

NH Public Utilities Commission
REC Aggregator Portal

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 Batch Number

Are you registered in NH

- Yes
- No

Aggregator name

NH Reg #

Aggregator Email

Other Aggregator name

Other aggregator email address

Facility Name

Facility Owner Name

Facility Owner email

ddi98mike@aol.com

Owner Phone

207-754-3839

Facility Address

86 Alpine Park

Facility Town/City

Moutonborough

Facility State

NH

Facility Zip

03254

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

Utility

Other Utility Name

To obtain a GIS ID contact:

James Webb

408 517 2174

jwebb@apx.com

GIS ID (include "NON")

Date of Initial Operation

Facility Operator Name, if applicable

Panel Quantity

Panel Make

Panel Model

Panel Rated Output

Inverter Quantity

3

Inverter Make

Fronius

Add'l Inverter Quantity

0

Additional Inverter Make

None

Rated Output - Primary Inverter

280

Rated Output - Additional Inverter

System capacity based on single inverter make

840

System capacity based on two inverter types

System capacity in kW as stated on the interconnection agreement

7.6

Revenue Grade Meter Make

Other

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

- Yes
 No

Electrician Name & Number

Other

Other Electrician Name & Number

Brian Blackadar #NH8625M

Installation Company

Brian Blackadar Contracting

Other Installation Company Name

Other Inst. Company Address

Other Inst. Company City

Other Inst. Company State

Other Inst. Company Zip

Independent Monitor Name & Company

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.

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

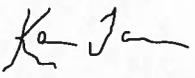
https://fs30.formsite.com/jan1947/files/f-5-168-6428212_xW6pcn7P_Mike_Wentworth_contract_part_3

Please attach additional document here

https://fs30.formsite.com/jan1947/files/f-5-173-6428212_aaUGgR2r_Wentworth-SPIA.pdf

Aggregator statement of accuracy

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



Print Name

Karen Tonnesen

Date Signed

03/28/2016



NEW HAMPSHIRE ELECTRIC CO-OP

INTERCONNECTION APPLICATION-RENEWABLE GENERATION UP TO 1000 KW

PURSUANT TO NEW HAMPSHIRE ADMINISTRATIVE RULE PUC 900, APPLICANT HEREBY GIVES NOTICE OF INTENT TO INSTALL AND OPERATE A GENERATING FACILITY.

Section 1. Applicant Information

Name: Michael R. Wentworth
Mall Address: P.O. Box 311
City: Center Harbor State: NH Zip Code: 03206
Facility Location (if different from above): 86 Alpine Park Rd
Daytime Phone #: 207-754-3839
Distribution Utility: New Hampshire Electric Cooperative, Inc. Account #: [REDACTED]
Electricity Supplier (ES) _____ Account #: _____

Section 2. Generating Facility Information

Generator Type (check one): Solar Wind _____ Hydro _____
Generator Manufacturer, Model Name & Number: SOLARWORLD SW 250 w PANEL X 27
Number of Phases of Unit: Single, Three or Other: SINGLE
Generation output rating in AC & DC Kilowatts: 7.6 kWAC / 7.56 kWDC
Inverter Manufacturer, Model Name & Number: FRONIOS 7.6
Battery backup? Yes No
Will a generator Disconnect Switch accessible to the utility be installed? Yes No
Proposed location of Disconnect Switch, if applicable: _____

Section 3. Installation Information & Certification

1. Installer = Check if owner-installed
Installation Date: 6/15/15
Installing Electrician: BRIAN BLACKADAN
State of NH License #: 8625M
Mail Address: PO BOX 1596
City: CENTER HARBOR
State: NH Zip Code: 03226
Daytime Phone #: 603-455-3080

Daytime Phone #: _____

1. The system hardware is listed to Underwriters Laboratories standards to be in compliance with UL 1741 and IEEE 929-2000:

Signed (Vendor/Supplier): Brian Blackadar

Name (printed): Brian Blackadar Date: 9/14/15

Company: AH E ENERGY STORE

Company Address: 330 Coburn Hill Road, Buxton, MA 01715

2. The system has been installed in compliance with the local Building/Electrical Code of

Mid-Hampden, NH (City/County)

Signed (Electrician or Town Inspector): Brian Blackadar

Print Name: Brian Blackadar Date: 9/14/15

In lieu of signature by inspector, a copy of final inspection certificate may be attached.

3. The initial start-up test required by PUC 905.04 has been successfully completed.

Completed on 9/18/2015 Witnessed By Brian Blackadar

4. Utility signature to signify only receipt of this form, in compliance with the Commission's net metering rules PUC 900.

Signed (NHEC): [Signature]

Print Name: John McNeil Date: 9-18-15

Signed (Electricity Supplier Representative): _____

Date: _____

5. Interconnection Date: 9-18-15

Applicant agrees to install and operate the system in accordance with PUC 900.

I hereby certify that, to the best of my knowledge, all of the information provided in this Application is true and correct.

X Signature of Applicant: [Signature] Date: 9-18-2015

THE ELIGIBLE CUSTOMER-GENERATOR SHALL PROVIDE NEW HAMPSHIRE ELECTRIC CO-OP WITH A WRITTEN UPDATE OF THE INFORMATION ON THIS FORM AS ANY CHANGES OCCUR.



State of New Hampshire
Public Utilities Commission
21 S. Fruit Street, Suite 10, Concord, NH 03301-2429



PRE-APPROVAL APPLICATION

for applications submitted after July 3, 2012

**FOR RESIDENTIAL SMALL RENEWABLE ELECTRICAL GENERATION SYSTEMS
10 KILOWATTS or smaller**

Any New Hampshire homeowner seeking an incentive payment from the Commission for a small renewable generation facility (or "renewable energy system"), that begins operation after September 30, 2009 is required to obtain the Commission's pre-approval of the installation. Pre-approval will reserve your place in the funding queue. Once the facility has been installed at the owner's residence, the homeowner must then complete Step 2 by submitting a **final incentive request form**. The incentive pre-approval expires 12 months from the date this application is approved. Residents who choose to install systems prior to Commission pre-approval may still apply for this rebate, but the application is subject to Commission approval and availability of funds.

Because the application requires an original notarized signature,
it will not be accepted if submitted electronically.

Please submit application and all associated documents to:

Sustainable Energy Division
New Hampshire Public Utilities Commission
Sustainable Energy Division
21 S. Fruit Street, Suite 10
Concord, NH 03301-2429

TERMS AND CONDITIONS

Please read the Terms and Conditions carefully prior to completing the form.

1. This program is administered in accordance with RSA 362-F:10 and Puc 2500. Any applicant requesting an incentive payment for any renewable energy system is responsible for meeting all terms and conditions of the program.
2. You must complete a Step 2: Final Incentive Request Form to receive your incentive payment.
3. To be eligible for a one-time incentive payment, the renewable energy systems must qualify as Class I or Class II sources of electricity in accordance with RSA 362-F and Puc 2500. Qualifying systems include solar photovoltaic (PV) systems and wind turbines, but not solar hot water systems, geothermal heating and cooling systems or any other renewable energy system that does not generate electricity.
4. The renewable energy system must be located on or at the applicant's New Hampshire residence, which may include a second home that the residential owner occupies at least part of the year.
5. An addition to an existing renewable energy system may qualify for an incentive payment only if the renewable energy system has not previously qualified for an incentive under this program. Replacement of an existing facility will not qualify for an incentive. Used parts or self-installer labor cannot be included in the cost of the facility.
6. Residents who choose to install systems, in whole or in part, prior to approval by the Commission may still apply for this incentive payment by submitting both the Step 1 and Step 2 forms.
7. Solar PV systems must have a manufacturer's rated panel output under standard test conditions (STC) of 10 kilowatts or less and must be certified by a nationally-recognized testing laboratory as meeting the requirements of UL 1703.
8. Wind turbines must have a manufacturer's rated maximum output of 10 kilowatts or less measured at a wind speed of 11 meters per second or 24.6 miles per hour (mph).

9. Wind turbines must be mounted at least 30 feet above any physical wind barriers within a 500 foot radius. Roof-mounted wind turbines are not eligible for an incentive payment at this time.
10. Any renewable energy system must comply with all manufacturers' requirements and meet all applicable requirements of the State Building Code pursuant to RSA 155-A:1, IV including the National Electric Code 2011 or its successor.
11. Any interconnection of the renewable energy system with your utility must comply with your Interconnection Agreement, the Puc 900 Net Metering Rules (if applicable), as well as any applicable tariffs governing interconnection.
12. Any renewable energy system is subject to inspection and monitoring by the Commission, the State Fire Marshal and local code authorities or their agents for safety and performance in addition to any monitoring prescribed in any interconnection agreement between the electric utility and the owner of the facility.
13. The incentive payment is \$0.75 per Watt and is capped at a maximum of \$3,750.00 (5kW) or 50% of the total cost of the facility, whichever is less.
14. The Step 2: Final Incentive Request form must be submitted after the installation is complete and within 12 months of the date that this incentive pre-approval form is approved. Applicants may submit both forms together if the installation is already complete but the incentive payment is conditioned on meeting the requirements listed herein.
15. Incentives are subject to the availability of funds received by the Commission under RSA 362-F; complete applications will be processed in the order in which they are received.
16. All program requirements and documentation must be complete and submitted in order to receive approval for an incentive payment. Payment of the incentive may be subject to Commission inspection of the facility to confirm that the system is operational and consistent with the application.
17. Certain information, including applicants' names, addresses, system details and total installed costs of systems installed with program support, may be available to the public and may be publicly posted. Additional information may be released upon official request. Additional specific personal information including Social Security numbers, telephone numbers and email addresses, will remain confidential to the extent permitted under state law.
18. The Commission reserves the right to request system performance data for a period of ten (10) years after issuing the incentive. The incentive recipient is strongly encouraged to install a utility grade electric meter to monitor and record system output. Installation of a utility grade electric meter also qualifies the system for renewable energy certificates pursuant to Puc 2500, the PUC Administrative Rules for the Electric Renewable Portfolio Standard (RSA 362-F).
19. The incentive recipient may be liable to the State of New Hampshire for the entire amount of the incentive if the incentive is obtained fraudulently.
20. Any incentive received under this program may be treated as taxable income by the IRS. It is the responsibility of the recipient of this incentive payment to consult with his or her tax advisor to determine the correct tax treatment of these payments. Applicants who do not provide their social security number on the Step 2: Final Incentive Request Form will not be eligible for reimbursement.

APPLICANT INFORMATION

Name: Michael R Westworth

Mailing Address: 86 Alpine Park

Town/City: Muldenborough State: NH Zip Code: 03254

Installation Address (if different): _____

Town/City: _____ State: _____ Zip Code: _____

Telephone: 603-253-5830 Cell: 207-754-3839

Email address: DDI98MIKE@AOL.com Your Electric Utility: New Hampshire Electric

Have you performed an energy audit of your home and undertaken energy efficiency measures? YES NO If yes, please summarize your activities: _____

If you would like to learn more about improving energy efficiency, please visit www.nhsaves.com and www.energystar.gov.

INSTALLATION INFORMATION

Anticipated start date: _____ Anticipated date of completion: _____

Will you install the system yourself? YES NO

If **Yes**, please initial here indicating that you are requesting a waiver of the requirements that you must provide a signed contract with a primary installer or vendor. **Initial:** _____

Is this an expansion of an existing system? YES NO

Note: An expansion is only eligible for an incentive if the existing system has not already received an incentive through this program. Replacement of any or all of an existing system is not eligible for a rebate.

INSTALLER (if not self-installed)

Installer Name: BRIAN BLACKAPAN Company: _____

Mailing Address: PO BOX 1596

Town/City: Center Harbor State: NH Zip Code: 03226

Telephone: (603) 485-3080 Email address: BDBLACKAPAN@ROADRUNNER.COM

NH Electrician license number (if applicable): NH 8625M

ELECTRICIAN

Electrician Name (if different than installer): SAME AS ABOVE

Company: _____

Mailing Address: _____

Town/City: _____ State: _____ Zip Code: _____

Telephone: (____) ____-____ Email address: _____

NH Electrician license number: _____

SYSTEM INFORMATION Photovoltaic Wind

PHOTOVOLTAIC SYSTEM INFORMATION

Panel Manufacturer: Solar World Model Number(s): SW 250

Are the panels UL 1703 listed? YES NO (if No, you are not eligible for an incentive payment.)

FOR TOTAL FACILITY POWER MULTIPLY NUMBER OF PANELS TIMES THE POWER RATING OF EACH AND ADD				
# of Panels	<u>54</u>			
Power of Panel	<u>250</u>			
Total Power	<u>13500 W</u>			
				Total Facility Power <u>13.5 KW</u>

Inverter Manufacturer: FRONIUS Model Number: IG PLUS V 7.5

Number of Inverters: 2

Will the inverters comply with IEEE 1547 and UL 1741? YES NO (if No, you are not eligible for an incentive payment.)

The system will be mounted on: a Roof the Ground a Pole

PERCENT OF OPTIMAL PV PRODUCTION

Note: The applicant must provide panoramic photos of the horizon taken from the installation location from due east through south to due west. A shading analysis must also be provided if the applicant cannot claim 0% shading below.

Azimuth (180°=true south): 180 degrees Tilt (horizontal=0°) = 33 degrees

1. Optimal Annual Production (kWh): 16681 kWh

Go to: http://rredc.nrel.gov/solar/calculators/PVWATTS/version1/US/New_Hampshire/Concord.html and use Concord, NH as a default. Use total array output, optimal azimuth (180°) and tilt (43.2°), no shading, and .77 derating factor.

2. Actual Annual Production without Shading (kWh): 16681 kWh

Use total facility output, actual tilt and azimuth, .77 derating factor, and no shading.

3. Percent loss from shading: 0 %

Use a Solmetric SunEye, Solar Pathfinder, or other similar device to quantify the percent loss from shading. You may enter 0% loss from shading if no obstruction is closer than 3 times the height that the obstruction extends above the PV panels or there is a clear view of the sky above 18° of the horizon from due east through south to due west.

4. Actual Annual Production with Shading (#2 above x (1-#3 above)): 16681 kWh

5. Ratio of Actual Production to Optimal Annual Production (#4 above/#1above) x 100): 100 %

6. Is this percentage greater than 80%? YES NO If NO, please explain in an attachment why you don't meet this performance threshold.

WIND SYSTEM INFORMATION

~~Turbine Manufacturer: _____ Model Number: _____~~

~~Manufacturer's Power Rating of Turbine at 11m/s or 24.6 mph: _____ watts~~

~~Inverter Manufacturer: _____ Model Number: _____~~

~~Will the inverter be compliant with IEEE 1547 and UL 1741? YES NO~~

~~Number of Inverters: _____~~

~~Tower Manufacturer: _____ Model Number: _____~~

~~Tower Height: _____ Height above tree line: _____~~

~~Tower Type: Single Pole Guyed~~

~~Average wind speed at installation site (if known): _____ mph~~

~~Please describe method of assessing wind resources: _____~~

Note: To minimize turbulence, all wind turbines must be mounted on the ground and at least 30 feet above any physical wind barrier within a 500 foot radius. The average wind speed at the installation site should be at least 10 mph. The Commission strongly recommends that the applicant evaluate the wind resources at the proposed installation site using a source other than a wind map. Small wind turbines have encountered difficulties in New England partly due to misjudged wind speed and turbulence. Please see www.masstech.org/renewableenergy/sm_renew/Small%20Wind%20Progress%20Report%20061208.pdf for more information on the issues that have contributed to their poor performance results. See also the Wind Resource Assessment Handbook by AWS Scientific, Inc. at www.nrel.gov/wind/pdfs/22223.pdf.

REQUIRED ATTACHMENTS

These items (copies) must be attached to the application:

- | | Attached |
|---|-------------------------------------|
| 1. Signed contract with installer or evidence of intent (if applicable) | <input checked="" type="checkbox"/> |
| 2. Panoramic photos of the installation site | <input checked="" type="checkbox"/> |
| 3. Quantified shading analysis if applicant cannot enter 0% shading (See note in Percent Optimal Production.) | <input type="checkbox"/> N/A |
| 4. Professional wind analysis, wind study or other method of assessing wind speed (if available) | <input type="checkbox"/> N/A |

Due to the likelihood that funding will not be immediately available for rebate applicants, the Building permit requirement is waived for Step 1 but it or other documentation that the facility meets local zoning regulations must be provided with the Step 2 Final Incentive Request Form.

Note: In the final incentive request form you will be expected to provide paid invoices, an interconnection agreement with your electric utility (unless the system is off-grid), pictures of the installation, and documentation that the system is UL certified and has been inspected by a local building code official or NH licensed electrician, unless the installation team includes a NH licensed electrician.

INCENTIVE CALCULATION

- Total Facility Cost (less any self-installer labor costs or used equipment): \$132,225.00
 - System Output (Total Array Output or Manufacturer's Power Rating at 11m/s): 13500 w
 - System Output X \$0.75/Watt = 13500 x .75 = 10125
 - Total Requested Incentive: \$3,750.00
- For Line 4 enter 50% of line 1 or 100 % of line 3 or \$3,750, whichever is less (\$3,750 maximum).

DECLARATION

The Undersigned applicant declares under penalty of perjury that:

- the applicant intends to purchase and install the renewable energy system described in this application;
- the applicant has read and understands the terms and conditions set forth in this application with attachments and has agreed to abide by those requirements;
- the information provided in this form is true and correct to the best of his or her knowledge; and
- the applicant agrees that the system and documents supporting the application may be audited and inspected by the Commission.

Applicant's Signature [Signature] Date: 1-6-2015
Only one signature needed per household.

Subscribed and sworn before me this 6 (day) of JANUARY (month) in the year 2015

County of CARROLL

State of NEW HAMPSHIRE

[Signature]
Notary Public/Justice of the Peace
My Commission expires SHARON F. HAMELIN, Notary Public
My Commission Expires February 22, 2017

For questions regarding this rebate program, see the incentive program FAQ website at www.puc.state.nh.us/Sustainable%20Energy/RenewableEnergyRebatesOAs-residential.htm, or contact Jon Osgood at jon.osgood@puc.nh.gov or (603)271-6306.

Brian Blackadar

Electrical Contracting

PO Box 1596 • Center Harbor, NH 03226

603-455-3080

bblackadar@roadrunner.com

Invoice

4/22/2014

**Mike Wentworth
Diamond Distributors
PO Box 311
Center Harbor, NH 03226**

Re: Wiring at 86 Alpine

Solar panels, inverters, rails, hardware	\$ 21,500.00
Panel wire, conduits, grounding wire, misc	2,100.00
Labor	7,500.00
Data logger (internet connection unit – to log output)	500.00
Shipping	<u>625.00</u>
Total	\$ 32,225.00

System completed 7/15/2014

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 wentworth

Printed Name of signature owner

michael wentworth
michael wentworth (Jan 29, 2016)

Signature of system owner