



Dear Member:

Thank you for inquiring about your New Hampshire Electric Cooperative's (NHEC) 2009 Solar Photovoltaics (PV) Rebate Program. Below are important points you need to know in order to expedite the processing of your rebate. Please read carefully!

- **All projects must be pre-approved before installation begins. Rebates will not be awarded retroactively for systems that did not receive pre-approval.**
- Rebates are available on a first come, first-serve basis. There are a limited number of rebates available in 2009. The rebate is \$3.00 per Watt up to \$3,500.
- Receipt of your completed application with supporting documents (see checklist) will put you in the queue for a rebate. If your project is pre-approved, NHEC will send a pre-approval letter to you.
- To receive 2009 program year rebates, your project must be installed and operating and all paperwork received by NHEC no later than December 31, 2009.
- By receiving a rebate, you will be giving NHEC rights to your Renewable Energy Certificates. These certificates are used to help the Cooperative reach its Renewable Energy Portfolio requirements. See http://www.nhec.com/rates_rps_compliance.php.
- You may be eligible for a State of NH rebate of \$3/Watt up to \$6,000 for residential projects. Go to www.puc.nh.gov Sustainable Energy division for more information. You may also be entitled to a federal tax credit up to 30% of the cost of installing a small renewable energy project. Members should consult their own tax advisor to determine eligibility for these credits.
- NHEC does not guarantee energy performance of your system.
- System installation orientation and tilt requirements: The system must be oriented between 165° and 225° (solar south being 195° in NH). The system must be tilted between 25° and 60° degrees above the horizon. You should have a clear view of the southern sky above 25° and above and the eastern and western sky above 12°.
- Your installer must install a UL listed electric utility meter socket (outdoors next to the building's utility revenue meter) wired after the inverter and before the building's electric panel. NHEC will install a dedicated utility meter in this socket.

All documents should be mailed to: NHEC Solar PV Program, 579 Tenney Mountain Highway, Plymouth, NH 03264. Please call 1-800-698-2007 if you have any questions.

Thank you.

NHEC



NEW HAMPSHIRE ELECTRIC COOPERATIVE'S (NHEC) 2009 SOLAR PHOTOVOLTAIC (PV) REBATE PROGRAM APPLICATION CHECKLIST (please keep for your records)

Please send in the following documents, which constitute your rebate application (important note- applications must be pre-approved before installation of your system begins):

1. _____ GENERAL INFORMATION FORM (to be filled out by member)
2. _____ PROGRAM TERMS AND CONDITIONS (to be signed and initialed by member)
3. _____ MINIMUM DESIGN AND ESTIMATED PRODUCTION CALCULATION FORM
(filled out by either installer or member)
4. _____ PHOTOGRAPHS AS DESCRIBED BELOW (taken by member or installer)

Photographs of home or building taken at 1 PM during Daylight Savings Time (summer) or 12 PM during Eastern Standard Time (winter) where system will be installed. Take pictures as follows:
A. facing the building with south behind you
B. with the building to your back, facing south
C. from the south side of the building, facing east
D. from the south side of the building, facing west
5. _____ PROPOSAL OR CONTRACT FROM INSTALLER (to be signed by member and installer)
6. _____ SYSTEM DESCRIPTION (to be provided by installer to member)
A. Location, orientation, and tilt of collectors, etc.
B. Shading Analysis (Solar Path Finder or Similar Tool)
7. _____ EQUIPMENT LIST (to be provided by installer to member. May be included in contract)

Please send in the following once your system is installed and is operating:

1. _____ NEW HAMPSHIRE ELECTRIC COOPERATIVE'S (NHEC) 2009 SOLAR PV REBATE PROGRAM COMPLETION FORM (to be filled out by installer and member)
2. _____ GRANTING OF RIGHTS TO RECS FORM (to be signed by member)
3. _____ INTERCONNECTION APPLICATION-RENEWABLE GENERATION UP TO 100 KW (to be filled out by installer and member). This is the document for Net Metering (spinning the meter backwards)
4. _____ MUTUAL INDEMNITY AGREEMENT (to filled out and signed by the member)
5. _____ FINAL CONTRACT WITH FINAL PRICING (signed by member and installer).

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Member Name: _____

Initials _____



NEW HAMPSHIRE ELECTRIC COOPERATIVE'S (NHEC) 2009 SOLAR PHOTOVOLTAICS (PV) REBATE PROGRAM TERMS AND CONDITIONS

1. Rebates

Subject to these terms and conditions, NHEC will award rebates to eligible NHEC active members for the installation of new commercially available solar PV systems including the panels, inverter, rack, wiring, permits, labor, and associated equipment installed by a qualified installer. Adding panels onto an existing system or replacing equipment does not constitute an eligible project. All installations must comply with local, State of NH, and National codes. Do it yourself installations do not qualify. Application for the solar PV system must be submitted on or after February 1, 2009. Application must be received and pre-approved prior to the beginning of installation of the system.

To receive 2009 program year rebates, your project must be completely installed and operating and all documentation received by NHEC no later than December 31, 2009.

Each capital credit account can participate one time in each of NHEC's 2009 Social and Environmental Responsibility Programs.

Program definitions:

Qualified Installer: a sole proprietorship; company; corporation; limited liability company; or other organization authorized to conduct business in the State of NH that is normally commercially engaged in the installation of solar PV systems.

Solar PV System: any commercially available solar PV system that is 100 kW or less in capacity. The system includes the solar panels, inverter, mounting racks, labor, permits, and other equipment as needed. The inverter must comply with UL 1741.

Do it yourself installation: any other type of installation project.

To the extent that funds are available, the following rebates will apply:

Total Rebate
\$3.00 per watt DC STC up to \$3,500 per project. STC = Standard Test Conditions
System must meet a minimum score of 80% to qualify for the rebate. See Minimum Design and Estimated Production Requirements Calculation Instructions and Form.

System Requirements:

- Meet a minimum score of 80% as indicated above
- An azimuth of between 165 ° and 225 ° (magnetic)
- A tilt of between 25° and 60 ° above the horizon
- A shading efficiency of 80% or more.
- Your installer must install a UL listed electric utility meter socket (outdoors next to the building's utility revenue meter) wired after the inverter and before the building's electric panel. NHEC will install a dedicated utility meter in this socket.

2. Member Eligibility

Funds will be distributed on a first-come, first-serve basis. Systems must be installed in NHEC's service territory (at an active member account) and NHEC reserves the right to limit each member to one rebate. Energy produced must be used at the member's home or business.

3. Completed Application

Receipt by NHEC of the completed application will put the member in the queue for a rebate. A completed application includes the following:

- a. General Information Form
- b. Rebate Terms and Conditions Form (this document)
- c. Granting of Rights to RECs Form
- d. Photographs of home or building taken at 1 PM during Daylight Savings Time (summer) or 12 PM during Eastern Standard Time (winter) where system will be installed. Take photographs as follows:
 - i.. facing the building with south behind you
 - ii.. with the building to your back, facing south
 - iii.. from the south side of the building, facing east
 - iv. from the south side of the building, facing west
- e. Proposal or Contract from installer signed by member and installer
- f. System Description from Installer
 - i. Location, orientation, and tilt of collectors, etc.
 - ii. Shading Analysis (Solar pathfinder or similar tool)
- g. Equipment List from installer
- h. Minimum Design and Estimated Production Calculation Form

4. Pre-Approval and Pre-Installation

Before installation work begins, pre-approval from NHEC is required for all projects. After an application is pre-approved by NHEC, the member will receive written notification of the maximum pre-approved rebate. NHEC reserves sole discretion to approve or disapprove of any solar PV system proposed. NHEC reserves sole discretion to determine if an installer is qualified or an installation is qualified as described above.

The following are required in addition to other requirements listed herein:

- a. The project must be deemed feasible regarding payback, energy savings, practicality, etc. by a qualified installer.
- b. The system will remain permanently installed for at least 10 years
- c. The building that the system serves must be "on the NHEC electric grid" for a period of five years after completion of the project. Failure to do so will result in member paying NHEC the rebate amount within 60 days of going "off grid."

Submission of an application does not entitle member to program participation. Participation can only occur after NHEC has given written pre-approval.

5. Monitoring and Evaluation Follow-up Visits and Dedicated Solar PV Meter

NHEC reserves the right to make a reasonable number of follow-up visits after the actual project completion date and filing of Project Completion Form. Such visits will be at a time convenient to the member. The purpose of these visits is to provide NHEC with an opportunity to review operation of the system. The scope of the review of the design and installation of the system is limited solely to determining whether program conditions have been met. It does not include any safety review. NHEC will also conduct an annual review of this dedicated electric utility meter and may require entry into your building.

6. Schedule for Rebate Payment

NHEC expects all rebates to be paid 30 days after the Monitoring and Evaluation Follow-up visit and project completion. This visit may take 30 days or more to schedule. Project completion includes:

- a. receipt of all Application documentation
- b. completed installation of the solar PV system and the system is operating
- c. receipt of the Completion Form
- d. receipt of the final contract with final pricing (if changed from the original contract)
- e. receipt of the Interconnection Application and Mutual Indemnity Agreement
- f. Monitoring and Evaluation visit as deemed necessary by NHEC
- g. NHEC's acceptance of the above, all in accordance with the specifications outlined elsewhere in the Terms and Conditions

7. Changes in or Cancellation of the Program

NHEC may change and/or cancel the program requirements, rebates, and/or Terms and Conditions at any time without prior notice to members. In the event of a program change, pre-approved applications will be processed to completion under the Terms and Conditions in effect at the time of pre-approval.

8. Publicity of Member Participation

NHEC may wish to publicize your participation in the program, the results, the amount of rebates paid to participants, and any other information which reasonably relates to participation in this program without compromising your reasonable expectations of confidentiality.

9. Installation/Completion Schedule Requirements

Rebate funding will be held in queue for a period of four months from the date of application to the date of project completion. All projects must be completed on or before December 31, 2009. All documentation must be received by NHEC on or before December 31, 2009.

10. Limitation of Liability and Indemnification

NHEC's liability under these Terms and Conditions will be limited to paying the rebate amounts specified herein. NHEC and any of its affiliates, consultants, or contractors shall not be liable for any consequential or incidental damages or for any damages in tort (including negligence) caused by any activities associated with these Terms and Conditions or in the Program.

The member shall protect, indemnify, and hold harmless NHEC from and against all liabilities, losses, claims, damages, judgments, penalties, causes of action, costs, expenses (including, without limitation, attorney's fees and expenses) incurred by or assessed against NHEC arising out of or relating to performance of these Terms and Conditions.

11. No Warranties

NHEC does not qualify, endorse, guarantee, nor warrant any particular manufacturer, product, or installer and provides no warranties, expressed or implied, for any product or services. The member's reliance on warranties is limited to any warranties that may arise from, or be provided by installers, contractors, vendors, etc. NHEC merely maintains a list of installers and equipment. It is the member's responsibility to determine if an installer is qualified to perform the work needed for the project and the equipment specified by the installer is appropriate for the project.

Member acknowledges that neither NHEC nor any of its consultants or affiliates are responsible for assuring that the design, engineering and construction of the system is proper or complies with any particular laws, codes, or industry standards. NHEC is not providing design and/or system technical advice and shall not be considered as doing so. Member should seek design and/or system technical advice from the qualified installer.

NHEC makes no representations of any energy and/or demand performance results to be achieved by the system.

12. No Advice on Taxes, Property Tax Exemptions, or State of NH Rebates

Members may qualify for a federal tax credit, a local property tax exemption, and/or a State of NH Rebate. NHEC's actions, comments, or written materials shall in no way be considered tax advice, advice on property tax exemptions, or advice on State of NH Rebates. Members should consult a tax advisor for a federal tax credit qualification determination. Members should consult your municipal officials for determination of a local property tax exemption. Members should consult the appropriate State of NH agency for determination of qualification of a State of NH rebate.

13. ISO-NE Forward Capacity Market Payments, Renewable Energy Credits, Regional Green House Gas Initiative Payments , Etc.

Member agrees in perpetuity to forgo applying directly or indirectly for any ISO-NE Forward Capacity Market payments or credits, any Renewable Energy Credits or payments, any Regional Green House Gas Initiative payments or credits, and any other environmental or energy credits or payments resulting from this project. NHEC reserves the right to apply for the above-mentioned payments and/or credits and to receive such payments and/or credits for its own use.

Member reserves the right to apply for and receive local, state, and/or federal tax credits, deductions, and/or exemptions.

14. Member Designation of NHEC as Recipient of Renewable Energy Certificates

Member designates in perpetuity NHEC as the recipient of its Renewable Energy Certificates resulting from this project so that NHEC can receive such Certificates directly from the issuer. Member designates in perpetuity NHEC as the recipient of any Regional Green House Gas Initiative payments or credits, and any other environmental or energy credits or payments resulting from this project.

Member agrees to the conditions set forth in the NEW HAMPSHIRE ELECTRIC COOPERATIVE'S (NHEC) 2009 SOLAR PHOTOVOLTAICS (PV) REBATE PROGRAM GRANTING OF RIGHTS OF RENEWABLE ENERGY CERTIFICATES (RECS) TO NHEC, NAMING NHEC AS DESIGNEE OF RECS, ATTESTATION OF MEMBER REGARDING BUILDING CODES, AND MEMBER DISCLOSURE TO FUTURE OWNERS OF THE PROPERTY THE TRANSFER OF RIGHTS OF RECS TO NHEC agreement and will sign said agreement.

15. Miscellaneous Items

The Parties agree that no failure or delay in exercising any right, power or privilege hereunder will operate as a waiver thereof, nor will any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any right, power or privilege hereunder.

This Agreement shall be governed by and construed and interpreted in accordance with the laws of the State of New Hampshire without regard to its conflicts of laws principles and any legal action will be adjudicated at a New Hampshire State court or New Hampshire administrative body of competent jurisdiction.

The invalidity or unenforceability of any provision of these Terms and Conditions will not affect the validity or enforceability of its other provisions. Following a determination by a court or an administrative body of competent jurisdiction that any provision of these Terms and Conditions is invalid or unenforceable, the remaining Terms and Conditions shall remain in full force and effect in accordance with their terms.

Member agrees to disclose these Terms and Conditions to future purchasers of the property at which the project is located.

16. Paragraph Headings and Paragraph Numbering

Paragraph headings, paragraph numbering, and other headings are for information only and are not made a part of these Terms and Conditions.

17. Entire Agreement

These Terms and Conditions set forth the entire agreement between the Parties. No other prior or contemporaneous written or oral agreement and no subsequent oral agreements between the Parties will be binding on the Parties.

By signing below and initialing the other pages, member and NHEC agree to the terms and conditions contained herein.

Signature of Member

Date

Member Printed Name (if Business, Print Name of Business)

Signature of NHEC Representative

Date

NHEC Representative Printed Name

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NEW HAMPSHIRE ELECTRIC COOPERATIVE'S (NHEC) 2009 SOLAR PHOTOVOLTAICS (PV) MINIMUM DESIGN AND ESTIMATED PRODUCTION REQUIREMENTS INSTRUCTIONS

The following calculation must be conducted and form (below) filled out.

The Solar PV project must be designed so that the estimated annual energy output for the Solar PV, based on actual site specific shading, azimuth, and tilt is at least 80% of the default optimal output for a fixed Solar PV project of the same capacity, as estimated by PVWATTS V1 and the shading analysis.

Additionally, the system must:

- a. An azimuth of between 165 ° and 225 ° (magnetic)
- b. A tilt of between 25° and 60 ° above the horizon
- c. A shading efficiency of 80% or more.

Note: The installer must install a UL listed electric utility meter socket (outdoors next to the building's utility revenue meter) wired after the inverter and before the building's electric panel. NHEC will install a dedicated utility meter in this socket.

PVWATTS V1 is available at the following website:

http://rredc.nrel.gov/solar/codes_algs/PVWATTS/version1/US/New_Hampshire/Concord.html

All projects must have the calculation performed indicated below and submitted with the application (see form).

Optimal parameters for purposes of a PVWATTS estimate are:

- 1) DC Rating – 1 kW
- 2) DC to AC Derate Factor – 0.77
- 3) Array Type – Fixed
- 4) Array Tilt - 43.2 degrees
- 5) Array Azimuth - 180 degrees (True South)

Total is 1,236 kWh AC Energy

How to Calculate the Percent of Optimal for the Proposed System:

In PV Watts, Input

- 1) DC Rating – 1 kW
- 2) DC to AC Derate Factor – 0.77
- 3) Array Type – _____ (fixed, single axis, or double axis)
- 4) Array Tilt - _____ in degrees
- 5) Array Azimuth - _____ in degrees

Note the Total kWh Calculated (AC Energy)

Percent of Optimal = $\frac{\text{Total kWh Calculated} \times \text{Site Shading Efficiency \%}}{\text{Optimal kWh}}$

Example: assume fixed array, 30 degree tilt, 200 degree azimuth, 90% site shading efficiency.

How to Calculate the Percent of Optimal for the Proposed System:

In PV Watts, Input

- 1) DC Rating – 1 kW
- 2) DC to AC Derate Factor – 0.77
- 3) Array Type – fixed
- 4) Array Tilt - 30 degrees
- 5) Array Azimuth - 200 degrees

Calculated kWh = 1,214

$$\text{Percent of Optimal} = \frac{1,214 \text{ kWh} \times 0.90}{1,236 \text{ kWh}} = 0.88 \text{ or } 88\%$$

This example project would qualify for a rebate



**NEW HAMPSHIRE ELECTRIC COOPERATIVE'S (NHEC) 2009 SOLAR PHOTOVOLTAICS (PV)
MINIMUM DESIGN AND ESTIMATED PRODUCTION CALCULATION FORM**

Member Name: _____ Signature: _____

Installer Name: _____ Signature: _____

Date: _____

1) DC Rating – 1 kW

2) DC to AC Derate Factor – 0.77

3) Array Type - _____

4) Array Tilt - _____

5) Array Azimuth - _____

Percent of Optimal = $\frac{\text{Total kWh Calculated} \times \text{Site Shading Efficiency \%}}{1,236 \text{ kWh}}$ = _____

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**NEW HAMPSHIRE ELECTRIC COOPERATIVE'S (NHEC) 2009
SOLAR PHOTOVOLTAIC (PV) REBATE PROGRAM COMPLETION FORM**

Member Name:	
Member Account Number:	
Installer must fill out the information in this block (please initial)	
<p>_____ the system has been installed in compliance with the applicable requirements of the local codes authority, State of NH codes, and National Codes.</p> <p>_____ installation of the system is complete and the system is operating as designed.</p> <p>_____ the final contract signed by the member and installer with final pricing is included with this form (if changed from the original contract)</p> <p>Comments:</p>	
Signature of Installer:	Date:
Member Signature:	Date:

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Member Name: _____

**NEW HAMPSHIRE ELECTRIC COOPERATIVE'S (NHEC) 2009 SOLAR
PHOTOVOLTAICS (PV) REBATE PROGRAM
GRANTING OF RIGHTS OF RENEWABLE ENERGY CERTIFICATES (RECS) TO NHEC,
NAMING NHEC AS DESIGNEE OF RECS, ATTESTATION OF MEMBER REGARDING
BUILDING CODES, AND MEMBER DISCLOSURE TO FUTURE OWNERS OF THE PROPERTY
THE TRANSFER OF RIGHTS OF RECS TO NHEC**

In exchange for receiving a rebate from NHEC, member agrees to the following:

Member forgoes in perpetuity applying directly or indirectly for any ISO-NE Forward Capacity Market payments or credits, any Renewable Energy Certificates or payments, any Regional Green House Gas Initiative payments or credits, and any other environmental or energy credits or payments resulting from this project. NHEC reserves the right to apply for the above-mentioned payments, certificates and/or credits and to receive such payments, certificates and/or credits for its own use.

Member designates in perpetuity NHEC as the recipient of its Renewable Energy Certificates resulting from this project so that NHEC can receive such Certificates directly from the issuer. Member designates in perpetuity NHEC as the recipient of any Regional Green House Gas Initiative payments or credits, and any other environmental or energy credits or payments resulting from this projects.

Member reserves the right to apply for and receive local, state, and/or federal tax credits, deductions, and/or exemptions.

Member attests that the project is installed and operating in conformance with any applicable building codes, if any.

Member will disclose this agreement to future purchasers of the property at which the project is located.

By signing below, member agrees to the terms listed herein.

Project Address: _____

Date Installed (completion): _____

Type of Project (Wind, Solar Hot Water, Solar PV, other): _____

If other, describe:

Signature of Member

Date

Member Printed Name (if Business, Print Name of Business)

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**NEW HAMPSHIRE ELECTRIC CO-OP
INTERCONNECTION APPLICATION-RENEWABLE GENERATION UP TO 100 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: _____

Mail Address:

City: _____ State: _____, Zip Code: _____

Facility Location (if different from above):

Daytime Phone #: _____

Distribution Utility: New Hampshire Electric Co-Op

Account # : _____
(if applicable)

Electricity Supplier (ES) _____

Account # : _____

Section 2. Generating Facility Information

Generator Type (check one): Solar _____ Wind _____ Hydro _____

Generator Manufacturer, Model Name & Number:

Number of Phases of Unit: Single, Three or Other: _____

Generation output rating in Kilowatts: _____

Inverter Manufacturer, Model Name & Number:

Battery Backup? (yes or no) _____

If 10 kW, will a generator Disconnect Switch accessible to the utility be installed?

Yes or No

Proposed location of Disconnect Switch, if applicable: _____

Section 3. Installation Information & Certification

Check if owner-installed

Installation Date: _____

Interconnection Date: _____

Installing Electrician: _____

License #: _____

Mail Address: _____

City: _____

State: _____ Zip Code: _____

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): _____

Date: _____

Name (printed): _____

Company: _____

2. The system has been installed in compliance with the local Building/Electrical Code of _____ (City/County)

Signed (Inspector): _____

Print Name: _____

Date: _____

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

3. Utility and Electricity Supplier signatures signify only receipt of this form, in compliance with the Commission's net metering rules Puc 900.

Signed (NHEC): _____

Print Name: _____

Date: _____

Signed (Electricity Supplier Representative): _____

Date: _____

4. The initial start-up test required by Puc 905.04 has been successfully completed.

Completed on _____ Witnessed By _____

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.

Signature of Applicant : _____

Date: _____

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.

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Member Name: _____

MUTUAL INDEMNITY AGREEMENT

“Each Party shall hold harmless, and indemnify the other Party and its directors, officers, agents and employees against any and all loss, liability, damage, or expense, including any direct, indirect or consequential loss, liability, damage, or expense, but not including attorneys’ fees unless awarded by a court of competent jurisdiction, for injury or death to persons, including employees of either Party, and damage to property, including property of either Party, arising out of or in connection with intentional, willful, wanton, reckless or negligent conduct regarding (a) the engineering, design, construction, maintenance, repair, operation, supervision, inspection, testing, protection or ownership of the Party’s facilities, or (b) the making of replacements, additions, or improvements to, or reconstruction of, the Party’s facilities. However, neither Party shall be indemnified hereunder for any loss, liability, damage, or expense resulting from its sole negligence or willful misconduct. Notwithstanding the indemnity provisions contained herein, except for a Party’s willful misconduct or sole negligence, each Party shall be responsible for damage to its own facilities resulting from electrical disturbances or faults.”

Member

_____ Eligible Customer-Generator (sign)
_____ Eligible Customer-Generator (print)
_____ Date Signed

New Hampshire Electric Cooperative, Inc. (NHEC)

_____ Signature
Distribution Utility Name of Utility
By its _____ Title of Authorized Utility Personnel
_____ Typed or Printed Name of Utility Representative
_____ Date Signed

_____ Signature
Electricity Supplier Name of Electricity Supplier
By its _____ Title of Authorized Personnel
_____ Typed or Printed Name of Supplier Representative
_____ Date Signed