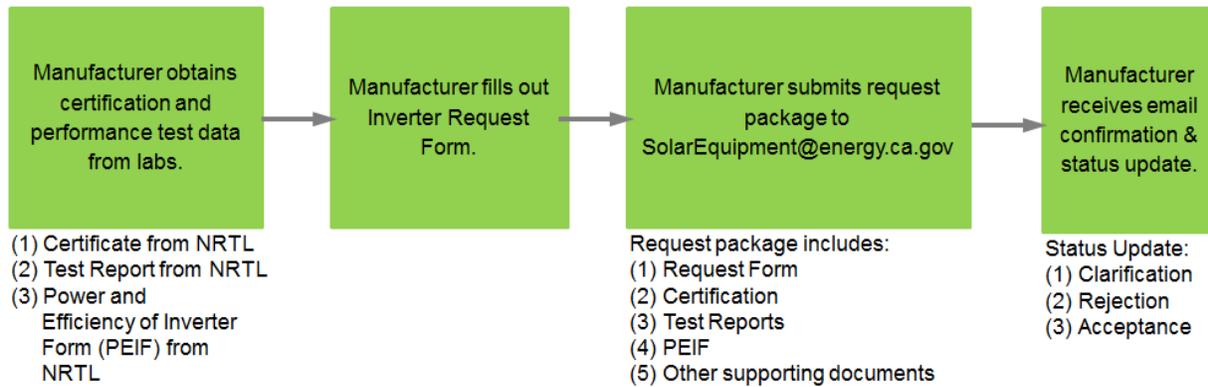


Inverter Listing Request Procedure



General Guidance for Inverter Listing Request:

- Requirements are detailed in the [Guidelines for California's Solar Electric Incentive Programs \(Senate Bill 1\), Sixth Edition](#)
- **Equipment manufacturer must submit the request.**
- Reports and documents must be written in English.
- Submit all the required documentation **in a single email**. Incomplete requests will be rejected and will lose their place in the review queue; a complete request must then be resubmitted.
- Requests containing falsified reports or altered forms will be rejected. The equipment may be permanently prohibited from inclusion on the list, and the manufacturer permanently prohibited from having equipment listed.
- Refer to the [Workshops, Notices and Training page](#) on the [GoSolarCalifornia website](#) for additional instructions, examples, and best practices to avoid common mistakes.
- **NOTE: Data and information submitted to the Energy Commission are public record. Do not submit any proprietary or confidential information. Proprietary or confidential information on required documents must be redacted or omitted prior to submission.**

Procedure for Submitting an Inverter Listing Request (1, 2, 3):

1. Required Request Documents

The manufacturer submits the listing request in a single e-mail to SolarEquipment@energy.ca.gov.

Include a subject line stating the purpose of the equipment request (new or revised), the equipment type (Inverter), and the manufacturer's name. Attach to the e-mail all required documentation:

- a) Inverter Listing Request Form.
- b) Nationally Recognized Testing Laboratory (NRTL) certification(s) to UL 1741 from a NRTL whose OSHA Scope of Recognition includes UL 1741.¹
 - o NOTE: Includes UL 1741 Supplement SA for Grid Support Utility Interactive inverters.
- c) NRTL test report(s) for UL 1741 including Supplement SA test summary for Grid Support Utility Interactive inverters.
- d) **Excel file(s)** of the Power and Efficiency of Inverter Form.
- e) Additional supporting documentation, as required by Energy Commission staff. Please note that submitted information is public record; **do not submit any proprietary or confidential information.**

2. Minimum Criteria for Certification and Test Reports

The certification(s) and test report(s) must meet the requirements outlined below.

- a) The UL 1741 certification document.
 - o Signed or stamped and dated by NRTL.
 - o Indicates the UL 1741 standard and Source Requirement Documents (SRDs) for the test.
 - Includes UL 1741 Supplement SA for Grid Support Utility Interactive inverter models.
 - o Specifies the requested model number(s) certified.
 - o Specifies inverter type: "Utility Interactive" or "Grid Support Utility Interactive".
- b) The UL 1741 test report (only required for Grid Support Utility Interactive ["Smart"] inverters).
 - o Signed and dated by NRTL.
 - o Indicates testing completed according to UL 1741 including the Supplement SA sections.
 - o Specifies the model number(s) tested.
 - o Indicates testing for UL 1741 Supplement SA Sections SA8-SA13 completed.
 - o Specifies the firmware version(s) tested for grid support functionality.
- c) The [Power and Efficiency of Inverter Form](#) in **Excel format**.

¹ [The current list of NRTLs with OSHA scopes](#)

- The most current version of the form must be used or the request will be rejected².
 - Data from a NRTL whose OSHA scope includes UL 1741.
 - Form completed by NRTL.
 - Performance test data obtained in accordance with “Performance Test Protocol for Evaluating Inverters Used in Grid-Connected Photovoltaic Systems”^{3,4}.
 - One form per model number and associated output voltage.
 - Maximum Continuous Output Power Data:
 - Minimum 180 minutes of data.
 - 5 minute (or smaller) sampling intervals.
 - Values in kilowatts (kW) at unity power factor.
 - Weighted Inverter Efficiency Data:
 - Minimum of 5 test samples.
 - Each sample tested at V_{min} , V_{nom} , and V_{max} .
 - Tested at all required power levels.
 - Night Tare Loss, reported in watts (W).
- d) If a manufacturer wants to reflect Reactive Power Priority information on the list, they need to submit supporting language from their testing lab either in their certificate, test report summary, or additional document that meets the following minimum criteria (only required for Grid Support Utility Interactive [“Smart”] inverters).
- Signed and dated by NRTL.
 - Specifies the model number(s) tested.
 - Verifies that the Volt/VAr test (UL 1741 SA13) has been completed with reactive power priority enabled.
 - Separate documentation is not required if the certificate or test report meets the requirements.

3. Instructions for Completing the Inverter Request Form

Download the latest version of the [Inverter Listing Request Form](#). Complete all boxes and fields or explain in the Request Form Notes why a field is not applicable.

- a) List the manufacturer’s legal name (as listed on the certification). Any company name differences must be clarified through a signed letter submitted on company letterhead (see FAQs #1 below).

² <http://www.gosolarcalifornia.ca.gov/equipment/inverters.php>

³ [Sandia Lab test protocol](#)

⁴ [Sandia test guideline](#)

- b) In the Certification section, complete the table correlating the inverter model numbers with the test report numbers and dates. These report numbers should match the submitted documents; mismatched information may require clarification which in turn would delay the review and processing of the request.
- c) For [Multiple Listing](#) requests and [ACPV](#) requests, refer to the respective procedure.
- d) Provide any additional information to further explain or clarify the request in the “Notes” section. Accurate and detailed notes will help prevent the need for clarification and ensure timely processing of the listing request without further delays.
- e) **For Grid Support Utility Interactive inverters:**
 - 1. If the Utility Interactive model is already on the Inverter List, mark the request type as “Add”.
 - 2. If the power and efficiency data for the Grid Support Utility Interactive model are the same as the listed data for the Utility Interactive model, state this in the “Notes” section on the Inverter Listing Request Form; the Power and Efficiency of Inverter Form will not be required. However, this data must still be provided upon request by Energy Commission staff.
 - 3. Enter all of the firmware version(s) that were tested for grid support functionality. This information must match the UL 1741 test report.
 - 4. In the “Certification” section, fill in the document(s) name and the associated page number(s) for the reactive power priority information. For example, “Test Report number 12345” and “page 13 of 20”.

FAQs

1. What if I want my equipment listed under a different manufacturer name than the name on my certification?

If a manufacturer wants equipment listed under a different manufacturer name, the manufacturer must submit a letter containing the information listed below:

- Submitted on company letterhead.
- Signed and dated by an authorized representative of the company.
- The legal name of the manufacturer (from the certification).
- The name that manufacturer wants to use for equipment listing purposes.
- The reasoning behind the request (for example, a manufacturer may want to list the brand name instead).
- An explanation of all manufacturer name variations found on the submitted documents and the relation between each manufacturer name and the manufacturer name reported on the certification (parent company, subsidiary, etc.).

2. What if my inverter requires an external transformer for grid interconnection?

The efficiency data for the external transformer must be provided. The final weighted inverter efficiency will include the efficiency of the external transformer. Contact the Energy Commission before submitting, as additional documentation may be required.

3. What if the inverter includes a built-in meter?

If the inverter has an approved built-in meter that meets the metering requirements, the meter must be listed prior to inverter listing. If the meter is not listed, the meter manufacturer must submit a separate meter listing request. See the [Meter Listing Procedure](#) for more details.

4. How can I add another firmware version to the equipment which are already on the list?

You must obtain a **new** test report for UL 1741 SA that includes the new firmware version tested. You also need to provide the most recent UL 1741 (including of UL 1741 SA) certificate for the related model numbers if any revision to certificate was needed based on NRTL's input.

5. How can I demonstrate that my equipment has completed the testing for reactive power priority?

If the equipment is already listed on the online list prior to the release of this procedure, contact the Solar Equipment Call Center at (916) 654-4120 or SolarEquipment@energy.ca.gov for instructions. If you are submitting a new listing request to add equipment on the list, please follow the instructions in this procedure and provide the requested documentation.

6. How do I know my request has been received?

The Energy Commission sends a confirmation email upon receipt of an equipment listing request. A unique request ID number ("R number") will be assigned to each request and will be included in the confirmation email.

7. What if I have questions or need updates on my request?

You can contact the Solar Equipment Call Center at (916) 654-4120 or SolarEquipment@energy.ca.gov for any equipment listing questions. Please reference your "R" number to help Energy Commission staff identify the specific request. Manufacturers also receive email notifications from the Energy Commission when the status of a request changes or decisions (approval, clarification needed, or rejection) are made.

8. How does the Energy Commission process my request?

Requests are processed on a first-in, first-out basis, and involve a 2-phased process: Phase 1 consists of an administrative screening, and Phase 2 consists of a technical evaluation. Only those requests

that pass administrative screening will be reviewed for technical evaluation. Requests that are complete and accurate on their first submission take typically no more than 45 days to be approved from the date the request was received. If clarification or additional information is required, or the request is rejected because of omissions or deficiencies, the Energy Commission will typically notify the manufacturer within 30 days. Requests that require clarification will take longer to complete than complete and accurate requests, and may take significantly longer than the 45-day timeline to complete the review and posting of approved equipment on the Energy Commission's Lists of Eligible Equipment. The Energy Commission updates the solar equipment lists twice a month, typically on the 1st and the 15th business day of the month.