

## **Inverter Manufacturer Attestation Form** **Phase 3 Functions 1 and 8**

### **Instructions**

California Public Utilities Commission (CPUC) Resolution E-5000 requires Generating Facilities<sup>1</sup> utilizing inverter-based technologies for which an Interconnection Request is submitted on or after January 22, 2020, to comply with Rule 21 Section Hh Monitoring and Telemetry requirements (Function 1) and Scheduling capability requirements (Function 8).<sup>2</sup> For inverter-based Generating Facilities requesting interconnection with a Distribution Provider's<sup>3</sup> electricity grid on and after January 22, 2020, this manufacturer attestation will serve as sufficient evidence of compliance with:

- Phase 3 Function 1 (Monitor Key Data) until 18 months after the publication of a nationally recognized test procedure<sup>4</sup> containing Phase 3 Function 1.<sup>5</sup> After this time period, the function shall be testing according to prescribed procedures.
- Phase 3 Function 8 (Scheduling) until 12 months after the publication of a nationally recognized test procedure<sup>6</sup> containing Phase 3 Function 8.<sup>7</sup> After this time period, the function shall be testing according to prescribed procedures.

Manufacturers may submit this attestation form to the California Energy Commission (CEC), as evidence to the Distribution Provider of inverter compliance with the Phase 3 Functions 1 and 8 requirements. To prevent a disruption in the interconnection process, it is recommended to allow the CEC at least 30 to 45 days to review the information and add the equipment to the approved inverter list. Manufacturers should consider the compliance requirement of January 22, 2020, when submitting this attestation form to the CEC.

The completed form must be submitted to the CEC in accordance with the instructions that will be provided in the Inverter Listing Request Instructions located on the CEC website at:

<https://www.gosolarcalifornia.org/equipment/inverters.php>

For additional questions, contact the CEC Solar Equipment Call Center at:

Email: [solarequipment@energy.ca.gov](mailto:solarequipment@energy.ca.gov)

Phone: (916) 654-4120

Where a communications interface is required for the DER site by the Distribution Provider, the Distribution Provider's commissioning test procedure may specify commissioning checks of the communications and attested functions.

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<sup>1</sup> Terms with initial capitalization that are not defined herein shall have the meanings specified in Rule 21 of each utility to whom this attestation is submitted, respectively.

<sup>2</sup> Resolution E-5000, issued July 11, 2019, at Ordering Paragraph 10.

<sup>3</sup> Distribution Provider is an investor-owned electric utility regulated by the California Public Utilities Commission: Pacific Gas & Electric Company, Southern California Edison, and San Diego Gas & Electric Company.

<sup>4</sup> UL1741 updated, approved, and published with IEEE1547.1-2020 testing requirements.

<sup>5</sup> Resolution E-5000, issued July 11, 2019, at Ordering Paragraph 7.

<sup>6</sup> UL1741 updated, approved, and published with IEEE1547.1-2020 testing requirements.

<sup>7</sup> Resolution E-5000, issued July 11, 2019, at Ordering Paragraph 8.

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**Phase 3 Functions 1 and 8**

**Inverter  
Manufacturer  
Logo**

**1. Inverter Manufacturer Attestation**

\_\_\_\_\_ (“Manufacturer”) attests to the following:

- It has performed sufficient structured testing by qualified personnel based on the most updated publicly available testing criteria on each of the inverter models listed in this report.
- The inverter models listed in this report have demonstrated performance of each function as specified in this document.
- It will maintain testing records and make them available upon request.

**Capability Requirement for Smart Inverter Phase 3 Function 1**

Each Smart Inverter listed below shall have the capability to communicate its performance information on the following functional elements:

- A. **Production or consumption of active power (Watts).** The inverter shall be capable of accurately communicating the active power (Watts) produced or consumed as measured at the terminals of the inverter.
- B. **Consumption or production of reactive power (Vars).** The inverter shall be capable of accurately communicating the reactive power (Vars) produced or consumed as measured at the terminals of the inverter.
- C. **Phase voltage measured at the AC terminals of the Smart Inverter (volts).** The inverter shall be capable of accurately communicating the measured AC voltage (volts) as measured at the terminals of the inverter.
- D. **Frequency measured at the AC terminals of the Smart Inverter (Hz).** The inverter shall be capable of accurately communicating the measured system frequency (HZ) as measured at the terminals of the inverter.
- E. For inverters designed for applications with energy-storage systems, the inverter shall be capable of communicating the operational state of charge as a percent of energy storage capacity.
- F. The inverter shall be capable of communicating when the inverter is capable of providing electric services, as follows:
  - In-Service:** An operational state which indicates that the Smart Inverter is connected to the electric system and operating as determined locally by the Generating Facility operator or by a scheduling control system.
  - Not In-Service:** An operating state that indicates that the Smart Inverter is not capable of connecting to the electric system and not capable of providing any type of electrical support as required local or as commanded by a scheduling control system.

## Capability Requirement for Smart Inverter Phase 3 Function 8

The inverter shall respond to scheduling command changes that are sent to the inverter from an external scheduling control system.<sup>8</sup> The inverter shall respond by changing its mode of operation as commanded by the external scheduling control within the expected time response for the given function. The scheduling functions for which the inverter shall respond may include one or a combination of the following mode changes:

- Modifications to the voltage and reactive set-points of the Dynamic volt/var function.
- Modifications to the reactive power set-points for the fixed power factor function.
- Modifications to the voltage and watt-reduction level set-points for the volt/watt function.

### 2. Inverter List

Manufacturer attests that each of the following inverters have demonstrated performance of each function as specified in this document:

Inverter Manufacturer <sup>9</sup>	Inverter Name	Inverter Model Number <sup>10</sup>	Date Tested	Notes
Ex: Green Inverter Company Inc.	Ex: Green Inverter GG1	Ex: GG1-5000	Ex: 8/30/2020	

### 3. Affidavit in Support of Manufacturer’s Claim of Inverter Compliance with the Distribution Provider’s CPUC-approved Electric Rule 21 Phase 3 Smart Inverter Functions 1 and 8.

I, \_\_\_\_\_, state as follows:

1. I am authorized to make this declaration as authorized representative of the Manufacturer;
2. I have personal knowledge of the matters set forth herein and if called upon as a witness could and would testify competently thereto;
3. I warrant that the inverter(s) listed in Section 2 are in full compliance with the Phase 3 Smart Inverter Function 1, as defined under Rule 21, Section Hh; and

<sup>8</sup> Note: The process of providing the scheduling command to the inverter is not a part of this attestation. The attestation is for how the inverter responds to commands to change settings.

<sup>9</sup> Manufacturer name should match the UL 1741 certification.

<sup>10</sup> Model Number should match the model number on the CEC inverter list.

4. I warrant that the inverter(s) listed in Section 2 are in full compliance with the Phase 3 Smart Inverter Function 8, as defined under Rule 21, Section Hh.
5. In the event that the inverter(s) listed above are not able to perform the functions as specified in this report, customers should contact Manufacturer for support: \_\_\_\_\_.<sup>11</sup> The customer should also refer to Manufacturer's warranty for the terms and conditions of Manufacturer's responsibility, if any, for costs associated with retrofitting, testing, and certification of the inverter(s) in the event the inverter(s) listed above are not able to perform the functions as specified in this report.
6. A copy of the warranty will be made available to the customer by Manufacturer that explains Manufacturer's commitment, or lack thereof, to work with the customer if the inverter(s) are found to be non-compliant, and responsibility, or lack thereof, for any costs associated with making the inverter(s) compliant.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ at \_\_\_\_\_, \_\_\_\_\_ [City, State].

Signature: \_\_\_\_\_  
Authorized Representative of Manufacturer

Title: \_\_\_\_\_

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<sup>11</sup> Manufacturer will update this attestation with current contact information.