Chapter PSC 119

RULES FOR INTERCONNECTING DISTRIBUTED GENERATION FACILITIES

Subchapter I — General

PSC 119.01 Scope. This chapter implements s. 196.496, Stats. It applies to all DG facilities with a capacity of 15 MW or less that are interconnected, or whose owner seeks to have interconnected, to an electric public utility's distribution system. It also applies to all electric public utilities to whose distribution systems a DG facility is interconnected, or to which interconnection is sought. These rules establish uniform statewide standards for the interconnection of DG facilities to an electric distribution system.

History: CR 03−003: cr. Register January 2004 No. 577, eff. 2−1−04.

PSC 119.02 Definitions. In this chapter:

(1) "ANSI" means American National Standards Institute.

(2) "Applicant" means the legally responsible person applying to a public utility to interconnect a DG facility to the public utility's distribution system.

(3) "Application review" means a review by the public utility of the completed standard application form for interconnection, to determine if an engineering review or distribution system study is needed.

(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.

(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.

(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.

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

(8) "Certified equipment" means a generating, control or protective system that has been certified by a nationally recognized testing laboratory as meeting acceptable safety and reliability standards.

(9) "Commission" means the public service commission of Wisconsin.

(10) "Commissioning test" means the process of documenting and verifying the performance of a DG facility so that it operates in conformity with the design specifications.

(11) "Customer" means any person who is receiving electric service from a public utility's distribution system.

(12) "DG" means distributed generation.

(13) "DG facility" has the meaning given in s. 196.496 (1), Stats.

(14) "Distribution feeder" means an electric line from a public utility substation or other supply point to customers that is operated at 50 kV or less, or as determined by the commission.

(15) "Distribution system" means all electrical wires, equipment, and other facilities owned or provided by a public utility that are normally operated at 50 kV or less.

(16) "Distribution system study" means a study to determine if a distribution system upgrade is needed to accommodate the proposed DG facility and to determine the cost of any such upgrade.

(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.

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

Note: This defined term should be used when completing the standard application form, PSC Form 6031.

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

Note: This defined term should be used when completing the standard application form, PSC Form 6031.

(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.

Note: This defined term should be used when completing the standard application form, PSC Form 6031.

(17) "Engineering review" means a study that may be undertaken by a public utility, in response to its receipt of a completed standard application form for interconnection, to determine the suitability of the installation.

(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:

(a) The nameplate rating.

(b) If limited using any approved means, that limited amount.

(18) "Fault" means an equipment failure, conductor failure, short circuit, or other condition resulting from abnormally high amounts of current from the power source.

(19) "IEEE" means Institute of Electrical and Electronics Engineers.

(20) "Interconnection" means the physical connection of a DG facility to the distribution system so that parallel operation can occur.

(21) "Interconnection disconnect switch" means a mechanical device used to disconnect a DG facility from a distribution system.

(22) "Inverter" means a machine, device, or system that converts direct current power to alternating current power.

(23) "Islanding" means a condition on the distribution system in which a DG facility delivers power to customers using a portion of the distribution system that is electrically isolated from the remainder of the distribution system.

(24) "kV" means kilovolt.

(25) "kW" means kilowatt. Unless otherwise specified, the definition references units in alternating current.

(26) "Material modification" means any modification that changes the maximum electrical output of a DG facility or changes the interconnection equipment, including:

(a) Changing from certified to non−certified devices.

(b) Replacing a component with a component of different functionality or UL listing.

(27) "MW" means megawatt. Unless otherwise specified, the definition references units in alternating current.

(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.

(28) "Nationally recognized testing laboratory" means any testing laboratory recognized by the U.S. Department of Labor Occupational Safety and Health Administration's accreditation program.

Note: A list of nationally recognized testing laboratories is available at www.osha.gov/dts/otpca/nrtl/index.html.

(29) "Network service" means 2 or more primary distribution feeders electrically connected on the low voltage side of 2 or more transformers, to form a single power source for any customer.

(30) "Parallel operation" means the operation, for longer than 100 milliseconds, of an on−site DG facility while the facility is connected to the energized distribution system.

(31) "Paralleling equipment" means the generating and protective equipment system that interfaces and synchronizes a DG facility with the distribution system.

(32) "Point of common coupling" means the point where the electrical 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.

Note: National electric codes are adopted in Wisconsin Electrical Safety Code Volumes 1 and 2, as found in ch. PSC 114 and ch. SPS 316.

(32m) "Power factor" means the ratio of active power to apparent power.

(33) "Public utility" has the meaning given in s. 196.01 (5), Stats.

(34) "Standard application form" means PSC Form 6031. The standard application form has supplements designed to collect information specific to different installations and technologies.

(35) "Standard interconnection agreement" means PSC Form 6029 for Category 1 facilities or PSC Form 6030 for Category 2 to 4 DG facilities.

Note: A copy of PSC Forms 6029 to 6033 can be obtained can be obtained at no charge from the local electric utility or from the Public Service Commission, PO Box 7854, Madison, WI 53707−7854.

(35g) "Standard pre−application request form" means PSC Form 6032.

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

(36) "Telemetry" means transmission of DG operating data and settings using telecommunications techniques. It may also include controls and two−way communication.

(37) "UL" means Underwriters Laboratory.

(38) "Working day" has the meaning given in s. 227.01 (14), Stats.

History: CR 03−003: cr. Register January 2004 No. 577, eff. 2−1−04; **CR 22−077: am. (4) to (7), cr. (16d) to (16t), (17m), am. (25), (27), cr. (27m), am. (32), cr. (32m), am. (34), cr. (35g), (35r), am. (36) Register April 2024 No. 820, eff. 5−1−24; correction in numbering of (17m) (a), (b) made under s. 13.92 (4) (b) 1., Stats., Register April 2024 No. 820.**

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 this chapter.

(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.

History: CR 22−077: cr. Register April 2024 No. 820, eff. 5−1−24; correction in (1) made under s. 35.176, Stats., Register April 2024 No. 820.

Subchapter II — General Requirements

PSC 119.03 Designated point of contact. Each public utility shall designate one point of contact for all customer inquiries related to DG facilities and from which interested parties can obtain installation guidelines and the appropriate standard commission application and interconnection agreement forms. Each public utility shall have current information concerning its DG point of contact on file with the commission.

History: CR 03−003: cr. Register January 2004 No. 577, eff. 2−1−04.

PSC 119.04 Application process for interconnecting DG facilities. Public utilities and applicants shall complete the following steps regarding interconnection applications for all classes of DG facilities, in the order listed:

(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.

(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).

(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.

(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.

(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.

(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.

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

(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, the notification shall state a nonbinding estimate of that review. 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 pars. (b) through (g).

(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.

(c) Upon 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:

1. Category 1 DG application, 10 working days.
2. Category 2 DG application, 15 working days.
3. Category 3 DG application, 20 working days.
4. Category 4 DG application, 40 working days.

(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. 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.

(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:

1. Category 1 DG application, 10 working days.
2. Category 2 DG application, 15 working days.
3. Category 3 DG application, 20 working days.
4. Category 4 DG application, 60 working days.

(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.

(g) If the applicant agrees, in writing, to pay for any required distribution system construction and modifications, the public utility shall complete the distribution system upgrades and the applicant shall install the DG facility within a time frame that is mutually agreed upon. The applicant shall notify the public utility when project construction is complete.

(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 facility, or 20 working days, for a Category 3 or 4 facility, to complete the following:

1. Witness commissioning tests.

2. Perform an 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.

(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.

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

1. If approved, the public utility shall provide a written statement of final acceptance and 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.

(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.

(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 May 1, 2024:

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.

(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.

History: CR 03–003: cr. Register January 2004 No. 577, eff. 2–1–04; **CR 22–077: am. (1), (2), cr. (2m), am. (3), cr. (3g), (3r), (4) (intro.), renum. (4) to (4) (a) and am., cr. (4) (b), renum. (5) to (4) (c) and am., renum. (5) (a) to (d) to be (4) (c) 1. to 4., renum. (6) to (4) (d) and am., renum. (7) (intro.) to (4) (e) (intro.) and am., renum. (7) (a) to (d) to be (4) (e) 1. to 4. and, as renumbered, am. 4., renum. (8) to (4) (f) and am., renum. (10) (a) to (4) (h) and, as renumbered, am. (intro.), 2., renum. (10) (b) to (4) (i) and am., renum. (11), (12) to (4) (j), (k), and am., cr. (5), (6) Register April 2024 No. 820, eff. 5–1–24; correction in (4) (e) (4) made under s. 35.17, Stats., Register April 2024 No. 820.**

PSC 119.05 Insurance and indemnification. (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.

(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.

Table 119.05–1

Category	Generation Capacity	Minimum Liability Insurance Coverage
1	20 kW or less	$300,000
2	Greater than 20 kW to 200 kW	$1,000,000
3	Greater than 200 kW to 1 MW	$2,000,000
4	Greater than 1 MW to 15 MW	Negotiated

(2) Each party to the standard interconnection agreement shall indemnify, hold harmless and defend the other party, its officers, directors, employees and agents from and against any and all claims, suits, liabilities, damages, costs and expenses resulting from the installation, operation, modification, maintenance or removal of the DG facility. The liability of each party shall be limited to direct actual damages, and all other damages at law or in equity shall be waived.

History: CR 03–003: cr. Register January 2004 No. 577, eff. 2–1–04; **CR 22–077: am. (1), cr. (1m) Register April 2024 No. 820, eff. 4–1–24.**

PSC 119.06 Modifications to the DG facility. The applicant shall notify the public utility of plans for any material modification to the DG facility by providing at least 20 working days of advance notice for a Category 1 DG facility, 40 working days for Category 2 DG facility, and 60 working days for a Category 3 or 4 DG facility. The applicant shall provide this notification by submitting a revised standard application form and such supporting materials as may be reasonably requested by the public utility. The applicant may not commence any material modification to the DG facility until the public utility has approved the revised application, including any necessary engineering review or distribution system study. The public utility shall indicate its written approval or rejection of a revised application within the number of working days shown in the table below. Upon completion of the application process, a new standard interconnection agreement shall be signed by both parties prior to parallel operation. If the public utility fails to respond in the time specified in Table 119.06–1, the completed application is deemed approved.

Table 119.06–1		
Category	Export 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

History: CR 03–003: cr. Register January 2004 No. 577, eff. 2–1–04; **CR 22–077: am. Table 119.06–1 Register April 2024 No. 820, eff. 5–1–24.**

PSC 119.07 Easements and rights–of–way. If a public utility line extension is required to accommodate a DG interconnection, the applicant shall provide, or obtain from others, suitable easements or rights–of–way. The applicant is responsible for the cost of providing or obtaining these easements or rights of way.

History: CR 03–003: cr. Register January 2004 No. 577, eff. 2–1–04.

PSC 119.08 Fees and distribution system costs. (1) Upon receiving a standard application form, the public utility shall specify the amount of any engineering review or distribution system study fees. 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.

Table 119.08–1					
Category	**Export Capacity**	**Application Review Fee**	**Engineering Review Fee**	**Distribution System Study Fee**	**Commissioning Fee**
1	20 kW or less	$150 (1–8 kW) $300 (9–20 kW)	Cost based	Cost based	$150
2	Greater than 20 kW to 200 kW	$300 + $10/kW	Cost based	Cost based	$250
3	Greater than 200 kW to 1 MW	$2000 + $2/kW	Cost based	Cost based	$1000
4	Greater than 1 MW to 15 MW	$4000 + $0.50/kW	Cost based	Cost based	$2500

(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. 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.

(3) Costs for any necessary line extension shall be assessed pursuant to s. PSC 113.1005.

(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.

(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.

(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.

History: CR 03–003: cr. Register January 2004 No. 577, eff. 2–1–04; **CR 22–077: am. (1), Table 119.08–1, (2), cr. (4) to (6) Register April 2024 No. 820, eff. 5–1–24.**

PSC 119.09 Disconnection. A public utility may refuse to connect or may disconnect a DG facility from the distribution system only under any of the following conditions:

(1) Lack of approved standard application form or standard interconnection agreement.

(2) Termination of interconnection by mutual agreement.

(3) Non–compliance with the technical or contractual requirements.

(4) Distribution system emergency.

(5) Routine maintenance, repairs, and modifications, but only for a reasonable length of time necessary to perform the required work and upon reasonable notice.

History: CR 03–003: cr. Register January 2004 No. 577, eff. 2–1–04.

PSC 119.10 One–line schematic diagram. (1) The applicant shall include a one–line schematic diagram with the completed standard application form. ANSI symbols shall be used in the one–line schematic diagram to show the following:

(a) Generator or inverter.

(b) Point where the DG facility is electrically connected to the customer's electrical system.

(c) Point of common coupling.

(d) Lockable interconnection disconnect switch.

(e) Method of grounding, including generator and transformer ground connections.

(f) Protection functions and systems.

(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 unintentional islanding and power quality protective systems. The specifications regarding the 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 dia-

gram a statement by the manufacturer that its equipment meets or exceeds the type tested requirements for certification.

History: CR 03–003: cr. Register January 2004 No. 577, eff. 2–1–04; **CR 22–077: am. (2) Register April 2024 No. 820, eff. 5–1–24.**

PSC 119.11 Control schematics. For equipment not certified under s. PSC 119.26, the applicant shall include with the application a complete set of control schematics showing all protective functions and controls for generator protection and distribution system protection.

History: CR 03–003: cr. Register January 2004 No. 577, eff. 2–1–04.

PSC 119.12 Site plan. For all categories, the applicant shall include with the application a site plan that shows the location of the interconnection disconnect switch, adjoining street name, and the street address of the DG facility. For Category 2, 3, or 4 DG facilities, the site plan shall show the location of major equipment, electric service entrance, electric meter, interconnection disconnect switch, and interface equipment.

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).

(3m) 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.

(4m) 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.

History: CR 22–077: cr. Register April 2024 No. 820, eff. 5–1–24; renum. (3) (a), (4) (a) to be (3m) and (4m) under s. 13.92 (4) (b) 1., Stats., Register April 2024, No. 820.

Subchapter III — Design Requirements

PSC 119.20 General design requirements. (1) The applicant shall install protection devices to ensure that the current supplied by the DG facility is interrupted if a fault or other potentially dangerous event occurs on the distribution system. If such an event occurs and the public utility's distribution system is de–energized, any DG facility that is connected to this distribution system shall automatically disconnect. All DG facilities shall utilize protection devices that prevent electrically closing a DG facility that is out of synchronization with the distribution system.

(2) All installations shall include equipment circuit breakers, on the DG facility side of the point where the DG facility is electrically connected to the customer's electrical system, that are capable of interrupting the maximum available fault current. Equipment circuit breakers shall meet all applicable UL, ANSI, and IEEE standards.

(3) The public utility may require that the applicant furnish and install an interconnection disconnect switch that opens, with a visual break, all ungrounded poles of the interconnection circuit. The interconnection disconnect switch shall be rated for the voltage and fault current requirements of the DG facility, and shall meet all applicable UL, ANSI, and IEEE standards. The switch enclosure shall be properly grounded. The interconnection disconnect switch shall be accessible at all times, located for ease of access to public utility personnel, and shall be capable of being locked in the open position. The applicant shall follow the public utility's recommended switching, clearance, tagging, and locking procedures.

Note: Provisions of the Wisconsin Electrical Safety Code, Volume 2, ch. SPS 316 also apply to these installations.

(4) The applicant shall label the interconnection disconnect switch "Interconnection Disconnect Switch" by means of a permanently attached sign with clearly visible and permanent letters. The applicant shall provide and post its procedure for disconnecting the DG facility next to the switch.

(5) The applicant shall install an equipment grounding conductor, in addition to the ungrounded conductors, between the DG facility and the distribution system. The grounding conductors shall be available, permanent, and electrically continuous, shall be capable of safely carrying the maximum fault likely to be imposed on them by the systems to which they are connected, and shall have sufficiently low impedance to facilitate the operation of overcurrent protection devices under fault conditions. All DG transformations shall be multi–grounded. The DG facility may not be designed or implemented such that the earth becomes the sole fault current path.

Note: Grounding practices are also regulated by the Wisconsin Electrical Safety Code Volumes 1 and 2, as found in chs. SPS 316 and PSC 114.

(6) (a) All inverter–based DG facilities shall be UL 1741 published September 28, 2021 listed.

(b) 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.

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, 4822 Madison Yards Way, Madison, WI.

(7) (a) All Category 1 and 2 DG facilities shall be operated at a power factor greater than 0.9.

(b) All Category 3 and 4 DG facilities shall be operated at unity power factor or as mutually agreed between the public utility and applicant.

(8) The DG facility shall not create system voltage or current disturbances that exceed the standards listed in subch. VII of ch. PSC 113.

(9) The applicant shall protect and synchronize its DG facility with the distribution system.

(10) Each DG facility shall include an automatic interrupting device that is listed with a nationally recognized testing laboratory and is rated to interrupt available fault current. The interrupting device shall be tripped by any of the required protective functions.

(11) An applicant for interconnection of a Category 3 or Category 4 facility shall provide test switches as specified by the public utility, to allow for testing the operation of the protective functions without unwiring or disassembling the equipment.

(12) The public utility may require a DG facility to be isolated from other customers by installation of a separate power transformer. When a separate transformer is required, the utility may include its actual cost in the distribution system upgrade costs. The applicant is responsible for supplying and paying for any custom transformer. This requirement does not apply to an induction–type generator with a capacity of 5 kW or less, or to other generating units of 10 kW or less that utilize a line–commutated inverter.

(13) The owner of a DG facility designed to operate in parallel with a spot or secondary network service shall provide relaying or control equipment that is rated and listed for the application and is acceptable to the public utility.

(14) For a Category 3 or Category 4 DG facility, the public utility may require that the facility owner provide telemetry equipment whose monitoring functions include transfer–trip functionality, voltage, current, real power (watts), reactive power (vars), and breaker status.

(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.

(16) 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.

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.

History: CR 03–003: cr. Register January 2004 No. 577, eff. 2–1–04; **CR 22–077: am. (6) (a), renum. (6) (b) to (6) (b) (intro.) and am., cr. (6) (b) 1. to 3., (15), (16) Register April 2024 No. 820, eff. 5–1–24; correction in (16) (b) made under s. 35.17, Stats., Register April 2024 No. 820.**

PSC 119.25 Minimum protection requirements. **(1)** Each DG facility shall include protection and 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.

(2) The protective system functions, which may be met with microprocessor–based multifunction protection systems or discrete relays, are required. Protective relay activation shall not only alarm but shall also trip the generator breaker/contactor.

(3) In addition to 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.

(4) A DG facility certified pursuant to s. PSC 119.26 shall be deemed to meet the requirements of this section.

History: CR 03–003: cr. Register January 2004 No. 577, eff. 2–1–04; **CR 22–077: am. (1), (3) (intro.), (b) 6. Register April 2024 No. 820, eff. 5–1–24.**

Subchapter IV — Equipment Certification

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 (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.

History: CR 03–003: cr. Register January 2004 No. 577, eff. 2–1–04; **CR 22–077: am. Register April 2024 No. 820, eff. 5–1–24.**

PSC 119.27 Non–certified paralleling equipment. **(1)** 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.

(2) The applicant shall calibrate any protective system approved under sub. (1) to the specifications of the public utility. The applicant shall obtain prior written approval from the public utility for any revisions to specified protection system calibrations.

History: CR 03–003: cr. Register January 2004 No. 577, eff. 2–1–04; **CR 22–077: am. (1) Register April 2024 No. 820, eff. 5–1–24.**

Subchapter V — Testing of DG Facility Installations

PSC 119.30 Unintentional islanding test. The public utility may perform an unintentional islanding test or observe the automatic shutdown before giving final written approval for interconnection of the DG facility. The unintentional islanding test requires that the DG facility shall detect the island, cease to energize the local distribution system, and trip within two seconds of the formation of an island. 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 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 simulation of an unintentional island, approval

of the installation shall not be given until corrective measures are taken with a subsequent successful test.

History: CR 03–003: cr. Register January 2004 No. 577, eff. 2–1–04; **CR 22–077: am. Register April 2024 No. 820, eff. 5–1–24.**

PSC 119.31 Commissioning tests for paralleling equipment in Categories 2 to 4. The public utility shall provide the acceptable range of settings for the paralleling equipment of a Category 2, 3, or 4 DG facility. The applicant shall program protective equipment settings into this paralleling equipment. The public utility may verify the protective equipment settings prior to allowing the DG facility to interconnect to the distribution system.

History: CR 03–003: cr. Register January 2004 No. 577, eff. 2–1–04.

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 responsible for the re–testing shall bear the cost of the re–tests.

History: CR 03–003: cr. Register January 2004 No. 577, eff. 2–1–04; **CR 22–077: am. Register April 2024 No. 820, eff. 5–1–24.**

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) (a) 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.

(am) The hearing shall confirm 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.

History: CR 03–003: renum. from PSC 113.0208 and am. Register January 2004 No. 577, eff. 2–1–04; **CR 22–077: r. and recr. Register April 2024 No. 820, eff. 5–1–24; correction in numbering in (7) (intro.), (a) made under s. 13.92 (4) (b) 1., Stats., and correction in (7) (a) made under s. 35.17, Stats., Register April 2024, No. 820.**