

EVERSOURCE – NEW HAMPSHIRE
INTERCONNECTION STANDARDS FOR INVERTERS SIZED UP TO 100 KVA

Exhibit B - Certificate of Completion for Simplified Process Interconnections

Installation Information: Check if owner-installed

Customer or Company Name (print): _____

Contact Person, if Company: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____ (Evening): _____

Facsimile Number: _____ E-Mail Address: _____

Facility Information: → Eversource Meter # _____

Address of Facility (if different from above): _____

City: _____ State: _____ Zip Code: _____

Electrical Contractor Contact Information:

Electrical Contractor's Name (if appropriate): _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____ (Evening): _____

Facsimile Number: _____ E-Mail Address: _____

License number: _____

Date of approval to install Facility granted by the Company: _____

Eversource Application ID number: _____

Inspection:

The system has been installed and inspected in compliance with the local Building/Electrical Code of:

City: _____ County: _____

Signed (Local Electrical Wiring Inspector, or attach signed electrical inspection):

Signature: _____

Name (printed): _____ Date: _____

Customer Certification:

I hereby certify that, to the best of my knowledge, all information contained in this Exhibit B – Certification of Completion is true and correct. This system has been installed and shall be operated in compliance with applicable standards. Also, the initial start-up test required by Puc. 905.04 has been successfully completed.

Please remember to complete the “Customer Requirements Checklist” (page 2), including the “ISO New England Ride Through Requirements Self-Certification” (pages 3, 4 and 5).

Customer Signature: _____

As a condition of interconnection, you are required to email or mail all pages of this form and related documents to:

NHDG@eversource.com
Eversource - Distributed Generation (NH)
780 North Commercial Street
P. O. Box 330, Manchester, NH 03105-0330

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Customer Requirements Checklist
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Please provide the following Post-Installation documentation with your Certificate of Completion.

Any Certificate of Completion submitted without the appropriate documentation may be delayed in processing and/or returned.

Page 1 must include the required signature to certify that the facility shall be inspected and certified by the local electrical wiring inspector having jurisdiction. In the event the municipality does not have an inspector, a New Hampshire licensed electrician can inspect and certify the facility in accordance with section **PUC 904.05 Installation and Interconnection of Facility**.

Complete and submit the ISO New England Ride Through Requirements “Self-Certification” Form (see page 3, 4 & 5)

Submit ‘as-built’ digital photos to Eversource which clearly show the following:

The existing Eversource revenue meter (meter number must be clearly readable).

The inverter(s). If micro inverters are used, submit a photo of the entire array instead.

The external manual disconnect switch (*if required*). Please refer to Part PUC 905 Technical Requirements For Interconnections For Facilities, PUC 904.01 Requirements For Disconnect Switches and 905.02 Disconnect Switch and/or your processed Application.

The main distribution panel showing the point of interconnection (backfeed breaker). **Note:** If the point of interconnection is via a line side tap, the cover shall be off of the panel and or junction box. Under no circumstances shall the point of interconnection be made within the meter box, nor shall the meter box be used as a pass through for any other conductors.

Upon receipt of all required documentation Eversource will within ten (10) business days; 1) schedule a witness test unless otherwise waived (please review the attached Terms and Conditions for Simplified Process Interconnections to determine whether Eversource has waived the right to inspection), and 2) schedule the installation of a Net Meter.

Once all requirements and conditions have been met, Eversource will provide written notification, authorizing the interconnection of your project to the Eversource electric distribution system and confirming your status as a net metered customer in our customer billing system.

Note: Eversource shall not be responsible for improper billing that will result when a customer operates their generator prior to the installation of the appropriate Net Meter.

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ISO New England Ride Through Requirements “Self-Certification” Form

Effective June 1, 2018, all inverter-based projects are subject to ISO-NE Ride through Requirements.

To comply with the ISO-NE Ride-through requirements, all inverters in distributed energy resource (DER) installations shall be certified per the requirements of UL 1741 SA as a grid support utility interactive inverter and have the voltage and frequency trip settings and ride-through capability described in the ISO-NE Inverter Source Requirements Document (SRD).

Link to the ISO-NE SRD:

https://www.eversource.com/content/docs/default-source/builders-contractors/iso-new-england-source-requirement-document-2018-02-02.pdf?sfvrsn=a4f1c362_2

Link to an ISO-NE presentation for more information:

https://www.eversource.com/content/docs/default-source/builders-contractors/a2-implementation-of-revised-ieee-standard-1547-presentation.pdf?sfvrsn=83f1c362_2

Please refer to this linked webpage for a list of UL 1741 SA inverters:

[https://www.gosolarcalifornia.ca.gov/equipment/documents/Grid_Support_Inverter_List_Simplified Data.xlsx](https://www.gosolarcalifornia.ca.gov/equipment/documents/Grid_Support_Inverter_List_Simplified_Data.xlsx)

The customer or their representative shall complete and submit the Self-Certification (pages 4 and 5)

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ISO New England Inverter Ride Through Requirements “Self-Certification” Form

Customer Name: _____ ES Application ID Number: _____

Facility Address: _____

Inverter Make/Model: _____ Inverter Firmware Version: _____

Inverter Serial Number: _____

Verified by (Print): _____ (Signature): _____

Requirement 1: Inverter is certified per UL 1741 SA as a “grid support utility interactive inverter” and has been verified by a Nationally Recognized Testing Laboratory to meet the ISO-NE SRD requirements.

Nameplate Shows UL 1741 SA “Grid Support Interactive Inverter” or “Grid Support Utility Interactive Inverter” (Yes/No): _____.

Requirement 2: Inverter settings adhere to ISO-NE SRD Voltage and Frequency trip settings requirements. This information shall be documented in the trip settings table below.

DEVICE	PICKUP SETTING (DEFAULTS)	DEFAULT CLEARING TIME (seconds)	Pickup and Clearing Times Adhere to Required Defaults (Yes/No):
Under Frequency (81U)	56.5 Hz	0.16	
Under Frequency (81U)	58.5 Hz	300	
Over Frequency (81O)	61.2 Hz	300	
Over Frequency (81O)	62.0 Hz	0.16	
Under Voltage (27)	50% of Nominal	1.1	
Under Voltage (27)	88% of Nominal	2	
Over Voltage (59)	110% of Nominal	2	
Over Voltage (59)	120% of Nominal	0.16	

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Requirement 3: Inverter Grid Support Functions are set according to the Advanced Functions Activation Table below per ISO-NE SRD:

Verify that ISO-NE SRD group settings have been confirmed by the manufacturer AND that ISO-NE SRD group setting is ENABLED (if available), OR manually check the following states are applied in the inverter:

Function	Default Activation State	Set to Required Default State? Yes/No
SPF, Specified Power Factor	OFF ¹	
Q(V), Volt-Var Function with Watt or Var Priority	OFF Default value: 2% of maximum current output per second	
SS, Soft-Start Ramp Rate	ON	
FW, Freq-Watt Function	OFF	

Requirement 4: The Inverter Enters “Momentary Cessation” for high voltage range:

In the Permissive Operation region above 1.1 p. u. voltage, the inverter(s) will ride-through in Momentary Cessation mode as defined in the NE ISO SRD. (Yes/No) _____

Note: Inverters that have passed UL 1741 SA testing using the “Example Operating Parameters that Correspond to Rule 21 L/HVRT” given in UL 1741 SA Table SA9.1 are acceptable for meeting this requirement.

¹ OFF and operating at unity PF, Or set to ON with unity PF.