EVERSOURCE

Contingent Approval for INT-103333

Date: 1/21/2025

Attention:	**Steven Steven**
RE:	Solar Interconnection for INT-103333 - GRE, ANDOVER BOARD OF EDUC ANDOVER SCHOOL - 130kW
Address:	35 SCHOOL RD ANDOVER, CT, 06232.
Equipment:	Interconnection point: 800 breaker located outside and behind the utility metering transformer compartment Production meter: Instrument rated 6 terminal socket with test switch please reference (I&R book) for approved sockets 2 current transformers: 600: 5 bar type (provided by utility), please reference (I&R book) for approved utility transformer compartment Current transformers are required to be mounted by the contractor with the polarity marking pointing towards the utility Utility will wire the production meter circuit after the current transformers have been mounted

Dear **Steven Steven**,

We have completed the interconnection and application review for your project, **Project # INT-103333**. You are approved as a **Netting Non-Residential (NRES)** customer. Your installer can proceed with the installation of your new generating system.

Attachment I and II with additional comments and a schedule of milestones are attached for your reference.

Please review and sign Attachment I (Schedule of Milestones) and page 15 of the Interconnection Agreement (both where it indicates "Generator") and then have the contractor upload to the project in PowerClerk. Refer to Attachment II for assumptions and notes. After completion of construction, the contractor must conduct a successful self-administered commissioning test, consistent with the requirements outlined in Attachment II. The contractor must then complete, sign and return Attachment III (Certificate of Compliance), via direct upload to the project in PowerClerk.

What happens now?
Once your new system is installed and an electrical inspection has been completed by your town inspector, we will schedule a meter change, if necessary. Additionally, once customer signed documents and contractor signed Certificate of Compliance form are returned, you will then receive an email from us providing you with Permission to Operate and your new generating system will be ready to begin operation.

Important information
• Here is your Residential Renewable Energy Solutions Statement of Qualifications. This outlines your eligibility to receive incentives with your new generating system.
• Once installed and inspected, please do not attempt to operate your new generating

system until a new meter has been installed, if necessary, and you have received the Permission to Operate email from Eversource. Operating prior to receiving this email may cause inaccurate metering data and result in additional charges on your electric bill. We are unable to prevent or correct billing errors that result from this scenario.
From this point forward, your installer will provide you with any further status updates. You can also contact me directly at **greg.pivin@eversource.com.** If you have questions related to Residential Renewable Energy Solutions, please visit our website or e-mail CTResiRenewables@eversource.com.

Should you have any questions or concerns please feel free to contact me.

Sincerely,

Gregory Pivin
Senior Account Executive- Distributed Energy Resources
107 Selden Street, Berlin CT 06037
Tel:
E-mail: greg.pivin@eversource.com

Attachment I
Schedule of Milestones

Item	Milestones for Interconnection	Due by Date	Responsible Party	Comments
1	Sign and return Schedule of Milestones	2/4/2025	Generator	Scan & upload to PowerClerk
2	Signed Interconnection Agreement	2/4/2025	Generator	Scan & upload to PowerClerk
3	**Submit Certificate of Insurance.**		**Generator**	**07 / 20 / 24 - 07 / 20 / 25**
4	Submit proof of Municipal Approval (**WR# 19872468**)	2/19/2025	Generator	Min 10 business days prior to the desired In-Service Date
5	Provide completed & signed Certificate of Compliance	2/19/2025	Generator	See Attachment III
6	In-Service Date	2/26/2025	Generator	
7	Final Approval	2/26/2025	Eversource	See Note 3, Attachment II

Agreed to by:

For Generator: _____ Date: _____

For Eversource: _____ Date: _____

Attachment II

Assumptions:

Interconnection point: 800 breaker located outside and behind the utility metering transformer compartment
Production meter: Instrument rated 6 terminal socket with test switch please reference (I&R book) for approved sockets
2 current transformers: 600: 5 bar type (provided by utility), please reference (I&R book) for approved utility transformer compartment
Current transformers are required to be mounted by the contractor with the polarity marking pointing towards the utility
Utility will wire the production meter circuit after the current transformers have been mounted

Metering Requirements-

Based on the information submitted through the interconnection application for this project, the Eversource Meter Engineering group has determined that the following meter type is required for your project and the associated cost for such meter type is indicated below:

Meter Type: Form 4S SCALAR

Meter Cost: $1,340.00

Project: INT-103333

CT's & VT's will be provided by Eversource for any IT-rated production meter

Please send the Meter Cost amount indicated above via check, payable to Eversource to the following address, and include the INT number and NRES contract number in the memo line on the check itself. Metering equipment will be procured after a payment is received.

Eversource Energy Attn. Distributed Generation
107 Selden Street
Berlin, CT 06037

- After construction completion, a self-administered commissioning test is required to be performed which indicates that when the AC disconnect switch is opened, the PV inverters stop conducting in two (2) seconds or less and when the AC disconnect switch is closed, the PV inverters do not start to conduct for at least five (5) minutes.

- After a successful test is performed, the contractor will complete, sign, and return Attachment III – Certificate of Compliance.

- The required, visible break AC Disconnect switch must be accessible to Eversource personnel twenty-four (24) hours a day, seven (7) days a week. If

the disconnect is greater than ten (10) feet from the Eversource billing meter, then a permanent placard will need to be placed on the Eversource meter that warns of the connected PV systems and describes the location of the required external AC disconnect switch

Notes for Attachment I-Schedule of Milestones:

1. Please provide the following:
   - A completed & signed Certificate of Compliance, after construction is complete

2. Below are the settings we will accept, per Appendix C of Exhibit B – Generator Interconnection Technical Requirements, dated April 30, 2018. If the customer has already taken delivery of the inverter, they will need to have someone set the IEEE1547-2018, UL1741SB & NPCC A-03 settings indicated here.

C.2. Inverter frequency trip settings

Shall Trip Function	Required Settings	
	Frequency (Hz)	Clearing Time(s)
OF2	62.0	0.16
OF1	61.2	300.0
UF1	58.5	300.0
UF2	56.5	0.16

C.3. Inverter Voltage Ride-through Capability and Operational Requirements

Voltage Range (p.u.)	Operating Mode/ Response	Minimum Ride-through Time(s) (design criteria)	Maximum Response Time(s) (design criteria)
V > 1.20	Cease to Energize	N/A	0.16
1.175<V≤1.20	Permissive Operation	0.2	N/A
1.15<V≤1.175	Permissive Operation	0.5	N/A
1.10<V≤1.15	Permissive Operation	1	N/A
0.88≤V≤1.10	Continuous Operation	infinite	N/A
0.65≤V<0.88	Mandatory Operation	Linear slope of 8.7 s/1 p.u. voltage starting at 3 s @ 0.65 p.u.: $T_{VRT} = 3\,s + \frac{8.7}{1\,p.u.}(V - 0.65\,p.u.)$	N/A

0.45≤V<0.65	Permissive Operation[12]	0.32	N/A
0.30≤V<0.45	Permissive Operation	0.16	N/A
V<0.30	Cease to Energize	N/A	0.16

C.4. Inverter frequency ride-thru capability

Frequency Range (Hz)	Operating Mode	Minimum Time(s) (Design Criteria)
f > 62.0	No ride-through requirements apply to this range	
61.2<f≤61.8	Mandatory Operation	299
58.8≤f≤61.2	Continuous Operation	Infinite
57.0≤f≤58.8	Mandatory Operation	299
f<57.0	No ride-through requirements apply to this range	

C.5. Grid support utility interactive inverter function status

Function	Default Activation State
SPF, Specified Power Factor	Off
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	Off

3. Once items 1-5 in Attachment II (Schedule of Milestones) are completed, Eversource will send you (via email) an Authorization to Interconnect Letter.

Attachment III

EVERSOURCE

Self-Certification Form

For UL 1741 SB Certified Inverters <= 500 kW

CERTIFICATE OF COMPLIANCE

Date of Test _____
Project ID: _____
Customer Name: _____
Generator Address: _____
kW -AC _____
Inverter Voltage _____
Inverter Serial Number _____
Inverter Firmware Version _____

<***Electrical Contractor Name***>, hereby certify that, the facility stated above was installed commissioned and tested successfully as required by the Eversource interconnection requirements and applicable codes and standards, and the following was performed:

- ☐ The photovoltaic system has been inspected and approved by the local wiring inspector with jurisdiction and is safe to operate.
- ☐ All required documents have been submitted and approved by Eversource.
- ☐ Verification of proper AC voltage and phasing at inverters.
- ☐ Verification of proper DC voltage(s) from strings and combiners at inverters.
- ☐ Inverter manufacturer's start up procedures have been followed.
- ☐ System has been installed as approved by Eversource in the Approval to Install agreement and as shown on attached "As-Built" or final drawing.
- ☐ System meets IEEE 1547 two (2) second shut down upon opening of utility disconnect switch.
- ☐ System meets IEEE 1547 five (5) minute re-start upon closing of utility PV system disconnect switch.
- ☐ Inverter settings are programmed to the Inverter Source Requirement Document as published by ISO-New England (ISO-NE) in February 2018 (Refer to Appendix G)

Name and Company _____ **Date** _____

Signature _____

ISO NE Ride Through Requirements

Certificate of Completion

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 SB 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 SB inverters:

https://www.energy.ca.gov/sites/default/files/2020-06/Grid_Support_Inverter_List_Simplified_Data.xlsx

Requirement 1: Inverter is certified per UL 1741 SB 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 SB* "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**	

INT-103333 - GRE, ANDOVER BOARD OF EDUC ANDOVER SCHOOL - Netting Non-Residential (NRES)- 130kW

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**	

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 SB testing using the "Example Operating

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

Parameters that Correspond to Rule 21 L/HVRT" given in UL 1741 SB Table SA9.1 are acceptable for meeting this requirement.