REC 16-410

NH Public Utilities Commission

REC Aggregator Portal

NHPUC 7APR'16PM12:40

New Users CLICK HERE to setup your account for this form. Creating an account enables you to partially complete the form and return later to finish it or to make changes after the form is submitted. Be sure to create your account BEFORE entering information into the form, or the information will be lost.

Existing Users CLICK HERE

## Basic Information

Who is submitting this request?

Aggregator

Aggregator Batch Number

KE040516

Are you registered in NH

- (●) Yes
- ( ) No

Aggregator name

Knollwood Energy - 14625

NH Reg #

Aggregator Email

karenton@knollwoodenergy.com

Other Aggregator name

Other aggregator email address

Facility Name

Facility Owner Name

Michael Collier

Facility Owner email

mcollier50@comcast.net

Owner Phone

603-930-6192

Facility Address

7 Appleleaf Drive

Facility Town/City

Bedford

Facility State

NH

Facility Zip

03110

Is the facility address the same as the owner's mailing address

- (●) Yes
- ( ) No

Mailing Address

Mailing Town/City

Mailing State

Mailing Zip

Primary Contact

Karen Tenneson

Primary Contact

Facility Primary Contact

karenton@knollwoodenergy.com

Other Email Address

## Facility Information

Class

II

Utility

Eversource

Other Utility Name

To obtain a GIS ID contact:

James Webb

408 517 2174

jwebb@apx.com

GIS ID (include "NON")

NON74531

Date of Initial Operation

01/12/2016

Facility Operator Name, if applicable

Panel Quantity

45

Panel Make

Solarworld

Panel Model

Other

Panel Rated Output

260

System capacity based on panels

11700

Inverter Quantity

45

Inverter Make

Enphase Energy

Add'l Inverter Quantity

NA

Additional Inverter Make

None

Rated Output - Primary Inverter

215

Rated Output - Additional Inverter

System capacity based on single inverter make

9675

System capacity based on two inverter types

System capacity in kW as stated on the interconnection agreement

10.8

Revenue Grade Meter Make

Irton Centron

Was this facility installed directly by the customer (no electrician involved)?

- ○ Yes
- ◉ No

Electrician Name & Number

Noureddine Mhal #12463M

Other Electrician Name & Number

Installation Company

NuWatt Energy LLC

Other Installation Company Name

Other Inst. Company Address

Other Inst. Company City

Other Inst. Company State

Other Inst. Company Zip

Independent Monitor Name & Company

Paul Button - Energy Audits Unlimited

Other Monitor Name and Company

Is the installer also the equipment supplier?

- (●) Yes
- ( ) No

Equipment Vendor

Please attach your completed interconnection agreement including Exhibit B.

https://fs30.formsite.com/jan1947/files/f-5-99-6485265_ByyK71cx_N4287_Collier_PV_-_Certificate_of_

The project described in this application will meet the metering requirements of PUC 2506 including:

Electricity generation in megawatt hours shall be reported to the GIS quarterly with a statement that the submission is accurate by the owner of the source, the independent monitor or a designated representative.

A revenue quality meter is used to measure the electricity generated.

The facility owner has certified to the independent monitor that the meter operates according to manufacturing standards.

The meter shall be maintained according to the manufacturer's recommendations.

The project is installed and operating in conformance with applicable building codes.

A copy of the facility's interconnection agreement is attached.

Please attach additional document here

https://fs30.formsite.com/jan1947/files/f-5-168-6485265_037pNMRa_Collier_NHOS.pdf

Please attach additional document here

https://fs30.formsite.com/jan1947/files/f-5-173-6485265_F3s4hIIc_N4287_Collier_PV_-_Processed_Ap

Aggregator statement of accuracy

Sign your name using a mouse or, if you are using a touch-screen device, a stylus or other pointer.

Karen Tonnesen

Print Name

Karen Tonnesen

Date Signed

04/05/2016

RECEIVED
OCT 08 2015
By

# EVERSOURCE
# INTERCONNECTION STANDARDS FOR INVERTERS
# SIZED UP TO 100 KVA
## Simplified Process Interconnection Application and Service Agreement

Eversource Application Project ID#: N4287

**Contact Information:**

Legal Name and Address of Interconnecting Customer (or, Company name, if appropriate)

Customer or Company Name (print): MICHAEL A. COLLIER / MICHELLE S COLLIER

Contact Person, if Company:

Mailing Address: 7 APPLELEAF DRIVE

City: BEDFORD State: NH Zip Code: 03110

Telephone (Daytime): (603) 930-6192 (Evening): (603) 471-9168

Facsimile Number: E-Mail Address: MCOLLIER50@CONCAST.NET

**Alternative Contact Information** (e.g., System installation contractor or coordinating company, if appropriate):

Name: NU WATT ENERGY

Mailing Address: 14 ELLYSON AVE

City: EAST HAMPSTEAD State: NH Zip Code: 03826

Telephone (Daytime): (857) 600-3070 (Evening): (857) 600-3070

Facsimile Number: E-Mail Address: INFO@NUWATTENERGY.COM

**Electrical Contractor Contact Information** (if appropriate):

Name: NU WATT ENERGY

Mailing Address: 14 ELLYSON AVE

City: EAST HAMPSTEAD State: NH Zip Code: 03826

Telephone (Daytime): (857) 600-3070 (Evening): (857) 600-3070

Facsimile Number: E-Mail Address: INFO@NUWATTENERGY.COM

**Facility Site Information:**

Facility (Site) Address: 7 APPLELEAF DR.

City: BEDFORD State: NH Zip Code: 03110

Electric

Service Company: Eversource Account Number: 5644642 1091 Meter Number: S 71059788

Account and Meter Number: Please consult an actual Eversource electric bill and enter the correct Account Number and Meter Number on this application. If the facility is to be installed in a new location, please provide the Eversource Work Request number.

Eversource Work Request #

**Non-Default Service Customers Only:**

Competitive Electric

Energy Supply Company: Account Number:

*(Customer's with a Competitive Energy Supply Company should verify the Terms & Conditions of their contract with their Energy Supply Company.)*

EVERSOURCE

INTERCONNECTION STANDARDS FOR INVERTERS

SIZED UP TO 100 KVA

**Simplified Process Interconnection Application and Service Agreement**

**Facility Machine Information:**

Generator/ Inverter Manufacturer: ENPHASE Model Name & Number: M215 Quantity: 48

Nameplate Rating: .225 (kW) .240 (kVA) 240 (AC Volts) Phase: Single ☐ Three ☐

*Nameplate Rating: The AC Nameplate rating of the individual inverter.*

System Design Capacity: ~~12.5~~ 10.8 (kW) ~~24~~ 10.8 (kVA) Battery Backup: Yes ☐ No ☒

*System Design Capacity: The system total of the inverter AC ratings. If there are multiple inverters installed in the system, this is the sum of the AC nameplate ratings of all inverters.*

Net Metering: If Renewably Fueled, will the account be Net Metered? Yes ☒ No ☐

Prime Mover: Photovoltaic ☒ Reciprocating Engine ☐ Fuel Cell ☐ Turbine ☐ Other_____

Energy Source: Solar ☒ Wind ☐ Hydro ☐ Diesel ☐ Natural Gas ☐ Fuel Oil ☐ Other_____

**Inverter-based Generating Facilities:**

UL 1741 / IEEE 1547.1 Compliant (Refer To Part Puc 906 Compliance Path For Inverter Units, Part Puc 906.01 Inverter Requirements)

Yes ☒ No ☐

The standard UL 1741.1 dated May, 2007 or later, "Inverters, Converters, and Controllers for Use With Independent Power Systems," addresses the electrical interconnection design of various forms of generating equipment. Many manufacturers choose to submit their equipment to a Nationally Recognized Testing Laboratory (NRTL) that verifies compliance with UL 1741.1. This term "Listed" is then marked on the equipment and supporting documentation. ***Please include, any documentation provided by the inverter manufacturer describing the inverter's UL 1741/IEEE 1547.1 listing.***

**External Manual Disconnect Switch:**

An External Manual Disconnect Switch shall be installed in accordance with 'Part Puc 905 Technical Requirements For Interconnections For Facilities, Puc 905.01 Requirements For Disconnect Switches and 905.02 Disconnect Switch.'

Yes ☒ No ☐

Location of External Manual Disconnect Switch: NEXT TO INSTALLED METER

Project Estimated Install Date: DEC 2015 Project Estimated In-Service Date: DEC 2015

**Interconnecting Customer Signature:**

I hereby certify that, to the best of my knowledge, all of the information provided in this application is true and I agree to the **Terms and Conditions for Simplified Process Interconnections** attached hereto:

Customer Signature: [signature] Title: OWNER Date: 10/7/15

***Please include a one-line and/or three-line diagram of proposed installation. Diagram must indicate the generator connection point in relation to the customer service panel and the Eversource meter socket. Applications without such a diagram may be returned.***

**For Eversource Use Only**

Approval to Install Facility:

Installation of the Facility is approved contingent upon the Terms and Conditions For Simplified Process Interconnections of this Agreement, and agreement to any system modifications, if required.

Are system modifications required? Yes ☐ No ☒ To be Determined ☐

Company Signature: [signature] Title: Associate Engineer Date: 10/19/15

# EVERSOURCE
# INTERCONNECTION STANDARDS FOR INVERTERS
# SIZED UP TO 100 KVA
## Terms and Conditions for Simplified Process Interconnections

**Company waives Inspection/Witness Test: Yes ☒ No ☐ Date of inspection/Witness Test: _____**

1. **Construction of the Facility.** The Interconnecting Customer may proceed to construct the Facility in compliance with the specifications of its Application once the Approval to Install the Facility has been signed by the Company. Such Approval relates only to the Eversource and Puc 900 electrical interconnection requirements, and does not convey any permissions or rights associated with permits, code enforcement, easements, rights of way, set back, or other physical contrutruction issues.

2. **Interconnection and operation.** The Interconnecting Customer may operate Facility and interconnect with the Company's system once the all of the following has occurred:

   2.1. **Municipal Inspection.** Upon completing construction, the Interconnecting Customer will cause the Facility to be inspected or otherwise certified by the local electrical wiring inspector with jurisdiction.

   2.2. **Certificate of Completion.** The Interconnecting Customer returns the Certificate of Completion to the Agreement to the Company at address noted.

   2.3. **Company has completed or waived the right to inspection.**

3. **Company Right of Inspection.** The Company will make every attempt within ten (10) business days after receipt of the Certificate of Completion, and upon reasonable notice and at a mutually convenient time, conduct an inspection of the Facility to ensure that all equipment has been appropriately installed and that all electrical connections have been made in accordance with the Interconnection Standard. The Company has the right to disconnect the Facility in the event of improper installation or failure to return Certificate of Completion. All projects larger than 10 kVA will be witness tested, unless waived by the Company.

4. **Safe Operations and Maintenance.** The Interconnecting Customer shall be fully responsible to operate, maintain, and repair the Facility.

5. **Disconnection.** The Company may temporarily disconnect the Facility to facilitate planned or emergency Company work.

6. **Metering and Billing.** All renewable Facilities approved under this Agreement that qualify for net metering, as approved by the Commission from time to time, and the following is necessary to implement the net metering provisions:

   6.1. **Interconnecting Customer Provides:** The Interconnecting Customer shall furnish and install, if not already in place, the necessary meter socket and wiring in accordance with accepted electrical standards. In some cases the Interconnecting Customer may be required to install a separate telephone line.

   6.2. **Company Installs Meter.** The Company will make every attempt to furnish and install a meter capable of net metering within ten (10) business days after receipt of the Certificate of Completion if inspection is waived, or within 10 business days after the inspection is completed, if such meter is not already in place.

7. **Indemnification.** Interconnecting Customer and Company shall each indemnify, defend and hold the other, its directors, officers, employees and agents (including, but not limited to, Affiliates and contractors and their employees), harmless from and against all liabilities, damages, losses, penalties, claims, demands, suits and proceedings of any nature whatsoever for personal injury (including death) or property damages to unaffiliated third parties that arise out of, or are in any manner connected with, the performance of this Agreement by that party, except to the extent that such injury or damages to unaffiliated third parties may be attributable to the negligence or willful misconduct of the party seeking indemnification.

8. **Limitation of Liability.** Each party's liability to the other party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either party be liable to the other party for any indirect, incidental, special, consequential, or punitive damages of any kind whatsoever.

9. **Termination.** This Agreement may be terminated under the following conditions:

   9.1. **By Mutual Agreement.** The Parties agree in writing to terminate the Agreement.

   9.2. **By Interconnecting Customer.** The Interconnecting Customer may terminate this Agreement by providing written notice to Company.

   9.3. **By Company.** The Company may terminate this Agreement (1) if the Facility fails to operate for any consecutive 12 month period, or (2) in the event that the Facility impairs or, in the good faith judgment of the Company, may imminently impair the operation of the electric distribution system or service to other customers or materially impairs the local circuit and the Interconnecting Customer does not cure the impairment.

10. **Assignment/Transfer of Ownership of the Facility.** This Agreement shall survive the transfer of ownership of the Facility to a new owner when the new owner agrees in writing to comply with the terms of this Agreement and so notifies the Company.

11. **Interconnection Standard.** These Terms and Conditions are pursuant to the Company's "Interconnection Standards for Inverters Sized Up to 100 kVA" for the Interconnection of Customer-Owned Generating Facilities, as approved by the Commission and as the same may be amended from time to time ("Interconnection Standard"). All defined terms set forth in these Terms and Conditions are as defined in the Interconnection Standard (see Company's website for the complete document).

RECEIVED
JAN 04 2016
By _____

Eversource
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): Michael Collier / Michelle Collier

Contact Person, if Company: _____

Mailing Address: 7 Appleleaf Dr

City: Bedford State: NH Zip Code: 03110

Telephone (Daytime): (603) 930-6192 (Evening): _____

Facsimile Number: _____ E-Mail Address: mcollier50@comcast.net

**Facility Information:** → Eversource Meter # S71059788

Address of Facility (if different from above): _____

City: _____ State: _____ Zip Code: _____

**Electrical Contractor Contact Information:**

Electrical Contractor's Name (if appropriate): Noureddine Mhal

Mailing Address: 21 Pearl St

City: Methuen State: MA Zip Code: 01844

Telephone (Daytime): 617-908-4446 (Evening): _____

Facsimile Number: _____ E-Mail Address: teslanour@yahoo.com

License number: 12463M

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

Eversource Application ID number: #N 4287

**Inspection:**

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

City: Bedford County: Hillsboro

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

Signature: _____

Name (printed): Terry Carter Date: 12/31/15

**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 provide digital photos of the installation, including the AC disconnect switch (if required), the existing Eversource meter, the inverters, and the point of electrical interconnection.**

Customer Signature: _____

As a condition of interconnection you are required to send/fax a copy of this form to:

Eversource
Distributed Generation
780 North Commercial Street
P. O. Box 330, Manchester, NH 03105-0330
Fax No.: (603) 634-2924

# New Hampshire PUC REC Certification Application Owner Statements

The information provided on this application for New Hampshire Renewable Energy Certificate eligibility is accurate to the best of my knowledge and I authorize Knollwood Energy to act on my behalf in filing said application.

The project described in this application will meet the metering requirements of PUC 2506 including:

Electricity generation in megawatt hours shall be reported to the GIS quarterly with a statement that the submission is accurate by the owner of the source, the independent monitor, or a designated representative.

A revenue quality meter is used to measure the electricity generated.

The facility owner has certified to the independent monitor that the meter operates according to manufacturing standards.

The meter shall be maintained according to the manufacturer's recommendations.

The project is installed and operating in conformance with applicable building codes.

A copy of the facility's interconnection agreement is attached.

Michael A. Collier

Printed Name of signature owner

Michael Collier

Michael Collier (Mar 30, 2016)

Signature of system owner