the

board-approved preapplication request process that is provided on the board's Web site.

- 45.4(2) *Preapplication Request.*** Applicants may request a preapplication report from the utility using the following process:
- a. The utility shall designate an employee or office from which information on the application process and on the Affected system can be obtained through informal requests from the Applicant presenting a proposed project for a specific site, which may include multiple proposed individual interconnections in close proximity and related to one project such as a residential or commercial development proposing roof-top solar on each premise or a multi-turbine wind project. The name, telephone number, and E-mail address of such contact employee or office shall be made available on the utility's Web site. Electric system information provided to the Applicant should include relevant available system studies, interconnection studies, and other materials useful to get an understanding of an interconnection at a particular point on the utility's electric distribution system, to the extent such provision does not violate confidentiality provisions of prior agreements or critical infrastructure requirements. The utility shall comply with reasonable requests for such information.
 - b. In addition to the information described in 45.4(2)(a), which may be provided in response to an informal request, an Applicant may submit a formal written request form along with a non-refundable fee of \$300 for a preapplication report on a proposed project at a specific site. The utility shall provide the preapplication data described in 45.4(2)(a) to the applicant within 20 business days of receipt of the completed request form and payment of the \$300 fee. The preapplication report produced by the utility is non-binding, does not confer any rights, and the applicant must still successfully apply to interconnect to the utility's system. The written preapplication report request form shall include the following information to clearly and sufficiently identify the location of the proposed point of interconnection:
 - (1) Proposed distributed generation facility owner's contact information, including name, address, phone number, and E-mail address.
 - (2) Project location (street address with nearby cross streets and town).
 - (3) Meter number, pole number, or other equivalent information identifying proposed point of interconnection, if available.
 - (4) Generator Type (e.g., solar, wind, combined heat and power, etc.).
 - (5) Size (alternating current kW).

- (6) Single or three phase generator configuration.
 - (7) Stand-alone generator (no onsite load, not including station service – Yes or No?).
 - (8) Is new service requested? Yes or No? If there is existing service, include the customer account number, site minimum and maximum current or proposed electric loads in kW (if available) and specify if the load is expected to change.
- c. Using the information provided in the preapplication report request form in 45.4(2)(b), the utility will identify the substation/area bus, bank or circuit likely to serve the proposed point of interconnection. This selection by the utility does not necessarily indicate, after application of the screens and/or study, that this would be the circuit to which the distributed generation facility ultimately be connected or that interconnection will occur. The applicant must request additional pre-application reports if information about multiple points of interconnection is requested. Subject to 45.4(2)(d) and other confidentiality concerns identified by the utility, the preapplication report will include the following information:
- (1) Total capacity (in MW) of substation/area bus, bank or circuit based on normal or operating ratings likely to serve the proposed point of interconnection.
 - (2) Existing aggregate generation capacity (in MW) interconnected to a substation/area bus, bank or circuit (i.e., amount of generation online) likely to serve the proposed point of interconnection.
 - (3) Aggregate queued generation capacity (in MW) for a substation/area bus, bank or circuit (i.e., amount of generation in the queue) likely to serve the proposed point of interconnection.
 - (4) Available capacity (in MW) of substation/area bus or bank and circuit likely to serve the proposed point of interconnection (i.e., total capacity less the sum of existing aggregate generation capacity and aggregate queued generation capacity).
 - (5) Substation nominal distribution voltage and/or transmission nominal voltage if applicable.
 - (6) Nominal distribution circuit voltage at the proposed point of interconnection.
 - (7) Approximate circuit distance between the proposed point of interconnection and the substation.
 - (8) Relevant line section(s) actual or estimated peak load and minimum load data, including daytime minimum load and absolute minimum load, when available.
 - (9) Number and rating of protective devices and number and type (standard, bi-directional) of voltage regulating devices between the

proposed point of interconnection and the substation/area. Identify whether the substation has a load tap changer.

(10) Number of phases available at the proposed point of interconnection. If it is a single phase, distance from the three-phase circuit.

(11) Limiting conductor ratings from the proposed point of interconnection to the distribution substation.

(12) Whether the point of interconnection is located on a spot network, grid network, or radial supply.

(13) Based on the proposed point of interconnection, existing or known constraints such as, but not limited to, electrical dependencies at that location, short circuit interrupting capacity issues, power quality or stability issues on the circuit, capacity constraints, or secondary networks.

d. The preapplication report need only include existing data. A preapplication report request does not obligate the utility to conduct a study or other analysis of the proposed generator in the event that data is not readily available. If the utility cannot complete all or some of the preapplication report due to lack of available data, the utility shall provide the applicant with a preapplication report that includes the data that is available. The provision of information on "available capacity" pursuant to 45.4(2)(c)(4) does not imply that an interconnection up to this level may be completed without impacts since there are many variables studied as part of the interconnection review process, and data provided in the preapplication report may become outdated at the time of the submission of the complete interconnection request. Notwithstanding any of the provisions of this section, the utility shall, in good faith, include data in the preapplication report that represents the best available information at the time of reporting.

2. Interconnection Fees

Environmental Commenters state they do not object to the interconnection fees proposed by the Board. IAEC states it supports the fee levels proposed. The Board will adopt the following amendment to subrule 45.4(3), which includes the interconnection fees:

~~45.4(2)~~**45.4(3)** Utilities shall specify the fee by level that the applicant shall remit to process the interconnection request. The fee shall be specified in the interconnection request forms. ~~Utilities may charge a fee by level that applicants must remit in order to process an interconnection request.~~ The utilities shall not charge more than the fees as specified in the Standard Application Forms in Appendix A (199—45.14(476)) and Appendix C (199—45.16(476)) Level 1 Interconnection Request Application form and Distributed Generation Interconnection Agreement or the Levels 2 to 4 Interconnection Request Application form, which are located on the board's Web site. below:

- a. Level 1 - \$125 application fee and up to an additional \$125 if the utility performs a Witness Test as specified in 45.5(10).
- b. Level 2 - \$250 application fee plus \$1.00 per kVA and up to an additional \$125 if the utility performs a Witness Test as specified in 45.5(10).
- c. Level 3 - \$500 application fee plus \$2.00 per kVA.
- d. Level 4 - \$1,000 application fee plus \$2.00 per kVA.

E. Rule 199 IAC 45.9

MidAmerican supports the supplemental review process proposed by the Board and believes the process will provide a more time- and cost-effective review process for both customers and the utilities. MidAmerican recommends the process be included in the Board's rules. IPL supports the inclusion of the supplemental review process in the Board's rules but notes it does not currently have much of the data associated with the minimum load screen, voltage and power quality screen, or the safety and reliability screen. Environmental Commenters also recommend the supplemental review process be included in the rules.

The Board will amend subrule 45.9(6) to include the supplemental review process as follows:

45.9(6) ~~Additional Supplemental~~ review may be appropriate when a distributed generation facility fails to meet one or more of the Level 2 screens. The utility shall offer to perform ~~additional a supplemental~~ review to determine whether there are minor modifications to the distributed generation facility or electric distribution system that would enable the interconnection to be made safely ~~and so that it will not cause without causing~~ adverse system impacts. ~~The utility shall provide the applicant with a nonbinding estimate for the costs of additional review and the costs of minor modifications to the electric distribution system. The utility shall undertake the additional review only after the applicant pays for the additional review. The utility shall undertake the modifications only after the applicant pays for the modifications. The utility shall adopt the board-approved supplemental review process unless the utility has defined a supplemental review process in its board-approved tariff. The board-approved supplemental review process is provided on the board's Web site.~~ To accept the offer of a supplemental review, the Applicant shall agree in writing, and submit a deposit for the estimated costs of the supplemental review in the amount of the utility's good faith non-binding estimate of the costs for such review, both within 15 business days of the offer. If the written agreement and deposit have not been received by the utility within that timeframe, the interconnection request shall continue to be evaluated under the applicable study process unless it is withdrawn by the Applicant.

- a. The Applicant may specify the order in which the utility will complete the screens in section 45.9(6)(c).
- b. The Applicant shall be responsible for the utility's actual costs for conducting the supplemental review. The Applicant must pay any review costs that exceed the deposit within 20 business days of receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced costs, the utility will return such excess within 20 business days of the invoice without interest.
- c. Within 30 business days following receipt of the deposit for a supplemental review, the utility shall:
 - (1) Perform a supplemental review using the screens set forth below;
 - (2) Notify in writing the Applicant of the results; and
 - (3) Include with the notification, copies of the analysis and data underlying the utility's determinations under the screens.
- d. Unless the Applicant provided instructions on how to respond to the failure of any of the supplemental review screens identified below at the time the Applicant accepted the offer of a supplemental review,

the utility shall notify the Applicant following the failure of any of the screens, or if it is unable to perform the screen in section 45.9(6)(d)(1), within two business days of making such determination to obtain the Applicant's permission to: (1) continue evaluating the proposed interconnection under this section; (2) terminate the supplemental review and continue evaluating the small generating facility; or (3) terminate the supplemental review upon withdrawal of the interconnection request by the Applicant.

(1) Minimum Load Screen: Where 12 months of line section minimum load data (including onsite load but not station service load served by the proposed small generating facility) are available, can be calculated, can be estimated from existing data, or determined from a power flow model, the aggregate generating facility capacity on the line section must be less than 100 percent of the minimum load for all line sections bounded by automatic sectionalizing devices upstream of the proposed small generating facility. If minimum load data is not available, or cannot be calculated, estimated or determined, the utility shall include the reason(s) that it is unable to calculate, estimate or determine minimum load in its supplemental review results notification under section c above.

A. The type of generation used by the proposed small generating facility will be taken into account when calculating, estimating, or determining circuit or line section minimum load relevant for the application of screen. Solar photovoltaic (PV) generation systems with no battery storage use daytime minimum load (i.e. 10 a.m. to 4 p.m. for fixed panel systems and 8 a.m. to 6 p.m. for PV systems utilizing tracking systems), while all other generation uses absolute minimum load.

B. When this screen is being applied to a small generating facility that serves some station service load, only the net injection into the utility's electric system will be considered as part of the aggregate generation.

C. Utility will not consider generating facility capacity known to be already reflected in the minimum load data as part of the aggregate generation for purposes of this screen.

(2) Voltage and Power Quality Screen: In aggregate with existing generation on the line section: (1) the voltage regulation on the line section can be maintained in compliance with relevant requirements under all system conditions; (2) the voltage fluctuation is within acceptable limits as defined by the Institute of Electrical and Electronics Engineers (IEEE) Standard 1453, or

utility practice similar to IEEE Standard 1453; and (3) the harmonic levels meet IEEE Standard 519 limits.

(3) Safety and Reliability Screen: The location of the proposed small generating facility and the aggregate generation capacity on the line section do not create impacts to safety or reliability that cannot be adequately addressed without application of the study process. The utility shall give due consideration to the following and other factors in determining potential impacts to safety and reliability in applying this screen.

A. Whether the line section has significant minimum load levels dominated by a small number of customers (e.g., several large commercial customers).

B. Whether the load along the line section is uniform or even.

C. Whether the proposed small generating facility is located in close proximity to the substation (i.e., less than 2.5 electrical circuit miles), and whether the line section from the substation to the point of interconnection is a mainline rated for normal and emergency ampacity.

D. Whether the proposed small generating facility incorporates a time delay function to prevent reconnection of the generator to the system until system voltage and frequency are within normal limits for a prescribed time.

E. Whether operational flexibility is reduced by the proposed small generating facility, such that transfer of the line section(s) of the small generating facility to a neighboring distribution circuit/substation may trigger overloads or voltage issues.

F. Whether the proposed small generating facility employs equipment or systems certified by a recognized standards organization to address technical issues such as, but not limited to, islanding, reverse power flow, or voltage quality.

e. If the proposed interconnection passes the supplemental screens in sections 45.9(6)(d)(1),(2), and (3), the interconnection request shall be approved and the utility will provide the Applicant with an executable interconnection agreement within the timeframes established in sections 45.9(6)(f) and (g). If the proposed interconnection fails any of the supplemental review screens and the Applicant does not withdraw its interconnection request, it shall continue to be evaluated under the Level 4 study process consistent with 199 IAC 45.11.

f. If the proposed interconnection passes the supplemental screens in sections 45.9(6)(d)(1),(2), and (3) and does not require construction of facilities by the utility on its own system, the interconnection

agreement shall be provided within ten business days after the notification of the supplemental review results.

g. If interconnection facilities or minor modifications to the utility's system are required for the proposed interconnection to pass the supplemental screens in sections 45.9(6)(d)(1),(2), and (3), and the Applicant agrees to pay for the modifications to the utility's electric system, the interconnection agreement, along with a non-binding good faith estimate for the interconnection facilities and/or minor modifications, shall be provided to the Applicant within 15 business days after receiving written notification of the supplemental review results.

h. If the proposed interconnection would require more than interconnection facilities or minor modifications to the utility's system to pass the supplemental screens in sections 45.9(6)(d)(1),(2), and (3), the utility shall notify the Applicant at the same time it notifies the Applicant with the supplemental review results, that the interconnection request shall be evaluated under the Level 4 study process unless the Applicant withdraws its small generating facility.

F. Rule 199 IAC 45.11

IPL proposes several changes to subparagraphs 45.11(6)(a)(2) and 45.11(6)(b)(5)-(7) as follows:

45.11(6)(a)(2):

(2) Identification of affected systems and any subsequent affected system study;

45.11(6)(b)(5-7):

(5) Protection and set point coordination studies; and

(6) Grounding reviews.; and

(7)Results from the affected system study

IPL states the proposed changes will provide transparency and clarity related to the affected system study. IAEC and MidAmerican support the changes proposed by IPL.

Environmental Commenters do not object to IPL's proposed revisions but suggest subrule 45.11(6) be amended to ensure the utility coordinates with the affected system owner so the results of any affected system study are received in a timely manner. Environmental Commenters propose the following amendment:

45.11(6) Interconnection system impact study. An interconnection system impact study evaluates the impact of the proposed interconnection on both the safety and reliability of the utility's electric distribution system. The study identifies and details the system impacts that interconnecting the distributed generation facility to the utility's electric system have if there are no system modifications. It focuses on the potential or actual adverse system impacts identified in the interconnection feasibility study, including those that were identified in the scoping meeting. The study shall consider all other distributed generation facilities that, on the date the interconnection system impact study is commenced, are directly interconnected with the utility's system, have a pending higher review order position to interconnect to the electric distribution system, or have signed an interconnection agreement. The utility shall coordinate with any affected system owners regarding potential impacts to affected systems in a timely manner and include the results of such studies along with the system impacts study.

The Board will adopt the changes proposed by IPL and Environmental Commenters. The amendments proposed by IPL are reasonable to provide assurance that the installation of distributed generation facilities will not negatively impact the reliability of the utility grid.

G. Rule 199 IAC 45.13

The Board proposed to combine the interconnection reports outlined in rule 45.13 with distributed generation related reporting requirements found in 199 IAC chapter 15.

Environmental Commenters support transparent reporting by the utilities and state the reports should have sufficient detail to allow stakeholders to review and understand the data. They recommend the utilities be required to provide information that is not redacted for purposes of confidentiality. Environmental Commenters also suggests several types of information that should be included in the reporting requirements.

MidAmerican expresses concern about the proposed rules requirement to file non-confidential reports since the Board has accepted this confidential information in the past and no parties have challenged the confidential designation. MidAmerican opposes expanding the reporting requirements as suggested by Environmental Commenters. MidAmerican states there is no demonstrated need for the information.

The Board will continue to provide interconnection reporting requirements in rule 45.13. The Board will not require the utilities to report the information on a non-confidential basis. However, the Board encourages utilities to file reports that provide the required information in a publically available manner. The Board will adopt the following revisions to rule 45.13:

199—45.13(476) Records and reports

45.13(1) For each completed interconnection request received by the utility, the utility shall maintain records of the following for a minimum of three years:

a. Date the interconnection application was received as complete,-
~~The the~~ total AC nameplate capacity, and fuel type of the distributed generation facility;

b. The level of review received (Level 1, Level 2, Level 3, or Level 4) and whether the project failed any initial screens and if so and readily determinable, which screens, whether the facility receive supplemental

review and whether any impact or facility study was conducted; and

c. Whether the interconnection was approved, or denied, or withdrawn and the date of that action; and

d. Whether the facility is operational and if so the date the electric utility authorized the facility to begin operation.

45.13(2) ~~Beginning May 1, 2011, e~~Each utility shall file a report by April-May 1 of each year detailing the information required in subrule 45.13(1) for the previous calendar year.

ORDERING CLAUSES

IT IS THEREFORE ORDERED:

1. Amendments to the Utilities Board's rules, as described in the attached "Adopted and Filed" notice and identified as Docket No. RMU-2016-0003, are adopted.
2. The "Adopted and Filed" notice in the form attached to this order shall be submitted for publication in the Iowa Administrative Bulletin.

UTILITIES BOARD

/s/ Geri D. Huser

/s/ Elizabeth S. Jacobs

ATTEST:

/s/ Trisha M. Quijano
Executive Secretary, Designee

/s/ Nick Wagner

Dated at Des Moines, Iowa, this 28th day of December 2016.

UTILITIES DIVISION[199]

Adopted and Filed

Pursuant to Iowa Code sections 17A.4, 476.6A, and 476.58, the Utilities Board (Board) amends Chapter 45, "Electric Interconnection of Distributed Generation Facilities," Iowa Administrative Code.

Chapter 45 is designed to offer standardized requirements, forms, and procedures for smaller facilities and to make the interconnection process more transparent and less complex for larger facilities. The current interconnection rules were adopted in 2010 and incorporated the then-current best practices for interconnection agreements and procedures. The amendments to Chapter 45 incorporate current best practices and incorporate newly adopted Iowa Code section 476.58.

The Board is conducting a comprehensive review of its rules and, as part of that review, is attempting to make the rules more readable, to streamline reporting requirements in the rules, and to transition away from providing forms within the rules. The amendments to Chapter 45 reflect those goals.

The order approving this Adopted and Filed can be found on the Board's Electronic Filing System (EFS) Web site, <http://efs.iowa.gov>, in Docket No. RMU-2016-0003.

Notice of Intended Action was published in the Iowa Administrative Bulletin as **ARC 2673C** on August 17, 2016.

The Board received public comments from interested persons regarding the proposed amendments. The Board has modified several of the revisions proposed in the Notice of Intended Action based on the comments received. The Board's order approving this Adopted and Filed describes the comments received and any amendments the Board adopts based on those comments.

The Board adopted these amendments on December 28, 2016.

After analysis and review of this rule making, no negative impacts on jobs has been found.

These amendments are intended to implement Iowa Code sections 17A.4, 476.6A, and 476.58.

These amendments will become effective February 22, 2017.

The following amendments are adopted.

ITEM 1. Amend the following definitions in rule ~~199—45.1(476)~~:

“Certificate of completion” means the ~~Standard~~ Certificate of Completion in ~~Appendix B (199—45.15(476))~~ form that contains information about the interconnection equipment to be used, its installation, and local inspections.

“Distributed generation facility” means a qualifying facility, ~~or an AEP facility,~~ or an energy storage facility.

“Nationally recognized testing laboratory” or *“NRTL”* means a qualified private organization that meets the requirements of the Occupational Safety and Health Administration's (OSHA) regulations. See 29 CFR 1910.7 as amended through ~~April 9, 2014~~ [effective date of this amendment]. NRTLs perform independent safety testing

and product certification. Each NRTL shall meet the requirements as set forth by OSHA in its NRTL program.

“Parallel operation” or *“parallel”* means a distributed generation facility that is connected electrically to the electric distribution system for longer than 100 milliseconds continuously.

“UL Standard 1741” means the standard titled “Inverters, Converters, and Controllers, and Interconnection System Equipment for Use in Independent Power Systems with Distributed Energy Resources,” January 28, 2010, edition, Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096.

ITEM 2. Adopt the following **new** definitions of “Disconnection device” and “Electric meter” in rule **199—45.1(476)**:

“Disconnection device” means a lockable visual disconnect or other disconnection device capable of isolating, disconnecting, and de-energizing the residual voltage in a distributed generation facility.

“Electric meter” means a device used by an electric utility that measures and registers the integral of an electrical quantity with respect to time.

ITEM 3. Rescind the definitions of “Draw out type circuit breaker” and “Standard distributed generation interconnection agreement” in rule **199—45.1(476)**.

ITEM 4. Amend rule **199—45.2(476)** as follows:

199—45.2(476) Scope.

45.2(1) This chapter applies to utilities, and distributed generation facilities seeking to operate in parallel with utilities, provided the facilities are not subject to the interconnection requirements of an affected system, the Federal Energy Regulatory

Commission (FERC), the ~~Midwest~~ Midcontinent Independent Transmission System Operator, Inc. (MISO), the Southwest Power Pool (SPP), the Midwest Reliability Organization (MRO), or the ~~Mid-Continent Area Power Pool (MAPP)~~ SERC Reliability Corporation (SERC).

45.2(2) If the nameplate capacity of the facility is greater than 10 MVA, the interconnection customer and the utility shall start with the Level 4 review process and agreements under ~~rules~~ rule 199—45.11(476), ~~199—45.17(476)~~, ~~199—45.18(476)~~, ~~199—45.19(476)~~, and ~~199—45.20(476)~~, and modify the process and agreements as needed by mutual agreement. In addition, the interconnection customer and the utility shall start with the technical standards under rule 199—45.3(476) and modify the standards as needed by mutual agreement. If the interconnection customer and the utility cannot reach mutual agreement, the interconnection customer may seek resolution through the rule 199—45.12(476) dispute process.

ITEM 5. Amend subparagraph **45.3(1)“a”(1)** as follows:

(1) IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems—IEEE Standard 519-~~1992~~2014; and

ITEM 6. Amend paragraph **45.3(1)“c”** as follows:

c. National Electrical Code, ANSI/NFPA 70-~~2008~~2014.

ITEM 7. Amend subrule **45.3(2)** as follows:

45.3(2) *Interconnection facilities.*

a. ~~The utility may require the~~ A distributed generation facility placed in service after July 1, 2015, is required to have the capability to be isolated from the utility, either by

~~means of a lockable, visible-break isolation device accessible by the utility, or by means of a lockable isolation installed a disconnection device, whose status is indicated and is accessible by the utility. If an isolation device is required by the utility, the~~ The disconnection device shall be installed, owned, and maintained by the owner of the distributed generation facility and located electrically between the distributed generation facility and the point of interconnection. A draw-out type of circuit breaker accessible to the utility with a provision for padlocking at the drawn-out position satisfies the requirement for an isolation device. and shall be easily visible and adjacent to an interconnection customer's electric meter at the facility. Disconnection devices are considered easily visible and adjacent: for a home or business, up to ten feet away from the meter and within the line of sight of the meter, at a height of 30 inches to 72 inches above final grade; or for large areas with multiple buildings that require electric service, up to 30 feet away from the meter and within the line of sight of the meter, at a height of 30 inches to 72 inches above final grade. The disconnection device shall be labeled with a permanently attached sign with clearly visible letters that give procedures/directions for disconnecting the distributed generation facility.

(1) If an interconnection customer with distributed generation facilities installed prior to July 1, 2015, adds generation capacity to its existing system that does not require upgrades to the electric meter or electrical service, a disconnection device is not required, unless required by the electric utility's tariff. The customer must notify the electric utility before the generation capacity is added to the existing system.

(2) If an interconnection customer with distributed generation facilities installed prior to July 1, 2015, upgrades or changes its electric service, the new or modified electric service must meet all current utility electric service rule requirements.

b. For all distributed generation installations, the customer shall be required to provide and place a permanent placard no more than ten feet away from the electric meter. The placard must be visible from the electric meter. The placard must clearly identify the presence and location of the disconnection device for the distributed generation facilities on the property. The placard must be made of material that is suitable for the environment and must be designed to last for the duration of the anticipated operating life of the distributed generation facility. If no disconnection device is present, the placard shall state “no disconnection device”.

_____ If the distributed generation facility is not installed at the building with near the electric meter, an additional placard must be placed at the electric meter to provide specific information regarding the distributed generation facility and the disconnection device.

b.c. The interconnection shall include overcurrent devices on the facility to automatically disconnect the facility at all currents that exceed the full-load current rating of the facility.

e.d Distributed generation facilities with a design capacity of 100 kVA or less must be equipped with automatic disconnection upon loss of electric utility-supplied voltage.

d.e. Those facilities that produce a terminal voltage prior to the closure of the interconnection shall be provided with synchronism-check devices to prevent closure of

the interconnection under conditions other than a reasonable degree of synchronization between the voltages on each side of the interconnection switch.

~~f. An interconnection customer that fails to comply with the foregoing requirements may be disconnected as provided in 199 Chapter 20. The disconnection process details shall be provided in individual utility tariffs or in the interconnection agreement.~~

ITEM 8. Amend subrule **45.3(3)** as follows:

45.3(3) Access. If an ~~isolation~~ a disconnection device is required by the utility, ~~both the operator of the distributed generation facility, and the utility, and emergency personnel shall have access to the isolation~~ disconnection device at all times. ~~An~~ For distributed generation facilities installed prior to July 1, 2015, an interconnection customer may elect to provide the utility with access to an ~~isolation~~ a disconnection device that is contained in a building or area that may be unoccupied and locked or not otherwise accessible to the utility by installing a lockbox provided by the utility that allows ready access to the ~~isolation~~ disconnection device. The lockbox shall be in a location determined by the utility, in consultation with the customer, to be accessible by the utility. The interconnection customer shall permit the utility to affix a placard in a location of the utility's choosing that provides instructions to utility operating personnel for accessing the ~~isolation~~ disconnection device. If the utility needs to isolate the distribution generation facility, the utility shall not be held liable for any damages resulting from the actions necessary to isolate the generation facility.

ITEM 9. Amend subrule **45.3(4)** as follows:

45.3(4) Inspections and testing. The operator of the distributed generation facility shall adopt a program of inspection and testing of the generator and its appurtenances

and the interconnection facilities in order to determine necessity for replacement and repair. Such a program shall include all periodic tests and maintenance prescribed by the manufacturer. If the periodic testing of interconnection-related protective functions is not specified by the manufacturer, periodic testing shall occur at least once every five years. All interconnection-related protective functions shall be periodically tested, and a system that depends upon a battery for trip power shall be checked and logged. Test reports shall be maintained by the operator and made available upon request by the electric utility. Representatives of the utility shall have access at all reasonable hours to the interconnection equipment specified in subrule 45.3(2) for inspection and testing with reasonable prior notice to the applicant.

ITEM 10. Adopt the following **new** subrules **45.3(6)-(8)** as follows:

45.3(6) Notification. When the distributed generation facility is placed in service, owners of interconnected distributed generation facilities are required to notify local fire departments via U.S. mail of the location of distributed generation facilities and the associated disconnection device(s). The owner is required to provide any information related to the distributed generation facility as reasonably required by that local fire department including but not limited to:

a. A site map showing property address; service point from utility company; distributed generation facility and disconnect location(s); the location of rapid shutdown and battery disconnect(s), if applicable; property owner's or owner's representative's emergency contact information; utility company's emergency telephone number; and size of the distributed generation facility.

b. Information to access the disconnection device.

c. A statement from the owner verifying that the distributed generation facility was installed in accordance with the current state-adopted National Electrical Code.

45.3(7) Disconnections. If an interconnection customer fails to comply with the foregoing requirements of 45.3, the electric utility may require disconnection of the applicant's distributed generation facility until the facility complies with 45.3. The disconnection process shall be specified in individual electric utility tariffs or in the interconnection agreement. If separate disconnection of only the distributed generation facility is not feasible or safe, the customer's electric service may be disconnected as provided in 199—Chapter 20.

45.3(8) Reconections. If a customer's distributed generation facility or electric service is disconnected due to noncompliance with 45.3, the customer shall be responsible for payment of any costs associated with reconnection once the facility is in compliance with the rules.

ITEM 11. Amend rule **199—45.4(476)** as follows:

199—45.4 (476) Interconnection requests.

45.4(1) Applicants seeking to interconnect a distributed generation facility shall submit an interconnection request to the utility that owns the electric distribution system to

which interconnection is sought. Applicants shall identify in the application if they are representing a group of customers that are located in the same vicinity and whether the application requires a group interconnection study. Applicants shall use the board-approved interconnection request forms approved by the board and agreements that are provided on the board's Web site, <http://iub.iowa.gov>.

45.4(2) Preapplication Request. Applicants may request a preapplication report from the utility using the following process:

a. The utility shall designate an employee or office from which information on the application process and on the Affected system can be obtained through informal requests from the Applicant presenting a proposed project for a specific site, which may include multiple proposed individual interconnections in close proximity and related to one project such as a residential or commercial development proposing roof-top solar on each premise or a multi-turbine wind project. The name, telephone number, and E-mail address of such contact employee or office shall be made available on the utility's Web site. Electric system information provided to the Applicant should include relevant available system studies, interconnection studies, and other materials useful to get an understanding of an interconnection at a particular point on the utility's electric distribution system, to the extent such provision does not violate confidentiality provisions of prior agreements or critical infrastructure requirements. The utility shall comply with reasonable requests for such information.

b. In addition to the information described in 45.4(2)(a), which may be provided in response to an informal request, an Applicant may submit a formal written request form along with a non-refundable fee of \$300 for a preapplication report on a proposed

project at a specific site. The utility shall provide the preapplication data described in 45.4(2)(a) to the applicant within 20 business days of receipt of the completed request form and payment of the \$300 fee. The preapplication report produced by the utility is non-binding, does not confer any rights, and the applicant must still successfully apply to interconnect to the utility's system. The written preapplication report request form shall include the following information to clearly and sufficiently identify the location of the proposed point of interconnection:

- (1) Proposed distributed generation facility owner's contact information, including name, address, phone number, and E-mail address.
- (2) Project location (street address with nearby cross streets and town).
- (3) Meter number, pole number, or other equivalent information identifying proposed point of interconnection, if available.
- (4) Generator Type (e.g., solar, wind, combined heat and power, etc.).
- (5) Size (alternating current kW).
- (6) Single or three phase generator configuration.
- (7) Stand-alone generator (no onsite load, not including station service – Yes or No?).
- (8) Is new service requested? Yes or No? If there is existing service, include the customer account number, site minimum and maximum current or proposed electric loads in kW (if available) and specify if the load is expected to change.

c. Using the information provided in the preapplication report request form in 45.4(2)(b), the utility will identify the substation/area bus, bank or circuit likely to serve the proposed point of interconnection. This selection by the utility does not necessarily

indicate, after application of the screens and/or study, that this would be the circuit to which the distributed generation facility ultimately be connected or that interconnection will occur. The applicant must request additional pre-application reports if information about multiple points of interconnection is requested. Subject to 45.4(2)(d) and other confidentiality concerns identified by the utility, the preapplication report will include the following information:

(1) Total capacity (in MW) of substation/area bus, bank or circuit based on normal or operating ratings likely to serve the proposed point of interconnection.

(2) Existing aggregate generation capacity (in MW) interconnected to a substation/area bus, bank or circuit (i.e., amount of generation online) likely to serve the proposed point of interconnection.

(3) Aggregate queued generation capacity (in MW) for a substation/area bus, bank or circuit (i.e., amount of generation in the queue) likely to serve the proposed point of interconnection.

(4) Available capacity (in MW) of substation/area bus or bank and circuit likely to serve the proposed point of interconnection (i.e., total capacity less the sum of existing aggregate generation capacity and aggregate queued generation capacity).

(5) Substation nominal distribution voltage and/or transmission nominal voltage if applicable.

(6) Nominal distribution circuit voltage at the proposed point of interconnection.

(7) Approximate circuit distance between the proposed point of interconnection and the substation.

(8) Relevant line section(s) actual or estimated peak load and minimum load data, including daytime minimum load and absolute minimum load, when available.

(9) Number and rating of protective devices and number and type (standard, bi-directional) of voltage regulating devices between the proposed point of interconnection and the substation/area. Identify whether the substation has a load tap changer.

(10) Number of phases available at the proposed point of interconnection. If it is a single phase, distance from the three-phase circuit.

(11) Limiting conductor ratings from the proposed point of interconnection to the distribution substation.

(12) Whether the point of interconnection is located on a spot network, grid network, or radial supply.

(13) Based on the proposed point of interconnection, existing or known constraints such as, but not limited to, electrical dependencies at that location, short circuit interrupting capacity issues, power quality or stability issues on the circuit, capacity constraints, or secondary networks.

d. The preapplication report need only include existing data. A preapplication report request does not obligate the utility to conduct a study or other analysis of the proposed generator in the event that data is not readily available. If the utility cannot complete all or some of the preapplication report due to lack of available data, the utility shall provide

the applicant with a preapplication report that includes the data that is available. The provision of information on "available capacity" pursuant to 45.4(2)(c)(4) does not imply that an interconnection up to this level may be completed without impacts since there are many variables studied as part of the interconnection review process, and data provided in the preapplication report may become outdated at the time of the submission of the complete interconnection request. Notwithstanding any of the provisions of this section, the utility shall, in good faith, include data in the preapplication report that represents the best available information at the time of reporting.

~~45.4(2)~~**45.4(3)** Utilities shall specify the fee by level that the applicant shall remit to process the interconnection request. The fee shall be specified in the interconnection request forms. ~~Utilities may charge a fee by level that applicants must remit in order to process an interconnection request.~~ The utilities shall not charge more than the fees as specified in the Standard Application Forms in Appendix A (199—45.14(476)) and Appendix C (199—45.16(476)) below:

- a. Level 1 - \$125 application fee and up to an additional \$125 if the utility performs a Witness Test as specified in 45.5(10).
- b. Level 2 - \$250 application fee plus \$1.00 per kVA and up to an additional \$125 if the utility performs a Witness Test as specified in 45.5(10).
- c. Level 3 - \$500 application fee plus \$2.00 per kVA.
- d. Level 4 - \$1,000 application fee plus \$2.00 per kVA.

~~45.4(3)~~**45.4(4)** Interconnection requests may be submitted electronically, if agreed to by the parties.

ITEM 12. Amend subrule **45.5(6)** as follows:

45.5(6) ~~When an applicant is not currently a customer of the utility at the proposed site, the~~ The applicant shall provide, upon utility request, proof of the applicant's legal right to control the site(s), ~~as evidenced by the applicant's name on a property tax bill, deed, lease agreement or other legally binding contract.~~ Site control may be demonstrated through:

- a. Ownership of, a leasehold interest in, or a right to develop a site for the purpose of constructing, the distributed generation facility;
- b. An option to purchase or acquire a leasehold site for such purpose; or
- c. Exclusivity or other business relationship between the interconnection customer and the entity having the right to sell, lease, or grant the interconnection customer the right to possess or occupy a site for such purpose.

ITEM 13. Amend subrule **45.5(8)** as follows:

45.5(8) Any metering required for a distributed generation interconnection shall be installed, operated, and maintained in accordance with the utility's metering rules ~~filed with the board under 199 subrule 20.2(5),~~ and inspection and testing practices ~~adopted under rule 199 20.6(476)~~ defined in 199 Chapter 20. Any such metering requirements shall be identified in the Standard Level 1 Interconnection Request Application form and Distributed Generation Interconnection Agreement or the Levels 2 to 4 Distributed Generation Interconnection Request Agreement executed between the interconnection customer and the utility.

ITEM 14. Amend subrule 45.6(2) as follows:

45.6(2) Lab-certified interconnection equipment shall not require further design testing or production testing, as specified by IEEE Standard 1547, Sections 5.1 and 5.2, or additional interconnection equipment modification to meet the requirements for expedited review; however, ~~nothing in this subrule shall preclude the need for an interconnection installation evaluation,~~ the applicant shall conduct all commissioning tests, or periodic testing as specified by IEEE Standard 1547, Sections 5.3, 5.4, and 5.5, ~~or for a witness test conducted by a utility.~~ The utility may conduct additional witness tests, but no more frequently than annually.

ITEM 15. Amend paragraph **45.7(1)“b”** as follows:

b. The distributed generation facility has a nameplate capacity rating of ~~40~~20 kVA or less; and

ITEM 16. Amend paragraph **45.7(1)“b”** as follows:

45.7(2) A utility shall use Level 2 procedures for evaluating interconnection requests when:

a. The applicant has filed a Level 2 application; and

b. The nameplate capacity rating is 2 MVA or less for non-inverter-based systems. The Level 2 eligibility for inverter-based systems can be based on the following table.

<u>Line Voltage</u>	<u>Level 2 Eligibility</u> <u>Regardless of</u> <u>Location</u>	<u>Level 2 Eligibility on a</u> <u>Mainline and < 2.5</u> <u>Electrical Circuit Miles</u> <u>from Substation</u>
<u>< 5 kV</u>	<u>< 500 kVA</u>	<u>< 500 kVA</u>
<u>> 5 kV and < 15 kV</u>	<u>< 2 MVA</u>	<u>< 3 MVA</u>
<u>> 15 kV and < 30 kV</u>	<u>< 3MVA</u>	<u>< 4 MVA</u>
<u>> 30 kV and < 69 kV</u>	<u>< 4 MVA</u>	<u>< 5 MVA</u>

For purposes of this table, a mainline is the three-phase backbone of a circuit; and

- c. The interconnection equipment proposed for the distributed generation facility is lab-certified; and
- d. The proposed interconnection is to a radial distribution circuit or a spot network limited to serving one customer; and
- e. No construction of facilities by the utility shall be required to accommodate the distributed generation facility, other than minor modifications provided for in subrule 45.9(6).

ITEM 17. Amend subrule **45.8(2)** as follows:

45.8(2) The Level 1 interconnection shall use the following procedures:

- a. The applicant shall submit an interconnection request using the ~~appropriate Standard Level 1 Interconnection Request Application Form in Appendix A (199—45.14(476))~~ form and Distributed Generation Interconnection Agreement along with the Level 1 application fee.

b. to d. No change.

e. Otherwise, the utility shall approve the interconnection request and provide to the applicant a signed version of the standard “Conditional Agreement to Interconnect Distributed Generation Facility” in ~~Appendix A (199—45.14(476))~~ the Level 1 Interconnection Request Application form and Distributed Generation Interconnection Agreement subject to the following conditions:

(1) The distributed generation facility has been approved by local or municipal electric code officials with jurisdiction over the interconnection;

(2) The ~~Standard Certificate of Completion in Appendix B (199—45.15(476))~~ form has been returned to the utility. Completion of local inspections may be designated on inspection forms used by local inspecting authorities;

(3) The witness test has either been successfully completed or waived by the utility in accordance with Section (2)(c)(ii) of the Terms and Conditions for Interconnection in ~~Appendix A (199—45.14(476))~~ the Level 1 Interconnection Request Application form and Distributed Generation Interconnection Agreement; and

(4) The applicant has signed the standard “Conditional Agreement to Interconnect Distributed Generation Facility” in ~~Appendix A (199—45.14(476))~~ the Level 1 Interconnection Request Application form and Distributed Generation Interconnection Agreement. When an applicant does not sign the agreement within 30 business days after receipt of the agreement from the utility, the interconnection request is deemed withdrawn unless the applicant requests to have the deadline extended for no more than 15 business days. An initial request for extension shall not be denied by the utility, but subsequent requests may be denied.

f. If a distributed generation facility is not approved under a Level 1 review, and the utility's reasons for denying Level 1 status are not subject to dispute, the applicant may submit a new interconnection request for consideration under Level 2, Level 3, or Level 4 procedures. The date of the completed Level 1 interconnection request shall be retained and shall be used to determine the review order position for subsequent Level 2 to 4 applications, provided the request is made by the applicant within 15 business days after notification that the Level 1 interconnection request is denied.

ITEM 18. Amend paragraph **45.9(1)**"i" as follows:

i. A distributed generation facility, in aggregate with other generation interconnected to the distribution side of a substation transformer feeding the circuit where the distributed generation facility proposes to interconnect, may not exceed 10 MVA in an area where there are transient stability limitations to generating units located in the general electrical vicinity, as publicly posted by the ~~Mid-Continent Area Power Pool (MAPP),~~ Midwest Reliability Organization (MRO), the SERC Reliability Corporation (SERC), the ~~Midwest Midcontinent Independent Transmission System Operator, Inc. (MISO), or the Midwest Reliability Organization (MRO) or the Southwest Power Pool (SPP).~~

ITEM 19. Amend paragraph **45.9(2)**"a" as follows:

a. The applicant submits an interconnection request using the appropriate ~~Standard Levels 2 to 4 Interconnection Request Application Form in Appendix C (199-45.16(476))~~ form along with the Level 2 application fee.

ITEM 20. Amend subrule **45.9(3)** as follows:

45.9(3) When a utility determines that the interconnection request passes the Level 2 screening criteria, or the utility determines that the distributed generation facility can be interconnected safely and will not cause adverse system impacts, even if ~~it~~ the facility fails one or more of the Level 2 screening criteria, ~~it~~ the utility shall provide the applicant with the ~~Standard~~ Levels 2 to 4 Distributed Generation Interconnection Agreement in ~~Appendix D (199—45.17(476))~~ within three business days of the date the utility makes its determination.

ITEM 21. Amend subrule **45.9(4)** as follows:

45.9(4) Within ~~35~~ 30 business days after issuance by the utility of the ~~Standard~~ Levels 2 to 4 Distributed Generation Interconnection Agreement, the applicant shall sign and return the agreement to the utility. If the applicant does not sign and return the agreement within ~~35~~ 30 business days, the interconnection request shall be deemed withdrawn unless the applicant requests a 15-business-day extension in writing before the end of the ~~35~~ 30-day period. The initial request for extension may not be denied by the utility. When the utility conducts an additional review under the provisions of subrule 45.9(6), the interconnection of the distributed generation facility shall proceed according to milestones agreed to by the parties in the ~~Standard~~ Levels 2 to 4 Distributed Generation Interconnection Agreement.

ITEM 22. Amend subrule **45.9(5)** as follows:

45.9(5) The ~~Standard~~ Levels 2 to 4 Distributed Generation Interconnection Agreement is not final until:

- a. All requirements in the agreement are satisfied;
- b. The distributed generation facility is approved by the electric code officials with jurisdiction over the interconnection;
- c. The applicant provides the ~~Standard Certificate of Completion in Appendix B (199-45.15 (476))~~ form to the utility. Completion of local inspections may be designated on inspection forms used by local inspecting authorities; and
- d. The witness test has either been successfully completed or waived by the utility in accordance with Article 2.1.1 of the ~~Standard~~ Levels 2 to 4 Distributed Generation Interconnection Agreement.

ITEM 23. Amend subrule **45.9(6)** as follows:

45.9(6) ~~Additional~~ Supplemental review may be appropriate when a distributed generation facility fails to meet one or more of the Level 2 screens. The utility shall offer to perform ~~additional~~ a supplemental review to determine whether there are minor modifications to the distributed generation facility or electric distribution system that would enable the interconnection to be made safely ~~and so that it will not cause~~ without causing adverse system impacts. ~~The utility shall provide the applicant with a nonbinding estimate for the costs of additional review and the costs of minor modifications to the electric distribution system. The utility shall undertake the additional review only after the applicant pays for the additional review. The utility shall undertake the modifications only after the applicant pays for the modifications. The utility shall adopt the board-approved supplemental review process unless the utility has defined a supplemental review process in its board-approved tariff. The board-approved supplemental review process is provided on the board's Web site.~~ To accept the offer of

a supplemental review, the Applicant shall agree in writing, and submit a deposit for the estimated costs of the supplemental review in the amount of the utility's good faith non-binding estimate of the costs for such review, both within 15 business days of the offer. If the written agreement and deposit have not been received by the utility within that timeframe, the interconnection request shall continue to be evaluated under the applicable study process unless it is withdrawn by the Applicant.

a. The Applicant may specify the order in which the utility will complete the screens in section 45.9(6)(c).

b. The Applicant shall be responsible for the utility's actual costs for conducting the supplemental review. The Applicant must pay any review costs that exceed the deposit within 20 business days of receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced costs, the utility will return such excess within 20 business days of the invoice without interest.

c. Within 30 business days following receipt of the deposit for a supplemental review, the utility shall:

(1) Perform a supplemental review using the screens set forth below;

(2) Notify in writing the Applicant of the results; and

(3) Include with the notification, copies of the analysis and data underlying the utility's determinations under the screens.

d. Unless the Applicant provided instructions on how to respond to the failure of any of the supplemental review screens identified below at the time the Applicant accepted the offer of a supplemental review, the utility shall notify the Applicant following the failure of any of the screens, or if it is unable to perform the screen in

section 45.9(6)(d)(1), within two business days of making such determination to obtain the Applicant's permission to: (1) continue evaluating the proposed interconnection under this section; (2) terminate the supplemental review and continue evaluating the small generating facility; or (3) terminate the supplemental review upon withdrawal of the interconnection request by the Applicant.

(1) Minimum Load Screen: Where 12 months of line section minimum load data (including onsite load but not station service load served by the proposed small generating facility) are available, can be calculated, can be estimated from existing data, or determined from a power flow model, the aggregate generating facility capacity on the line section must be less than 100 percent of the minimum load for all line sections bounded by automatic sectionalizing devices upstream of the proposed small generating facility. If minimum load data is not available, or cannot be calculated, estimated or determined, the utility shall include the reason(s) that it is unable to calculate, estimate or determine minimum load in its supplemental review results notification under section c above.

A. The type of generation used by the proposed small generating facility will be taken into account when calculating, estimating, or determining circuit or line section minimum load relevant for the application of screen. Solar photovoltaic (PV) generation systems with no battery storage use daytime minimum load (i.e. 10 a.m. to 4 p.m. for fixed panel systems and 8 a.m. to 6 p.m. for PV

systems utilizing tracking systems), while all other generation uses absolute minimum load.

B. When this screen is being applied to a small generating facility that serves some station service load, only the net injection into the utility's electric system will be considered as part of the aggregate generation.

C. Utility will not consider generating facility capacity known to be already reflected in the minimum load data as part of the aggregate generation for purposes of this screen.

(2) Voltage and Power Quality Screen: In aggregate with existing generation on the line section: (1) the voltage regulation on the line section can be maintained in compliance with relevant requirements under all system conditions; (2) the voltage fluctuation is within acceptable limits as defined by the Institute of Electrical and Electronics Engineers (IEEE) Standard 1453, or utility practice similar to IEEE Standard 1453; and (3) the harmonic levels meet IEEE Standard 519 limits.

(3) Safety and Reliability Screen: The location of the proposed small generating facility and the aggregate generation capacity on the line section do not create impacts to safety or reliability that cannot be adequately addressed without application of the study process. The utility shall give due consideration to the following and other factors in determining potential impacts to safety and reliability in applying this screen.

A. Whether the line section has significant minimum load levels dominated by a small number of customers (e.g., several large commercial customers).

B. Whether the load along the line section is uniform or even.

C. Whether the proposed small generating facility is located in close proximity to the substation (i.e., less than 2.5 electrical circuit miles), and whether the line section from the substation to the point of interconnection is a mainline rated for normal and emergency ampacity.

D. Whether the proposed small generating facility incorporates a time delay function to prevent reconnection of the generator to the system until system voltage and frequency are within normal limits for a prescribed time.

E. Whether operational flexibility is reduced by the proposed small generating facility, such that transfer of the line section(s) of the small generating facility to a neighboring distribution circuit/substation may trigger overloads or voltage issues.

F. Whether the proposed small generating facility employs equipment or systems certified by a recognized standards organization to address technical issues such as, but not limited to, islanding, reverse power flow, or voltage quality.

e. If the proposed interconnection passes the supplemental screens in sections 45.9(6)(d)(1),(2), and (3), the interconnection request shall be approved

and the utility will provide the Applicant with an executable interconnection agreement within the timeframes established in sections 45.9(6)(f) and (g). If the proposed interconnection fails any of the supplemental review screens and the Applicant does not withdraw its interconnection request, it shall continue to be evaluated under the Level 4 study process consistent with 199 IAC 45.11.

f. If the proposed interconnection passes the supplemental screens in sections 45.9(6)(d)(1),(2), and (3) and does not require construction of facilities by the utility on its own system, the interconnection agreement shall be provided within ten business days after the notification of the supplemental review results.

g. If interconnection facilities or minor modifications to the utility's system are required for the proposed interconnection to pass the supplemental screens in sections 45.9(6)(d)(1),(2), and (3), and the Applicant agrees to pay for the modifications to the utility's electric system, the interconnection agreement, along with a non-binding good faith estimate for the interconnection facilities and/or minor modifications, shall be provided to the Applicant within 15 business days after receiving written notification of the supplemental review results.

h. If the proposed interconnection would require more than interconnection facilities or minor modifications to the utility's system to pass the supplemental screens in sections 45.9(6)(d)(1),(2), and (3), the utility shall notify the Applicant at the same time it notifies the Applicant with the supplemental review results, that the interconnection request shall be evaluated under the Level 4 study process unless the Applicant withdraws its small generating facility.

ITEM 24. Amend paragraph **45.10(1)“a”** as follows:

a. The applicant shall submit an interconnection request using the appropriate ~~Standard Levels 2 to 4 Interconnection Request Application Form in Appendix C (199—45.16(476))~~ form along with the Level 3 application fee.

ITEM 25. Amend subrule 45.10(2) as follows:

45.10(2) For a distributed generation facility that satisfies the criteria in paragraph 45.10(1)“e” or 45.10(1)“f,” the utility shall approve the interconnection request and provide the applicant with the Standard Levels 2 to 4 Distributed Generation Interconnection Agreement in Appendix D (199—45.17(476)) for the applicant to sign within three business days of the date the utility makes its determination.

ITEM 26. Amend subrule 45.10(3) as follows:

45.10(3) Within ~~35~~30 business days after issuance by the utility of the ~~Standard Levels 2 to 4~~ Distributed Generation Interconnection Agreement, the applicant shall complete, sign, and return the agreement to the utility. If the applicant does not sign the agreement within ~~35~~30 business days, the request shall be deemed withdrawn, unless the applicant requests a 15-business-day extension in writing before the end of the ~~35~~30-day period. An initial request for extension may not be denied by the utility. After the agreement is signed by the parties, interconnection of the distributed generation facility shall proceed according to any milestones agreed to by the parties in the ~~Standard Levels 2 to 4~~ Distributed Generation Interconnection Agreement.

ITEM 27. Amend subrule 45.10(4) as follows:

45.10(4) The ~~Standard~~ Levels 2 to 4 Distributed Generation Interconnection Agreement shall not be final until:

- a. All requirements in the agreement are satisfied; and
- b. The distributed generation facility is approved by the electric code officials with jurisdiction over the distributed generation facility; and
- c. The applicant provides the ~~Standard~~ Certificate of Completion in ~~Appendix B (199—45.15(476))~~ form to the utility; and
- d. The witness test has either been successfully completed or waived by the utility in accordance with Article 2.1.1 of the ~~Standard~~ Levels 2 to 4 Distributed Generation Interconnection Agreement.

ITEM 28. Amend subrule **45.11(1)** as follows:

45.11(1) The applicant submits an interconnection request using the appropriate ~~Standard~~ Levels 2 to 4 Interconnection Request Application Form in ~~Appendix C (199—45.16(476))~~ form along with the Level 4 application fee.

ITEM 29. Amend paragraph **45.11(4)“b”** as follows:

- b. Standard Level 4 study review procedures.
 - (1) No change.
 - (2) Feasibility study. Unless waived or combined with other studies pursuant to paragraph 45.11(4)“a,” an interconnection feasibility study (subrule 45.11(5)) shall be performed.
 1. The utility shall provide the applicant a copy of the ~~Standard~~ Interconnection Feasibility Study Agreement in ~~Appendix E (199—45.18(476))~~ or a

mutually agreed-upon alternative form, plus a description of the study and a nonbinding estimate of the cost to perform the study.

2. and 3. No change.

(3) System impact study. Unless waived or combined with other studies pursuant to paragraph 45.11(4)“a,” an interconnection system impact study (subrule 45.11(6)) shall be performed.

1. The utility shall provide the applicant a copy of the ~~Standard-Interconnection System Impact Study Agreement in Appendix F (199—45.19(476))~~ or a mutually agreed-upon alternative form, plus an outline of the scope of the study and a nonbinding estimate of the cost to perform the study.

2. and 3. No change.

(4) Facilities study. Unless waived or combined with other studies pursuant to paragraph 45.11(4)“a,” an interconnection facilities study (subrule 45.11(7)) shall be performed.

1. The utility shall provide the applicant a copy of the ~~Standard-Interconnection Facilities Study Agreement in Appendix G (199—45.20(476))~~ or a mutually agreed-upon alternative form, plus an outline of the scope of the study and a nonbinding estimate of the cost to perform the study.

2. and 3. No change.

ITEM 30. Amend paragraph **45.11(5)“e”** as follows:

e. Either party can require that the ~~Standard-Interconnection Feasibility Study Agreement in Appendix E (199—45.18(476))~~ be used. However, if both parties agree, an alternative form can be used.

ITEM 31. Amend subrule **45.11(6)** as follows:

45.11(6) Interconnection system impact study. An interconnection system impact study evaluates the impact of the proposed interconnection on both the safety and reliability of the utility's electric distribution system. The study identifies and details the system impacts that interconnecting the distributed generation facility to the utility's electric system have if there are no system modifications. It focuses on the potential or actual adverse system impacts identified in the interconnection feasibility study, including those that were identified in the scoping meeting. The study shall consider all other distributed generation facilities that, on the date the interconnection system impact study is commenced, are directly interconnected with the utility's system, have a pending higher review order position to interconnect to the electric distribution system, or have signed an interconnection agreement. The utility shall coordinate with any affected system owners regarding potential impacts to affected systems in a timely manner and include the results of such studies along with the system impacts study.

a. Unless waived or combined with other studies by agreement of the parties pursuant to paragraph 45.11(4)"a," an interconnection system impact study shall be performed when either a potential adverse system impact is identified in the interconnection feasibility study, or an interconnection feasibility study has not been performed. Before performing the study, the utility shall provide the applicant an outline of the scope of the study and a nonbinding estimate of the cost to perform the study. The interconnection system impact study shall include any pertinent elements from among the following:

- (1) A load flow study;
- (2) Identification of affected systems and any subsequent affected system study;
- (3) An analysis of equipment interrupting ratings;
- (4) A protection coordination study;
- (5) Voltage drop and flicker studies;
- (6) Protection and set point coordination studies;
- (7) Grounding reviews; and
- (8) Impact on system operation.

b. An interconnection system impact study shall consider any necessary criteria from among the following:

- (1) A short-circuit analysis;
- (2) A stability analysis;
- (3) Alternatives for mitigating adverse system impacts on affected systems;
- (4) Voltage drop and flicker studies;
- (5) Protection and set point coordination studies; ~~and~~
- (6) Grounding reviews; and
- (7) Results from the affected system study

c. The final interconnection system impact study shall provide the following:

- (1) The underlying assumptions of the study;
- (2) The results of the analyses;
- (3) A list of any potential impediments to providing the requested interconnection service;

- (4) Required distribution upgrades; and
- (5) A nonbinding estimate of cost and time to construct any required distribution upgrades.

d. Either party can require that the ~~Standard~~ Interconnection System Impact Study Agreement in ~~Appendix F (199—45.19(476))~~ be used. However, if both parties agree, an alternative form can be used.

ITEM 32. Amend paragraph **45.11(7)**“d” as follows:

d. Upon completion of the interconnection facilities study, and after the applicant agrees to pay for the interconnection facilities and distribution upgrades identified in the interconnection facilities study, the utility shall provide the applicant with the Standard—Levels 2 to 4 Distributed Generation Interconnection Agreement in Appendix D (199—45.17(476)) for the applicant to sign within three business days of the date the utility makes its determination.

ITEM 33. Amend paragraph **45.11(7)**“f” as follows:

f. Either party can require that the ~~Standard~~ Interconnection Facilities Study Agreement in ~~Appendix G (199—45.20(476))~~ be used. However, if both parties agree, an alternative form can be used.

ITEM 34. Amend subrule **45.11(8)** as follows:

45.11(8) When a utility determines, as a result of the studies conducted under a Level 4 review, that it is appropriate to interconnect the distributed generation facility, the utility shall provide the applicant with the Standard—Levels 2 to 4 Distributed Generation Interconnection Agreement in Appendix D (199—45.17(476)). If the interconnection request is denied, the utility shall provide the applicant with a written explanation as to its

reasons for denying interconnection. If denied, the interconnection request does not retain its position in the review order.

ITEM 35. Amend subrule 45.11(9) as follows:

45.11(9) Within 30 business days after receipt of the ~~Standard~~ Levels 2 to 4 Distributed Generation Interconnection Agreement, the applicant shall provide all necessary information required of the applicant by the agreement, and the utility shall develop all other information required of the utility by the agreement. After completing the agreement with the additional information, the utility will transmit the completed agreement to the applicant. Within 30 business days after receipt of the completed agreement, the applicant shall sign and return the completed agreement to the utility. If the applicant does not sign and return the agreement within 30 business days after receipt, the interconnection request shall be deemed withdrawn, unless the applicant requests in writing to have the deadline extended by no more than 15 business days, prior to the expiration of the 30-business-day period. The initial request for extension may not be denied by the utility. If the applicant does not sign and return the agreement after the 15-business-day extension, the interconnection request shall be deemed withdrawn. If withdrawn, the interconnection request does not retain its position in the review order. When construction is required, the interconnection of the distributed generation facility shall proceed according to milestones agreed to by the parties in the ~~Standard~~ Levels 2 to 4 Distributed Generation Interconnection Agreement.

ITEM 36. Amend subrule 45.11(10) as follows:

45.11(10) The ~~Standard~~ Levels 2 to 4 Distributed Generation Interconnection Agreement is not final until:

- a. The requirements of the agreement are satisfied; and
- b. The distributed generation facility is approved by electric code officials with jurisdiction over the interconnection; and
- c. The applicant provides the ~~Standard~~ Certificate of Completion in ~~Appendix B (199—45.15(476))~~ form to the utility. Completion of local inspections may be designated on inspection forms used by local inspecting authorities; and
- d. The witness test has either been successfully completed or waived by the utility in accordance with Article 2.1.1 of the ~~Standard~~ Levels 2 to 4 Distributed Generation Interconnection Agreement in ~~Appendix D (199—45.17(476))~~.

ITEM 37. Amend subrules **45.13(1)-(2)** as follows:

45.13(1) For each completed interconnection request received by the utility, the utility shall maintain records of the following for a minimum of three years:

- a. Date the interconnection application was received as complete, The the total AC nameplate capacity, and fuel type of the distributed generation facility;
- b. The level of review received (Level 1, Level 2, Level 3, or Level 4) and whether the project failed any initial screens and if so and readily determinable, which screens, whether the facility receive a supplemental review and whether any impact or facility study was conducted; and
- c. Whether the interconnection was approved, or denied, or withdrawn and the date of that action; and

d. Whether the facility is operational and if so the date the electric utility authorized the facility to begin operation.

45.13(2) ~~Beginning May 1, 2011, e~~Each utility shall file a report by April-May 1 of each year detailing the information required in subrule 45.13(1) for the previous calendar year.

ITEM 38. Rescind rules **199—45.14(476)** to **199—45.20(476)**.

December 22, 2016

/s/ Geri D. Huser

Geri D. Huser

Chair