

PUBLIC SERVICE COMMISSION OF WISCONSIN

In the Matter of Rulemaking to Update Wisconsin Administrative Code Chapter
PSC 119 for Interconnecting Distributed Generation Facilities

1-AC-256

Clearinghouse Rule No. 22-077

The statement of scope for this rule, SS 013-21, was approved by the Governor on February 4, 2021, published in Register No. 782A3 on February 15, 2021, and approved by the Commission on April 15, 2021. This rule was approved by the Governor on August 11, 2023.

ORDER ADOPTING MODIFIED RULES

This is an Order of the Public Service Commission of Wisconsin proposing to **renumber** PSC 119.04 (5) (a), (b), (c), and (d), 119.04 (7) (a), (b), and (c), 119.04 (9), 119.04 (10) (a) 1. and 3.; **renumber and amend** PSC 119.04 (4), 119.04 (5), 119.04 (6), 119.04 (7) (intro.) and (d), 119.04 (8), 119.04 (10) (a) (intro.) and 2., 119.04 (10) (b), 119.04 (11), 119.04 (12); **amend** PSC 119.02 (4), 119.02 (5), 119.02 (6), 119.02 (7), 119.02 (25), 119.02 (27), 119.02 (32), 119.02 (34), 119.02 (35) (Note), 119.02 (36), 119.04 (1), 119.04 (2), 119.04 (3), 119.05 (1), 119.06 Table 1, 119.08 (1), 119.08 Table 1, 119.08 (2), 119.10 (2), 119.20 (6) (a), (b), and (Note), 119.25 (1), 119.25 (3) (intro.) and (b) (6), 119.26, 119.27 (1), 119.30, 119.32; **repeal and recreate** PSC 119.40; **create** PSC 119.02 (16d), 119.02 (16h) and (Note), 119.02 (16p) and (Note), 119.02 (16t) and (Note), 119.02 (17m), 119.02 (27m), 119.02 (32) (Note), 119.02 (32m), 119.02 (35g), 119.02 (35r), 119.025, 119.04 (2m), 119.04 (3g), 119.04 (3r), 119.04 (4) (intro.) and (b), 119.04 (5), 119.04 (6) (intro.), 119.04 (6) (a) to (k), 119.05 (1m), 119.08 (4), 119.08 (5), 119.08 (6) (intro.), (a), and (b), 119.13 (title), 119.13 (1), (2), (3), and (4), 119.20 (15), 119.20 (16) (intro.), (a), (b), and (Note), relating to rules for interconnecting distributed generation facilities.

**ANALYSIS PREPARED BY
THE PUBLIC SERVICE COMMISSION OF WISCONSIN**

A. Text of Rule

The proposed rule text is provided in Appendix A to this Order.

B. Statute Interpreted

This rule interprets Wisconsin Stat. § 196.496.

C. Statutory Authority and Explanation of Authority

This rulemaking is authorized under Wis. Stat. §§ 196.02(1) and (3), 196.496(2), 196.03(1), 196.19(2), 196.20(1), 196.37(2), and 227.11.

Section 227.11 authorizes agencies to promulgate administrative rules. Section 196.02(1) authorizes the Commission to do all things necessary and convenient to its jurisdiction. Section 196.02(3) grants the Commission specific authority to promulgate rules. Section 196.03(1) requires public utilities to provide reasonably adequate service and facilities. Section 196.19(2) requires public utilities to file all rules and regulations that in the judgment of the Commission affect service. Section 196.20(1) requires public utilities to include all service rules in their rate schedules, and file changes in rate schedules with the Commission. Section 196.37(2) authorizes the Commission to exercise control over the service rules that a public utility has with its consumers and requires the Commission to make a just or reasonable order if the Commission finds that the service is unjust, insufficient, or unlawful. As described above, Section 196.496(2) directs the Commission to promulgate rules regarding the interconnection of distributed generation facilities to electric distribution facilities.

D. Related Statutes or Rules

As noted in B., this rule implements Wisconsin Stat. § 196.496. Existing rule provisions cross-reference electric utility service rules in Wis. Admin. Code ch. PSC 113, and the state electrical code

established in ch. PSC 114. Proposed revisions add another connection with ch. PSC 113 by proposing updated dispute resolution language aligned with general dispute resolution procedures established in PSC 113.0407.

E. Plain Language Analysis

The proposed rule would update the existing provisions of Wis. Admin. Code ch. PSC 119 (PSC 119), regarding the interconnection of customer-owned distributed generation facilities with the distribution system of electric public utilities. Updates are informed by the recommendations of a rulemaking advisory committee including representatives from utilities, distributed generation installers, customer and renewable energy advocates, and technical experts on distributed generation issues.

Updates are intended to account for the significant changes in distributed generation technology and operations since the current rules were promulgated in 2004. Specific updates include referencing new technical standards and codes; adding and refining rule definitions to reference considerations raised by new and updated technologies related to distributed generation that have emerged in recent years; and clarifying language related to testing and communication requirements to reflect present practices and requirements.

Updates are also intended to refine rule provisions related to the application process and information sharing. The volume of interconnection requests has substantially increased since the initial rules were promulgated and may continue to increase in future years. To ensure administrative requirements remain fair and timely, and balance the interests of customers, installers and utilities, in the face of increased application volume, the proposed updates seek to clarify and update application process requirements, including related forms. The proposed rule updates, including the application process, are designed to support more-effective information collection; update timing deadlines and decision criteria for application processing; update application-related fee levels and clarify requirements for fee administration; require utilities to provide more information on application

requirements, processing of submitted applications, and grid conditions relevant to interconnections; and establish a more clearly defined dispute resolution process.

F. Summary of, and Comparison with, Existing or Proposed Federal Statutes and Regulations

The Federal Energy Regulatory Commission (FERC) has addressed interconnection issues through multiple orders, including FERC Order No. 841 concerning electric storage resources (issued 2018), FERC Order No. 872 concerning updates to the Public Utility Regulatory Policies Act of 1978 (PURPA) (issued 2020), and FERC Order No. 2222 concerning distributed energy resources more generally (issued 2020).

In those Orders, FERC declined to issue regulations regarding interconnection to the distribution facilities owned by the electric utility serving the customer. Order Nos. 841 and 2222 do address participation in electricity markets operated by regional transmission operations (such as the Midcontinent Independent System Operator, Inc., or MISO, which serves this role in Wisconsin) by interconnection resources. However, both of those Orders explicitly established that nothing in the Orders preempts the right of states to regulate the safety and reliability of their own distribution systems and stated that all resources affected by the Orders must comply with any applicable state rules related to interconnection with the customer's electric utility.

G. Comparison with Similar Rules in Adjacent States

Minnesota, Iowa, and Illinois have recently promulgated updates to their own interconnection rules, and a rule review process is ongoing in Michigan. All four states—as well as a number of other states around the country—are taking similar approaches to the rule revisions proposed in Wisconsin, by updating technical standards and making changes to interconnection application processes in light of significant growth in distributed generation deployment. For example, the proposals in this rulemaking for providing more information to applicants on grid conditions and application processing were informed by the similar requirements recently enacted in Minnesota. Illinois' updates, enacted in 2022, include

similar technical updates to the definitional changes proposed in Wisconsin, such as by addressing the treatment of “export-limited” projects that use new technologies to limit the amount of energy the customer sends to the utility’s distribution system.

H. Summary of Factual Data and Analytical Methodologies Used and How Any Related Findings Support the Regulatory Approach Chosen

No factual data or methodologies were relied upon.

I. Analysis and Supporting Documents Used to Determine the Effect on Small Business or in Preparation of an Economic Impact Report

The Commission’s fiscal estimate and economic impact analysis determined that the proposed rules will not have an economic effect on small businesses. The Commission sought input from all utilities, Wisconsin Utilities Association, Utility Workers’ Coalition, and the National Federation of Independent Businesses.

J. Effect on Small Business (initial regulatory flexibility analysis)

These rules will not have an economic impact on small businesses. The Wisconsin Stat. § 227.114 (12) definition of “small business” states that to be considered a small business, the business must not be dominant in its field. Since electric utilities are monopolies in their service territories, they are dominant in their field and are not small businesses.

K. Germane Modifications

The Commission resubmits the proposed rule pursuant to Wis. Stat. § 227.19(2) with germane modifications. While the proposed rule CR 22-077 was under review by the Joint Committee for Review of Administrative Rules (JCRAR), JCRAR raised concerns about language defining “distributed generation” (DG) capacity ranges and “export capacity” of a DG facility. On November 1, 2023, the Commission recalled the proposed rule pursuant to Wis. Stat. 227.19(4)(b)4. to make germane

modifications. The Commission approved the proposed rule with germane modifications on November 9, 2023.

Description of Modifications

JCRAR raised concerns regarding language in Sections 4 and 9 of the proposed rules. In Section 4, JCRAR expressed concerns regarding the second sentence which would not allow a DG facility with a non-exporting energy storage system of 1 MW or larger to be used in determining the export capacity as part of the category definitions. In Section 9, JCRAR expressed concerns with the second sentence because the use of “or” in the phrase, “Export capacity is either the nameplate rating, or a lower amount if limited using any approved means,” is unclear. Language was proposed for the second sentence of Section 9 to make sure it is clear that the lesser of the two capacity values should be used. The Commission modified Sections 4 and 9 with JCRAR’s suggested revisions as follows:

- **Section 4—PSC 119.02(7):**
 - Deleted the second sentence of this section, “The nameplate rating shall be used instead of the export capacity for this definition if the non-exporting energy storage system is larger than 1 MW.”
- **Section 9—PSC 119.02(17m):**
 - Deleted the second sentence of this section, “Export capacity is either the nameplate rating, or a lower amount if limited using any approved means.”
 - Replaced with the following language below. The suggested language was slightly revised to comply with LRB formatting guidelines:
 - Export capacity is the lesser of the following:
 - (1) the nameplate rating.
 - (2) if limited using any approved means, that limited amount.

L. Agency Contact Person

Questions regarding this matter should be directed to the docket coordinator Joe Fontaine at (608) 266-0910 or Joe.Fontaine@wisconsin.gov. Small business questions should be directed to Tara Kiley at (608) 266-7165 or Tara.Kiley@wisconsin.gov. Media questions should be directed to the Communications Director Meghan Sovey at (608) 266-9600 or Meghan.Sovey1@wisconsin.gov.

M. Place Where Comments are to be Submitted and Deadline for Submission

A hearing notice, announcing a preliminary public hearing on the statement of scope, was published on the Commission's website on March 4, 2021, and in the Wisconsin Administrative Register on March 8, 2021. An in-person hearing was held on March 19, 2021. The Commission accepted comments by regular mail, online, and at the public hearing. The public comment period for online and mailed comments ended on March 25, 2021. The public had the opportunity make oral comments at the hearing.

A hearing notice, announcing the public hearing and public comment period, was published on the Commission's website on October 27, 2022, and in the Wisconsin Administrative Register on November 11, 2022. A virtual public hearing was held on November 29, 2022. The Commission accepted comments by mail, online, and at the public hearing. The public comment period ended on December 7, 2022.

Dated at Madison, Wisconsin, the 9th day of November, 2023.

By the Commission:



Cru Stuble
Secretary to the Commission

CS DL:01974190

Appendix A

TEXT OF PROPOSED RULE

Section 1. PSC 119.02 (4) is amended to read:

PSC 119.02 (4) “Category 1” means a DG facility with an export capacity of 20 kW or less. A DG facility comprised of a resource no larger than 20 kW with a non-exporting energy storage system no larger than 20 kW shall be considered a Category 1 system.

Section 2. PSC 119.02 (5) is amended to read:

PSC 119.02 (5) “Category 2” means a DG facility with an export capacity of greater than 20 kW and not more than 200 kW. The nameplate rating shall be used instead of the export capacity for this definition if the non-exporting energy storage system is larger than 20 kW.

Section 3. PSC 119.02 (6) is amended to read:

PSC 119.02 (6) “Category 3” means a DG facility with an export capacity of greater than 200 kW and not more than 1 MW. The nameplate rating shall be used instead of the export capacity for this definition if the non-exporting energy storage system is larger than 200 kW.

Section 4. PSC 119.02 (7) is amended to read:

PSC 119.02 (7) “Category 4” means a DG facility with an export capacity of greater than 1 MW and not more than 15 MW.

Section 5. PSC 119.02 (16d) is created to read:

PSC 119.02 (16d) “Energy storage system” means a device or devices that capture energy produced at one time, store that energy for a period of time, and deliver that energy as electricity for use at a future time.

Section 6. PSC 119.02 (16h) and (Note) are created to read:

PSC 119.02 (16h) “Energy storage system max continuous output kW in alternating current” means the maximum rated continuous power output of the energy storage system.

PSC 119.02 (16h) (Note): This defined term should be used when completing the standard application form, PSC Form 6031.

Section 7. PSC 119.02 (16p) and (Note) are created to read:

PSC 119.02 (16p) “Energy storage system max usable energy kWh in alternating current” means the maximum rated amount of energy stored in the energy storage system.

PSC 119.02 (16p) (Note): This defined term should be used when completing the standard application form, PSC Form 6031.

Section 8. PSC 119.02 (16t) and (Note) are created to read:

PSC 119.02 (16t) “Energy storage system peak output kW in alternating current” means while grid interactive, the maximum short duration rated output power of the energy storage system to the distribution system.

PSC 119.02 (16t) (Note): This defined term should be used when completing the standard application form, PSC Form 6031.

Section 9. PSC 119.02 (17m) is created to read:

PSC 119.02 (17m) “Export capacity kW in alternating current” means the amount of power that can be transferred from the DG facility to the distribution system. Export capacity is the lesser of the following:

- (1) the nameplate rating.
- (2) if limited using any approved means, that limited amount.

Section 10. PSC 119.02 (25) is amended to read:

PSC 119.02 (25) “kW” means kilowatt. Unless otherwise specified, the definition references units in alternating current.

Section 11. PSC 119.02 (27) is amended to read:

PSC 119.02 (27) “MW” means megawatt. Unless otherwise specified, the definition references units in alternating current.

Section 12. PSC 119.02 (27m) is created to read:

PSC 119.02 (27m) “Nameplate rating alternating current” means the sum total of maximum continuous rated power (kW) output while grid connected of all of a DG facility’s constituent generating units or energy storage systems, or both, as identified on the manufacturer nameplate, regardless of whether it is limited by any approved means.

Section 13. PSC 119.02 (32) is amended to read:

PSC 119.02 (32) “Point of common coupling” means the point where the electrical ~~conductors of the distribution system are connected to the customer’s conductors and where any transfer of electric power between the customer and the distribution system takes place~~ power system of the applicant seeking to interconnect a DG facility is electrically connected to the distribution system. The point of common coupling is

equivalent, in most cases, to the service point as specified by the public utility and described in the National Electric Code and National Electrical Safety Code.

Section 14. PSC 119.02 (32) (Note) is created to read:

PSC 119.02 (32) (Note) National electric codes are adopted in Wisconsin Electrical Safety Code Volumes 1 and 2, as found in chs. PSC 114 and SPS 316.

Section 15. PSC 119.02 (32m) is created to read:

PSC 119.02 (32m) “Power factor” means the ratio of active power to apparent power.

Section 16. PSC 119.02 (34) is amended to read:

PSC 119.02 (34) “Standard application form” means PSC Form ~~6027~~ 6031 ~~for Category 1-DG facilities or PSC Form 6028 for Category 2 to 4 DG facilities.~~ The standard application form has supplements designed to collect information specific to different installations and technologies.

Section 17. PSC 119.02 (35) (Note) is amended to read:

PSC 119.02 (35) (Note): A copy of PSC Forms ~~6027~~ 6031 to ~~6030~~ 6033 can be obtained at no charge from ~~you~~ the local electric utility or from the Public Service Commission, PO Box 7854, Madison, WI 53707-7854.

Section 18. PSC 119.02 (35g) is created to read:

PSC 119.02 (35g) “Standard pre-application request form” means PSC Form 6032.

Section 19. PSC 119.02 (35r) is created to read:

PSC 119.02 (35r) “Standard pre-application report” means the information provided on PSC form 6033 in response to completed requests submitted through PSC Form 6032.

Section 20. PSC 119.02 (36) is amended to read:

PSC 119.02 (36) “Telemetry” means transmission of DG operating data and settings using telecommunications techniques. It may also include controls and two-way communication.

Section 21. PSC 119.025 is created to read:

PSC 119.025 Adoption of standards by reference.

(1) ADOPTION OF STANDARDS. The standards, IEEE Std 1547-2018: IEEE Standard for Interconnection and Interoperability of Distributed Energy Resources with Associated Electric Power Systems Interfaces, published April 6, 2018, and IEEE Std 1547.1-2020: IEEE Standard Conformance Test Procedures for Equipment Interconnecting Distributed Energy Resources with Electric Power Systems and Associated Interfaces, are hereby incorporated by reference into PSC 119.

(2) CONSENT TO INCORPORATE BY REFERENCE. Pursuant to s. 227.21, Stats., the attorney general has consented to incorporate by references these standards contained in Std 1547-2018 and IEEE Std 1547.1-2020. Copies of IEEE Std 1547-2018 and IEEE Std 1547.1-2020 are on file in the offices of commission and the legislative reference bureau.

Section 22. PSC 119.04 (1) is amended to read:

PSC 119.04 (1) The public utility shall respond to each request for DG interconnection by furnishing, within 5 working days, its guidelines and the public utility's electric service rules, representative or sample one-line schematic diagrams, and the appropriate standard application form. Public utilities shall also make these materials accessible on their website.

Section 23. PSC 119.04 (2) is amended to read:

PSC 119.04 (2) The applicant shall complete and submit the standard application form to its public utility. An application shall not be considered submitted until the applicant submits a form and pays applicable application review fees under s. PSC 119.08 (1).

Section 24. PSC 119.04 (2m) is created to read:

PSC 119.04 (2m) All submitted applications shall be reviewed for completeness in the order in which they fulfill the requirements of sub. (2), regardless of whether the project is from an outside applicant or the public utility.

Section 25. PSC 119.04 (3) is amended to read:

PSC 119.04 (3) Within 10 working days of receiving a new or revised application and application fee, the public utility shall notify the applicant whether the application is complete.

Section 26. PSC 119.04 (3g) is created to read:

PSC 119.04 (3g) All complete applications shall be processed in the order in which they are deemed complete, regardless of whether the project is from an outside applicant or the public utility. Reasonable exceptions may be made to account for the location of the proposed DG facility or other technical considerations, provided there is no material adverse impact on processing of other complete applications when an exception is made. Exceptions may also be made if an applicant exceeds any timing requirements identified in s. PSC 119.06. If the public utility misses any timing requirements in s. PSC 119.06, the order in which the application is processed shall not be affected.

Section 27. PSC 119.04 (3r) is created to read:

PSC 119.04 (3r) Where multiple DG facilities are electrically interrelated, processing complete applications jointly may be appropriate to increase cost and time efficiencies. If the public utility and the applicant mutually agree, the application may be studied in a group with other applications.

Section 28. PSC 119.04 (4) (intro.) is created to read:

Public utilities and applicants shall complete the following steps for processing interconnection applications, in the order listed:

Section 29. PSC 119.04 (4) is renumbered PSC 119.04 (4) (a) and amended to read:

PSC 119.04 (4) (a) Within 10 working days of determining that the application is complete, the public utility shall complete its application review and notify the applicant of its findings. If the public utility determines, on the basis of the application review, that an engineering review is needed, ~~it shall notify the applicant~~ the notification shall state the cost a nonbinding estimate of that review. For Categories 2 and 3, the cost estimate shall be valid for one year. For Category 4, the time period shall be negotiated but may not exceed one year. If the application review shows that an engineering review is not needed, the applicant may install the DG facility and need not complete the steps described in ~~subs. pars. (5) (b) through (9) (g)~~.

Section 30. PSC 119.04 (4) (b) is created to read:

PSC 119.04 (4) (b) The applicant shall provide written notification to proceed and full payment of the estimated cost of the engineering review within 15 working days of receiving the public utility's notification under par. (a). At the request of the applicant, the utility may provide a 15 working day extension of the deadline to provide notification to proceed and full payment. If notification and payment have not been received by the utility within 30 working days after the deadline to accept, the interconnection application shall be deemed withdrawn.

Section 31. PSC 119.04 (5) is renumbered PSC 119.04 (4) (c) (intro.) and amended to read:

PSC 119.04 (4) (c) (intro.) ~~If the public utility determines on the basis of the application review that an engineering review is needed, upon~~ Upon receipt of applicable payment from applicant receiving from the applicant written notification to proceed and full payment of the estimated cost of the engineering review, the public utility shall complete an engineering review and notify the applicant of the results within the following times:

Section 32. PSC 119.04 (5) (a), (b), (c), and (d) are renumbered to PSC 119.04 (4) (c) 1., 2., 3., and 4.

Section 33. PSC 119.04 (6) is renumbered PSC 119.04 (4) (d) and amended to read:

PSC 119.04 (4)(d) If the engineering review indicates that a distribution system study is necessary, the public utility shall include, in writing, a nonbinding cost estimate of the study in its engineering review. ~~The cost estimate shall be valid for one year and the applicant shall have one year from receipt of the cost estimate in which to notify the public utility to proceed, except for a Category 4 DG application, in which case the time period shall be negotiated, but may not extend beyond one year. Upon receiving written notification to proceed and payment of the applicable fee, the public utility shall conduct the distribution system study. To proceed with a distribution system study, the applicant shall provide the utility with written notification of acceptance and full payment of the~~

estimated study costs within 15 working days of receiving the engineering review. At the request of the applicant, the utility may provide a 15 working day extension of the deadline to provide notification to proceed and full payment. If notification and payment have not been received by the utility within 30 working days after the deadline to accept, the interconnection application shall be deemed withdrawn

Section 34. PSC 119.04 (7) (intro.) is renumbered PSC 119.04 (4) (e) and amended to read:

PSC 119.04 (4) (e) Upon receiving written notification to proceed and payment of the applicable fee, the public utility shall conduct the distribution system study. The public utility shall within the following time periods complete the distribution system study and provide study results to the applicant unless any additional studies are required by the Regional Transmission Operator, in which case the time periods may be extended:

Section 35. PSC 119.04 (7) (a), (b), (c), and (d) are renumbered PSC 119.04 (4) (e) 1., 2., 3., and 4. and PSC 119.04 (4) (e) 4. is amended to read:

PSC 119.04 (4)(e) 4. Category 4 DG facility application, 60 working days, unless a different time period is mutually agreed upon.

Section 36. PSC 119.04 (8) is renumbered PSC 119.04 (4) (f) and amended to read:

PSC 119.04 (4)(f) The public utility shall perform a distribution system study of the local distribution system and notify the applicant of findings along with an estimate of any distribution system construction or modification costs to be borne by the applicant.

Section 37. PSC 119.04 (9) is renumbered PSC 119.04 (4) (g).

Section 38. PSC 119.04 (10) (a) (intro.) is renumbered PSC 119.04 (4) (h) (intro.), PSC 119.04 (10) (a) 1., 2., 3., and PSC 119.04 (10) (b) are renumbered PSC 119.04 (4) (h) 1., 2., and 3., and PSC 119.04 (4) (i), and PSC 119.04 (4) (h) (intro.), PSC 119.04 (4) (h) 2., and PSC 119.04 (4) (i) are amended to read:

PSC 119.04 (4) (h) The applicant shall give the public utility the opportunity to witness or verify the system testing, as required in s. PSC 119.30 or 119.31, the utility's service rules, and applicable codes and standards. Upon receiving notification that an installation is complete and is in compliance with all applicable codes and standards, including any necessary state and local government inspections, and all requirements set forth in this chapter, the public utility has 10 working days, for a Category 1 or 2 DG project facility, or 20 working days, for a Category 3 or 4 DG project facility, to complete the following:

1. Witness commissioning tests.
2. Perform an ~~anti-islanding~~ unintentional islanding test or verify the protective equipment settings at its expense.
3. Waive its right, in writing, to witness or verify the commissioning tests.

PSC 119.04 (4) (i) The applicant shall provide the public utility with the results of any required tests within 5 working days of the completion of the test, for a Category 1 facility, or within 10 working days, for a Category 2 to 4 facility.

Section 39. PSC 119.04 (11) and (12) are renumbered PSC 119.04 (4) (j) (intro.), 1. and 2., and 119.04 (4) (k), and are amended to read.

PSC 119.04 (4) (j) The public utility ~~may~~ shall, unless rights have been waived per par. (h) 3., review the results of the on-site test, ~~and~~ Upon receipt of the test results, the public utility shall notify the applicant within 5 working days, for a Category 1 DG project facility, or within 10 working days, for a Category 2 to 4 DG project facility, of its approval or disapproval of the interconnection.

1. If approved, the public utility shall provide a written statement of final acceptance and ~~cost~~ reconciliation of costs from the engineering review, distribution system study, and any required distribution system upgrades or modifications. Public utilities shall refund to the applicant any fees paid in excess of costs incurred by the utility. Applicants shall pay any additional costs incurred by the utility in excess of previous payments. Any applicant for a DG system that passes the commissioning test may sign a standard interconnection agreement and interconnect.

2. If the public utility does not approve the interconnection, the applicant may take corrective action and request the public utility to reexamine its interconnection request. The applicant shall provide the utility with written notification that corrective action has been taken and request reexamination within 15 working days of receiving notification of disapproval. At the request of the applicant, the utility may provide a 15 working day extension of the deadline to provide notification to proceed and full payment. If a request for reexamination has been received by the utility within 30 working days after the deadline to accept, the interconnection application shall be deemed withdrawn.

PSC 119.04 (4) (k) A standard interconnection agreement shall be signed by the applicant and public utility before parallel operation commences, within 5 working days of the interconnection being deemed approved by the public utility, for a Category 1 facility, or within 10 working days for a Category 2 to 4 facility.

Section 40. PSC 119.04 (5) is created to read:

PSC 119.04 (5)

(a) All public utilities shall maintain a single application queue that shall identify the status of all applications submitted to the utility and shall be used to address applicant inquiries about application status.

(b) Public utilities who serve more than 100,000 customers shall make their application queue public. Public application queues shall be posted on the utility's website and updated on at least a monthly basis. Certain applications may be removed or redacted when posting in the interest of national security.

(c) At a minimum, the information maintained in an application queue, including public application queues, shall include for all applications active on or submitted to the utility after the effective date of this paragraph....[LRB inserts date]:

1. Application or queue numbers that enable applicants to identify their submissions.
2. Technology type(s).
3. Proposed DG facility nameplate capacity and, where applicable, export capacity, in kW or MW.
4. Category assignment.
5. Location by city, state, and county.
6. Substation and circuit on which the proposed installation would be located.
7. Current application status (active, withdrawn, approved, in service).
8. Date application deemed complete, if applicable.
9. Current status of the application's progress through the application process steps outlined in this section.
10. Date of signed interconnection agreement, if applicable.

Section 41. PSC 119.04 (6) (intro.) and (6) (a) through (k) are created to read:

PSC 119.04 (6) Upon approval of an application under sub. (4) (a), (c), or (g), the public utility shall provide the applicant with an interconnection approval memorandum that confirms the utility's application approval and identifies any applicable conditions of approval. For Category 2 to 4 facilities, the memorandum and associated attachments shall provide:

- (a) The date of approval.
- (b) Completed application materials.
- (c) Engineering review requirements, if applicable.
- (d) Distribution system study requirements, if applicable.
- (e) Identification of the authorized tariff or program agreement applicable to the DG facility at the time the memorandum is issued.
- (f) Expiration date of the memorandum if utility requirements are not met, including identification of options for deadline extensions.
- (g) System specifications and specific requirements imposed by the utility as conditions of approval.
- (h) Estimated distribution system construction or modification costs and scope, if applicable.
- (i) Estimated completion date for the public utility to complete distribution system upgrades, if applicable.
- (j) A copy of the standard interconnection agreement that would be executed by both parties upon completion of all requirements, including any anticipated distribution system upgrades.
- (k) Acknowledgement that the public utility will interconnect the DG facility if all identified conditions are met.

Section 42. PSC 119.05 (1) is amended to read:

PSC 119.05 (1) An applicant seeking to interconnect a Category 1 DG facility to the distribution system of a public utility shall maintain liability insurance equal to or greater than the amounts stipulated in Table PSC 119.05-1, per occurrence, or prove financial responsibility by another means mutually agreeable to the applicant and the public utility. ~~For a DG facility in Category 2 to 4, the applicant shall name the public utility as an additional insured party in the liability insurance policy.~~

Section 43. PSC 119.05 (1m) is created to read:

PSC 119.05 (1m) An applicant seeking to interconnect a Category 2 to 4 DG facility to the distribution system of a public utility shall maintain liability insurance equal to or greater than the amounts stipulated in Table PSC 119.05-1, per occurrence, and shall name the public utility as an additional insured party in the liability insurance policy, or prove financial responsibility by another means mutually agreeable to the applicant and the public utility.

Section 44. PSC 119.06 Table 1 is amended to read:

PSC 119.06 Table 1

| Table 119.06-1 | | |
|-----------------------|---|---|
| Category | Generation <u>Export</u> Capacity after Modification | Working Days for Utility's Response to Proposed Modifications |
| 1 | 20 kW or less | 20 |
| 2 | Greater than 20 kW to 200 kW | 40 |
| 3 | Greater than 200 kW to 1 MW | 60 |
| 4 | Greater than 1 MW to 15 MW | 60 |

Section 45. PSC 119.08 (1) is amended to read:

PSC 119.08 (1) Upon receiving a standard application form, the public utility shall specify the amount of any engineering review or distribution system study fees. ~~Application fees shall be credited toward the cost of any engineering review or distribution system study.~~ The applicant shall pay the fees specified in Table PSC 119.08, unless the public utility chooses to waive the fees in whole or in part. For any fees paid by the applicant per Table PSC 119.08, any unexpended funds shall be credited to subsequent interconnection steps and associated fee obligations.

Section 46. PSC 119.08 Table 1 is amended to read:

PSC 119.08 Table 1

| Table 119.08-1 | | | | | |
|-----------------------|--|---|--|---|--------------------------|
| Category | Generation <u>Export</u> Capacity | Application <u>Review</u> Fee | Engineering <u>Review</u> Fee | Distribution <u>System</u> Study Fee | <u>Commissioning</u> Fee |
| 1 | 20 kW or less | None <u>\$150 (1-8 kW)</u> <u>\$300 (9-20 kW)</u> | None <u>Cost based</u> | None <u>Cost Based</u> | <u>\$150</u> |

| | | | | | |
|---|------------------------------|---|--|--|---------------|
| 2 | Greater than 20 kW to 200 kW | \$250 \$300 + <u>\$10/kW</u> | <u>Max. \$500</u> <u>Cost Based</u> | <u>Max. \$500</u> <u>Cost Based</u> | <u>\$250</u> |
| 3 | Greater than 200 kW to 1 MW | \$500 \$2000 <u>+ \$2/kW</u> | Cost based | Cost based | <u>\$1000</u> |
| 4 | Greater than 1 MW to 15 MW | \$1000 \$4000 <u>+ \$0.50/kW</u> | Cost based | Cost based | <u>\$2500</u> |

Section 47. PSC 119.08 (2) is amended to read:

PSC 119.08 (2) The public utility may recover from the applicant an amount up to the actual cost, for labor and parts, of any distribution system upgrades required. ~~No public utility may charge a commissioning test fee for initial start-up of the DG facility.~~ The utility may charge for retesting an installation that does not conform to the requirements set forth in this chapter. The fee for retesting shall be equal to the applicable commissioning fee, unless at the public utility's discretion a lower fee amount is assessed.

Section 48. PSC 119.08 (4) and (5) and (6) (intro.), (a), and (b) are created to read:

PSC 119.08 (4) For any application that is withdrawn by the applicant or deemed withdrawn by the public utility, the public utility shall provide the applicant with a reconciliation of costs from any engineering review, distribution system study, or required distribution system upgrades or modifications performed. Public utilities shall refund to the applicant any fees paid in excess of costs incurred by the utility. Applicants shall pay any additional costs incurred by the utility in excess of previous payments.

PSC 119.08 (5) Public utilities may assess a fee of up to \$300 for preparation of a pre-application report, unless the public utility chooses to waive the fee in whole or in part.

PSC 119.08 (6) For each year in which a public utility assessed an engineering review fee or a distribution system study fee for a Category 1 or 2 facility, the public utility shall provide a report to the commission by March 31 of the following year which includes:

- (a) The number of Category 1 and 2 facilities in which an engineering review fee was assessed and the average engineering review fee that was charged to applicants.
- (b) The number of Category 1 and 2 facilities in which a distribution system study fee was assessed and the average distribution system study fee that was charged to applicants.

Section 49. PSC 119.10 (2) is amended to read:

PSC 119.10 (2) The applicant shall include with the schematic diagram technical specifications of the point where the DG facility is electrically connected to the customer's electrical system, including all ~~anti-islanding~~ unintentional islanding and power quality protective systems. The specifications regarding the ~~anti-islanding~~ unintentional islanding protective systems shall describe all automatic features provided to disconnect the DG facility from the distribution system in case of loss of grid power,

including the functions for over/under voltage, over/under frequency, overcurrent, and loss of synchronism. The applicant shall also provide technical specifications for the generator, lockable interconnection disconnect switch, and grounding and shall attach the technical specification sheets for any certified equipment. The applicant shall include with the schematic diagram a statement by the manufacturer that its equipment meets or exceeds the type tested requirements for certification.

Section 50. PSC 119.13 (title) and (1) through (4) are created to read:

PSC 119.13 Pre-application report.

- (1) Potential applicants may request a pre-application report in order to obtain information about system conditions at their proposed interconnection location, without submitting an application under s. PSC 119.04.
- (2) To request a pre-application report, potential applicants shall complete and submit to its public utility the standard pre-application request form. A request for a pre-application report shall not be considered submitted until applicant submits the standard pre-application form and pays applicable pre-application review fees under s. PSC 119.08 (5).
- (3) All submitted pre-application report requests shall be reviewed for completeness in the order in which they fulfill the requirements of sub. (2).
 - (a) Public utilities shall evaluate the submitted pre-application form for completeness within 5 business days of receipt. A complete request shall include location information that allows the public utility to clearly identify a proposed point of interconnection, and information on the proposed DG facility sufficient to identify DG type, nameplate and export capacity, and service configuration.
- (4) All complete pre-application report requests shall receive pre-application reports in the order in which they fulfill the requirements of sub. (3). Within 15 business days of determining a pre-application report request complete, the public utility shall respond by providing the applicant with a completed standard pre-application report that provides information on the capacity, network and operating characteristics, and applicable operating constraints at the proposed point of interconnection.
 - (a) Completed pre-application reports shall reflect the best available information using existing data readily available to the public utility at the time of reporting. A public utility shall not be obligated to conduct additional analysis of the proposed project or location in order to complete a pre-application report. The report shall communicate to potential applicants that the information provided is subject to change and may not be applicable as of the date when a future application is submitted.

Section 51. PSC 119.20 (6) (a) and (b) are amended to read:

PSC 119.20 (6) (a) ~~Certified paralleling equipment shall conform to UL 1741 (January 17, 2001 Revision) or an equivalent standard determined by the commission. All inverter-based DG facilities shall be UL 1741 published September 28, 2021 listed.~~

PSC 119.20 (6) (b) ~~Non-certified paralleling equipment shall conform to the requirements of IEEE 1547. All DG facilities shall meet the requirements of IEEE Std 1547-2018 and be tested in accordance with IEEE Std 1547.1.~~

1. Synchronous machine generation shall use the normal performance category of Category A and the abnormal performance category of Category I. Ride-through and trip settings shall meet the recommendations of the regional transmission operator guidelines.
2. Inverter-based DG facilities shall use the normal performance category of Category B and the abnormal performance category of Category II. Ride-through and trip settings shall meet the recommendations of the regional transmission operator guidelines. The public utility shall constructively work with the regional transmission operator to provide a recommendation whether abnormal performance category of Category III is the proper category assignment for inverter-based DG facilities.
3. Exceptions to these performance categories may be reviewed by the public utility on a case-by-case basis.

Section 52. PSC 119.20 (6) (Note) is amended to read:

PSC 119.20 (6) (Note): The UL standards are available at <http://ulstandards.ul.com>, and IEEE standards are available at <http://ieee.org>. They may also be viewed at the PSCW Library, ~~610 N. Whitney Way~~ 4822 Madison Yards Way, Madison, WI.

Section 53. PSC 119.20 (15) and (16) (intro.), (a), (b), and (Note) are created to read:

PSC 119.20 (15) When the public utility requires two-way communication or control functionality of the DG facility, the applicant shall work with the public utility to establish the minimum standard technical and communication requirements.

PSC 119.20 (16) (intro.) For interconnection purposes, energy storage systems shall be treated as distributed generation facilities and shall meet the following requirements and standards:

- (a) Provide operational mode programming that controls the charging, discharging, and bypass (export or non-export) of an energy storage system. Operational mode programming shall be stated in an interconnection agreement.
- (b) Be UL 9540, published February 27, 2020 listed.

PSC 119.20 (16) (Note): The UL standards are available at <http://ulstandards.ul.com>. They may also be viewed at the PSCW Library, 4822 Madison Yards Way, Madison, WI.

Section 54. PSC 119.25 (1) and (3) (intro.) and (b) (6) are amended to read:

PSC 119.25 (1) Each DG facility shall include protection and ~~anti-islanding~~ unintentional islanding equipment to prevent the facility from adversely affecting the reliability or capability of the distribution system. The applicant shall contact the public utility to determine any specific protection requirements.

PSC 119.25 (3) (intro.) In addition to ~~anti-islanding~~ unintentional islanding protection, a DG facility shall meet the following minimum protection requirements:

- (a) A Category 1 DG facility shall include:
 1. Over/under frequency function.
 2. Over/under voltage function.

3. Overcurrent function.
 4. Ground fault protection.
- (b) A Category 2, 3, or 4 DG facility shall include:
1. Over/under frequency function.
 2. Over/under voltage function.
 3. Overcurrent function.
 4. Ground fault protection.
 5. Synchronism check function.
 6. Other equipment, such as other protective devices, supervisory control and alarms, telemetry and associated communications channel, that the public utility determines to be necessary and is compliant with applicable codes and standards. The public utility shall advise the applicant of any communications requirements after a preliminary review of the proposed installation.

Section 55. PSC 119.26 is amended to read:

PSC 119.26 Certified paralleling equipment. DG paralleling equipment that a nationally recognized testing laboratory certifies as meeting the applicable type testing requirements of UL 1741 (~~January 17, 2001 revision~~)(September 28, 2021 revision) is acceptable for interconnection, without additional protection systems, to the distribution system. The applicant may use certified paralleling equipment for interconnection to a distribution system without further review or testing of the equipment design by the public utility, but the use of this paralleling equipment does not automatically qualify the applicant to be interconnected to the distribution system at any point in the distribution system. The public utility may still require an engineering review to determine the compatibility of the distributed generation system with the distribution system capabilities at the selected point of common coupling. DG paralleling equipment shall meet applicable codes and standards listed in PSC 119.025.

Section 56. PSC 119.27 (1) is amended to read:

PSC 119.27 (1) Non-certified paralleling equipment. Any DG facility that is not certified under s. PSC 119.26 shall be equipped with protective hardware or software to prevent unintentional islanding and to maintain power quality. The applicant shall provide the final design of this protective equipment. The public utility may review and approve the design, types of protective functions, and the implementation of the installation. The applicant shall own the protective equipment installed at its facility.

Section 57. PSC 119.30 is amended to read:

PSC 119.30 ~~Anti-islanding~~ Unintentional islanding test. The public utility may perform an ~~anti-islanding~~ unintentional islanding test or observe the automatic shutdown before giving final written approval for interconnection of the DG facility. The ~~anti-islanding~~ unintentional islanding test requires that the ~~unit shut down upon sensing the loss of power on the distribution system~~ DG facility shall detect the island, cease to energize the local distribution system, and trip within two seconds of the formation of an island. ~~This can be simulated by either removing the customer meter or opening a disconnection switch while the generator is operating. Voltage across the customer side~~

~~of the meter or disconnection switch shall be measured and must be observed to reduce to zero within two seconds after disconnection. The test shall be conducted as close to the point of common coupling as possible and should demonstrate that the DG facility does not energize the local distribution or transmission system. The test shall be conducted with the generation as close to its full output as possible all DG facility equipment operational and generating at an output that reflects site conditions acceptable to both parties. If a voltage is sustained after the disconnection simulation of an unintentional island, approval of the installation shall not be given until corrective measures are taken with a subsequent successful shutdown test.~~

Section 58. PSC 119.32 is amended to read:

PSC 119.32 Additional test. The public utility or applicant may, upon reasonable notice, re-test the DG facility installation after a failed test under s. PSC 119.30 or 119.31 or a disconnection under s. PSC 119.09. The party ~~requesting such~~ responsible for the re-testing shall bear the cost of the re-tests.

Section 59. PSC 119.40 is repealed and recreated:

PSC 119.40 Dispute Procedures.

- (1) Applicants and public utilities shall attempt to resolve all disputes arising out of the interconnection process, including, but not limited to, the application and approval process under s. 119.04 and disconnection under s. 119.09, as described in this section.
- (2) The applicant shall attempt to resolve the issue with the public utility by informing the public utility of the issue under dispute and the relief requested. The public utility shall:
 - (a) Investigate the issue promptly and completely.
 - (b) Advise the applicant of the results of the investigation.
 - (c) Attempt to resolve the dispute.
- (3) After the applicant has pursued available remedies with the public utility, the applicant may request that commission staff informally review the disputed issue and recommend terms of settlement.
 - (a) The applicant's request for an informal review may be made in any reasonable manner, such as by written request or telephone request direct to the commission. By telephone or written request public service commission staff may request information from the public utility to investigate the dispute.
 - (b) The public utility shall designate employees for responding to disputes who are readily available and have an appropriate and sufficient authority level for investigating concerns raised by the commission and its staff. The public utility shall respond to commission staff's request for investigation by providing a response to the commission within 10 business days. Commission staff may extend this time period if the public utility requests more time to complete its investigation. Based on the information provided by the applicant and the public utility, commission staff shall make an

- informal determination and communicate that determination in writing to both parties.
- (c) At least 7 days must elapse between the date commission staff communicates an informal determination and any disconnection of a distributed generation facility involved in the dispute.
- (4) After an informal determination is made, any party to the dispute may make a written request for a formal review by the commission. All requests for formal review shall be made within 30 days of the date commission staff communicates a written informal determination. To avoid disconnection of a DG facility from the distribution system pending a formal review, an applicant must request formal commission review within 7 days after the commission's informal determination.
- (5) The commission shall make a determination whether to grant the request for formal review. The commission shall base its determination on the request for formal review and the information previously collected for informal review. Commission staff shall provide the commission with a memorandum based on the information it has received from the parties. A copy of the commission staff memorandum shall be provided to the parties 30 days prior to consideration by the commission. Any party to the dispute may file a response to the commission staff's memorandum. Responses shall be filed with the commission 15 days prior to the date scheduled for consideration by the commission. The commission shall inform both parties of its decision.
- (6) Any party to the dispute may request that the commission reconsider its formal determination under this section. Such requests shall comply with s. 227.49, Stats., and must be received by the commission within 20 days of mailing of the commission's determination. A request for reconsideration shall include any additional information or arguments that the party believes were not considered in the original dispute. The commission may review and reaffirm its original decision, issue a new decision, or decide to hold a hearing on the matter for the gathering of additional information.
- (7) If the commission decides to conduct a formal hearing under sub. (6) on the dispute, the commission may condition the terms of its granting a formal hearing. Failure to meet these conditions before hearing shall constitute waiver of the dispute by the disputing party:
- (a) The hearing shall conform to the procedures of ss. 196.26 to 196.34, Stats.
- (b) Any such hearing shall be held not less than 60 days following a notice of hearing, and a decision thereon shall be rendered following the conclusion of the hearing.
- (8) A DG facility may not be disconnected from the distribution system because of any disputed matter while the disputed matter is being pursued in accordance with the provisions of this section. The utility shall inform the applicant that pursuing a disputed matter does not relieve the applicant

of the obligation of paying charges which are not in dispute; relieve compliance with undisputed rules, terms or conditions; or prevent disconnection from the distribution system for nonpayment of undisputed charges, or any failure to comply with undisputed rules, terms, or conditions.

Section 60. Effective Date. This rule takes effect on the first day of the month following publication in the Wisconsin Administrative Register as provided in s. 227.22 (2) (intro.), Stats.