

## PACIFIC POWER &amp; LIGHT COMPANY

WN U-75

First Revision of Sheet No. 136.3  
Canceling Original Sheet No. 136.3

(D)(N)

**Schedule 136**  
**INTERCONNECTION TARIFF**SPECIAL CONDITIONS:**A. Applicability**

**1. Tier 1.** Interconnection of a generating facility will use Tier 1 processes and technical requirements if the proposed generating facility meets all of the following criteria:

- a) Uses inverter-based interconnection equipment;
- b) Is single phase;
- c) Has a nameplate capacity of 25 kW or less;
- d) Is proposed for interconnection at secondary voltages (600 V class);
- e) Requires no construction or upgrades to Company facilities, other than meter changes;
- f) The aggregated generating capacity on the service wire does not exceed the service wire capability;
- g) The aggregated generating capacity on the transformer secondary does not exceed the nameplate on the transformer;
- h) If proposed to be interconnected on a center tap neutral of a 240 volt service, its addition shall not create an imbalance between the two sides of the 240 volt service of more than 5 kVA; and
- i) The aggregated nameplate capacity of all generating facilities on any line section does not exceed fifteen percent of the line section annual peak load as most recently measured or calculated for that line section, or fifteen percent of the circuit annual peak load as most recently measured or calculated for the circuit. For the purposes of the subsection:

A. "All generating facilities" means all interconnected generating facilities, the proposed generating facility, and all other proposed generating facilities already in the queue defined in WAC 480-108-030(7); and

B. "Line section" means that portion of an electric system connected to the generating facility and bounded by sectionalizing devices or the end of the distribution line.

**2. Tier 2.** Interconnection of a generating facility will use Tier 2 processes and technical requirements if the proposed generating facility meets all of the following criteria:

- a) It does not qualify for Tier 1 interconnection applicability requirements;
- b) Has a nameplate capacity of 500 kW or less;
- c) Is proposed for interconnection to an electric system distribution facility operated at or below 38 kV class;
- d) Is not a synchronous generator;
- e) If it is proposed to be interconnected on a shared secondary, the aggregate generating capacity on the shared secondary, including the proposed generating facility, must not exceed the lesser of the service wire capability or the nameplate of the transformer;
- f) The aggregated nameplate capacity of all generating facilities on any line section does not exceed fifteen percent of the line section annual peak load as most recently measured or calculated for that line section, or fifteen percent of the circuit annual peak load as most recently measured or calculated for the circuit. For the purposes of the subsection:

A. "All generating facilities" means all interconnected generating facilities, the proposed generating facility, and all other proposed generating facilities already in the queue defined in WAC 480-108-030(7); and

B. "Line section" means that portion of an electric system connected to the generating facility and bounded by sectionalizing devices or the end of the distribution line.

(continued)

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(D)(N)

**Schedule 136**  
**INTERCONNECTION TARIFF****A. Applicability:** (continued)**2. Tier 2.** (continued)

- g) Any upgrades required to the electric system must fall within the requirements in section (B)(2)(b) of this section;
- h) For interconnection of a proposed generating facility to the load side of the spot network protectors, the proposed generating facility must utilize an inverter. The aggregate nameplate capacity of all inverter-based systems must not exceed the smaller of five percent of a spot network's maximum load or 50 kW;
- i) The aggregated nameplate capacity of existing and proposed generating facilities must not contribute more than ten percent of the distribution circuit's maximum fault current at the point on the primary voltage distribution line nearest the point of interconnection; and
- j) The generating facility's point of interconnection must not be on a circuit where the available short circuit current, with or without the proposed generating facility, exceeds 87.5 percent of the interrupting capability of the Company's protective devices and equipment (including substation breakers, fuse cutouts, and line reclosers).

- 3. Tier 3.** Interconnection of a generating facility will use Tier 3 processes and technical requirements if the proposed generating facility does not qualify for Tier 1 or Tier 2.

**B. Technical Requirements:****1. Tier 1**

- a) The purpose of the protection required for Tier 1 generating facilities is to prevent islanding and to ensure that inverter output is disconnected when the electric system is deenergized;
- b) An interrupting device must be provided which is capable of safely interrupting the maximum available fault current (typically the maximum fault current is that supplied by the Company);
- c) The generating facility must operate within the voltage and power factor ranges specified by the Company and as allowed by Underwriters Laboratories standard (UL) 1741;
- d) Disconnect Switch:
  - A. Interconnection customers installing and operating an inverter-based UL 1741 certified system interconnected through a self-contained socket-based meter of 320 amps or less are not required to install a visible, lockable AC disconnect switch.
  - B. All other generating facilities must include a visible, lockable AC disconnect switch, except as provided in subsections 1, 2, and 3 of this subsection. The Company shall have the right to disconnect the generating facility at a UL listed disconnect switch to meet Company operating and safety requirements;
    - 1. The Company may waive the visible, lockable disconnect switch requirement for an inverter-based system.

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**Schedule 136**  
**INTERCONNECTION TARIFF****B. Technical Requirements:** (continued)**1. Tier 1** (continued)

## d) Disconnect Switch (continued)

2. To maintain Company operating and personnel safety in the absence of an external disconnect switch, the interconnection customer shall agree that the company has the right to disconnect electric service through other means if the generating facility must be physically disconnected for any reason, without liability to the Company. These actions to disconnect the generating facility (due to an emergency or maintenance or other condition on the electric system) will result in loss of electrical service to the customer's facility or residence for the duration of time that work is actively in progress. The duration of outage may be longer than it would otherwise have been with an AC disconnect switch;
3. In the absence of an external disconnect switch, the interconnection customer is required to operate and maintain the inverter in accordance with the manufacturer's guidelines, and retain documentation of commissioning. In the absence of such documentation the Company may, with 5 days' notice and at the interconnection customer's expense, test or cause to be tested the inverter to ensure its continued operation and protection capability. The person that tests the inverter shall provide documentation of the results to both the Company and the interconnection customer. Should the inverter fail the test, the Company may disconnect the generating facility, and require the interconnection customer to repair or replace the inverter. The cost of any such repair or replacement required by the Company shall be the sole responsibility of the interconnection customer.

**2. Tier 2:**

- a) In all cases, the interconnection facilities must isolate the generating facility from the electric system as specified by IEEE 1547, and the interconnection agreement. The interconnection customer shall prevent its generating facility equipment from automatically reenergizing the electric system as specified by IEEE 1547, and the interconnection agreement. For inverter-based systems the interconnecting facility must comply with IEEE 1547, UL 1741 and the interconnection agreement set forth by the electric utility. For noninverter based systems a separate protection package will be required to meet IEEE1547 and the interconnection agreement set forth by the Company.
- b) If the generating facility fails to meet the characteristics for Tier 2 applicability, but the Company determines that the generating facility could be interconnected safely if minor modifications to the transmission or distribution system were made (for example, changing meters, fuses, or relay settings), then the Company may offer the customer a good-faith, non-binding estimate of the costs of such proposed minor modifications. If the interconnection customer authorizes the Company to proceed with the minor modifications, then the Company may approve the application using Tier 2 processes and technical requirements;
- c) For proposed generating facilities 50 kW and greater, three-phase connection may be required by the Company;

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**Schedule 136**  
**INTERCONNECTION TARIFF**

**C. Applications:** (continued)**1. Tier 1 Application Timeline.**

- a) **Notice of receipt.** Notice of receipt of an application and application fee shall be sent by the Company to the interconnection customer within five business days;
- b) **Notice of complete application**
- (i) The Company shall notify the interconnection customer if the application is complete or incomplete, and if incomplete specifying any deficiencies, within ten business days after the notice of the receipt of application; and
  - (ii) When the Company sends a notice of incomplete application to an interconnection customer, the interconnection customer shall provide a complete application to the Company within fifteen business days of the notice. If the interconnection customer fails to complete the application, the application expires at the end of the incomplete application period.
- c) **Approval or denial.** Within twenty business days after a complete application notice is sent to an interconnection customer, the Company shall approve, approve with conditions, or deny the application with written justification. The Company shall include, in the same package as the notice of approval, an executable interconnection agreement, the dollar amount due to complete the interconnection, notice of steps the customer must take to receive any renewable production incentive payments, and any other information likely to expedite the remainder of the interconnection process. If delays result from unforeseen circumstances, customer variance requests, or other incentive program approval requirements, the customer shall be promptly notified; and
- d) **Initial Operation.** An interconnection customer must interconnect and operate the generating facility within one year from the date of approval of the application, or the application expires, unless the Company, in its sole discretion, grants an extension in writing.

**2. Tier 2 Application Timeline.**

- a) **Notice of receipt.** Notice of receipt of an application and application fee shall be sent by the Company to the interconnection customer within five business days;
- b) **Notice of complete application**
- (i) The Company shall notify the interconnection customer if the application is complete or incomplete, and if incomplete specifying any deficiencies, within ten business days after the notice of the receipt of application; and
  - (ii) When the Company sends a notice of incomplete application to an interconnection customer, the interconnection customer shall provide a complete application to the Company within fifteen business days of the notice. The Company may, but is not required to, grant an extension in writing. If the interconnection customer fails to complete the application, the application expires at the end of the incomplete application period.

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**Schedule 136**  
**INTERCONNECTION TARIFF****C. Applications:** (continued)**2. Tier 2 Application Timeline** (continued)

- c) **Approval or denial.** Within thirty business days after a complete application notice is sent to an interconnection customer, the Company shall approve, approve with conditions, or deny the application with written justification. If delays result from unforeseen circumstances, customer variance requests, or other incentive program approval requirements, the customer shall be promptly notified;
- d) **Offer of Agreement.** The Company must offer the interconnection customer an executable interconnection agreement within five business days of the notification of approval described in (c) of this subsection.
- e) **Initial Operation.** An interconnection customer must interconnect and operate the generating facility within one year from the date of approval of the application, or the application expires, unless the Company, in its sole discretion, grants an extension in writing.

**3. Tier 3 Application Timeline**

- a) **Notice of receipt.** Notice of receipt of an application and application fee shall be sent by the Company to the interconnection customer within five business days.
- b) **Notice of complete application**
  - (i) The Company shall notify the interconnection customer if the application is complete or incomplete, and if incomplete specifying any deficiencies, within ten business days after the notice of the receipt of application; and
  - (ii) When the Company sends a notice of incomplete application to an interconnection customer, the interconnection customer shall provide a complete application to the Company within thirty business days of the notice. The Company may, but is not required to, grant an extension in writing. If the interconnection customer fails to complete the application, the application expires at the end of the incomplete application period.
- c) **Technical review and additional studies.**
  - (i) **Technical review.** Once an application is accepted by the Company as complete, the Company will review the application to determine if the interconnection request complies with the technical standards established in WAC 480-108-020 and to determine whether any additional engineering, safety, reliability, or other studies are required. If the Company determines that additional studies are required, the Company must provide the interconnection customer a form of agreement that includes a description of what studies are required and a good faith estimate of the cost and time necessary to perform the studies. The Company must notify the interconnection customer of the result of these determinations within thirty business days of when the application is deemed complete, as described in subsection (b) of this section. The interconnection customer may request that these studies be combined.

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