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 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.

(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.

(16) “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:

PSC 119.10 Disconnection.

PSC 119.11 Control schematics.

PSC 119.12 Site plan.

PSC 119.13 Pre–application report.

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PSC 119.04 Application process for interconnecting DG facilities.

PSC 119.05 Insurance and indemnification.

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PSC 119.95 Other.

PSC 119.100 History.

PSC 119.105 Staff.

PSC 119.110nic.

PSC 119.115 Other.

PSC 119.120 History.

PSC 119.125 Staff.

PSC 119.130nic.

PSC 119.135 Other.

PSC 119.140 History.

PSC 119.145 Staff.

PSC 119.150nic.

PSC 119.155 Other.

PSC 119.160 History.

PSC 119.165 Staff.

PSC 119.170nic.

PSC 119.175 Other.

PSC 119.180 History.

PSC 119.185 Staff.

PSC 119.190nic.

PSC 119.195 Other.

PSC 119.200 History.

PSC 119.205 Staff.

PSC 119.210nic.

PSC 119.215 Other.

PSC 119.220 History.

PSC 119.225 Staff.

PSC 119.230nic.

PSC 119.235 Other.

PSC 119.240 History.

PSC 119.245 Staff.

PSC 119.250nic.

PSC 119.255 Other.

PSC 119.260 History.

PSC 119.265 Staff.

PSC 119.270nic.

PSC 119.275 Other.

PSC 119.280 History.

PSC 119.285 Staff.

PSC 119.290nic.

PSC 119.295 Other.

PSC 119.300 History.

PSC 119.305 Staff.

PSC 119.310nic.

PSC 119.315 Other.

PSC 119.320 History.

PSC 119.325 Staff.

PSC 119.330nic.

PSC 119.335 Other.

PSC 119.340 History.

PSC 119.345 Staff.

PSC 119.350nic.

PSC 119.355 Other.

PSC 119.360 History.

PSC 119.365 Staff.

PSC 119.370nic.

PSC 119.375 Other.

PSC 119.380 History.

PSC 119.385 Staff.

PSC 119.390nic.

PSC 119.395 Other.

PSC 119.400 History.

PSC 119.405 Staff.

PSC 119.410nic.

PSC 119.415 Other.

PSC 119.420 History.

PSC 119.425 Staff.

PSC 119.430nic.
(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/dbs/topics/nrtl/index.html.

(29) “Network service” means 2 or more primary distribution feeders that are 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 or 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.

(35n) “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 (16i), (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. 1392 (4) (b) 1., Stats., Register April 2024 No. 820.

PSC 119.025 Adoption of standards by reference.


(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 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. 35.17, 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.
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 inspection 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.

3. Waive its right, in writing, to witness or verify the commissioning tests.

(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 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.

(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), 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 a 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 119.05−1, the completed application is deemed approved.

<table>
<thead>
<tr>
<th>Category</th>
<th>Generation Capacity</th>
<th>Minimum Liability Insurance Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20 kW or less</td>
<td>$300,000</td>
</tr>
<tr>
<td>2</td>
<td>Greater than 20 kW to 200 kW</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>3</td>
<td>Greater than 200 kW to 1 MW</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>4</td>
<td>Greater than 1 MW to 15 MW</td>
<td>Negotiated</td>
</tr>
</tbody>
</table>

(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 119.05 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 insur-
**PUBLIC SERVICE COMMISSION**

### Table 119.06–1

<table>
<thead>
<tr>
<th>Category</th>
<th>Export Capacity after Modification</th>
<th>Working Days for Utility’s Response to Proposed Modifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20 kW or less</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>Greater than 20 kW to 200 kW</td>
<td>40</td>
</tr>
<tr>
<td>3</td>
<td>Greater than 200 kW to 1 MW</td>
<td>60</td>
</tr>
<tr>
<td>4</td>
<td>Greater than 1 MW to 15 MW</td>
<td>60</td>
</tr>
</tbody>
</table>

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

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 119.10 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-

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Register April 2024 No. 820
PSC 119.10  WISCONSIN ADMINISTRATIVE CODE

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 deenergized, 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://wiee.org. They may also be viewed at the FSCW Library, 4822 Madison Yards Way, Madison, WI. 4822 Madison Yards Way, Madison, W1.

(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), remum. (6) (b) to (6) (b) (intro.) and amm., (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.

(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 is nationally recognized testing laboratory (NRTL) certified to 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.

(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.

(b) The hearing shall confirm to the procedures of ss. 196.26 to 196.34, Stats.

(7) 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 recc. Register April 2024 No. 820, eff. 5–1–24; correction in numbering in (7) (intro.), (a) made under s. 13.92 (4) (h) 1., Stats., and correction in (7) (a) made under s. 35.17, Stats., Register April 2024, No. 820.