

THE STATE OF NEW HAMPSHIRE

CHAIRMAN
Thomas B. Getz

COMMISSIONER
Clifton C. Below

EXECUTIVE DIRECTOR
AND SECRETARY
Debra A. Howland



PUBLIC UTILITIES COMMISSION

21 S. Fruit St., Suite 10
Concord, N.H. 03301-2429

Tel. (603) 271-2431

FAX No. 271-3878

TDD Access: Relay NH
1-800-735-2964

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July 2, 2009

Scott F. Eaton, Director
Administrative Rules Division
Office of Legislative Services
State House Annex, Room 219
25 Capitol Street
Concord, New Hampshire 03301

Re: Notice No. 2009-78
Puc 900, Net Metering for Customer-Owned Renewable Energy Generation
Resources of 100 Kilowatts or Less
Commission Docket No. 08-148
Final Proposal

Dear Mr. Eaton:

On May 1, 2009, the Commission voted pursuant to RSA 541-A to initiate a Readoption with Amendment to Puc 1300, regarding Utility Pole Attachments. A rulemaking notice form required by RSA 541-A:6 was filed with the Office of Legislative Services on May 12, 2009. The notice scheduled the public hearing on the proposed Readoption with Amendment for June 18, 2009.

The hearing was held as scheduled, and comments were received from the parties involved. On July 2, 2009, the Commission voted to approve that document as the Final Proposal for the Readoption with Amendment of Puc 1300.

The Commission asks that the JLCAR consider this proposal for Approval.

As required by the Rulemaking Manual, you will find enclosed two copies of the following:

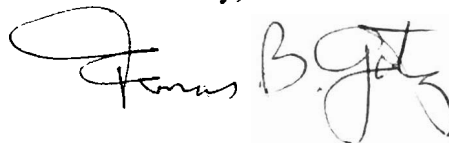
- A completed Appendix II-G, Cover Sheet for Final Proposal;
- A copy of the full text of the statutory rulemaking authority for the rule;

DRM 08-148
Puc 900
Final Proposal

- The established text of the final proposed rule as the “Final Proposal—Fixed Text”;
- The established text of the final proposed rule as the “Final Proposal—Annotated Text”;
- The cross reference table relative to implementation of statutes; and
- Applicable Incorporation by Reference Statements - 3.

Please let me know if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas B. Getz". The signature is fluid and cursive, with the first name "Thomas" being more legible than the last name "Getz".

Thomas B. Getz
Chairman

Enclosures

APPENDIX II-G

COVER SHEET FOR FINAL PROPOSAL

Notice Number 2009-78

Rule Number Puc 900

<p>1. Agency Name & Address:</p> <p>NH Public Utilities Commission 21 S. Fruit St Suite 10 Concord NH 03301-2429</p>	<p>2. RSA Authority: RSA 362-A:9, V & RSA 365:8, XII</p> <p>3. Federal Authority: _____</p> <p>4. Type of Action:</p> <p><input type="checkbox"/> Adoption</p> <p><input type="checkbox"/> Amendment</p> <p><input type="checkbox"/> Repeal</p> <p><input type="checkbox"/> Readoption</p> <p><input checked="" type="checkbox"/> Readoption w/amendment</p>
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5. Short Title: **NET METERING FOR CUSTOMER-OWNED RENEWABLE ENERGY GENERATION RESOURCES OF 100 KILOWATTS OR LESS**

6. Contact person for copies and questions:

Name:	Suzanne Amidon, Esq.	Title:	Staff Attorney
Address:	NH Public Utilities Commission 21 South Fruit Street, Suite 10 Concord NH 03301-2429	Phone #:	603-271-2431

7. Yes ☐ No ☒ Agency requests Committee legal counsel review and delayed Committee review pursuant to RSA 541-A:12, I-a

8. The rulemaking notice appeared in the Rulemaking Register on May 22, 2009

**SEE THE INSTRUCTIONS--PLEASE SUBMIT 2 COPIES OF THIS COVER SHEET AND 2 COPIES OF THE FOLLOWING:
 (and numbered correspondingly)**

9. The "Final Proposal-Fixed Text," including the cross-reference table required by RSA 541-A:3-a, II as an appendix.

10. The full text of the RSA passage granting rulemaking authority.

11. Yes ☒ N/A ☐ Incorporation by Reference Statement(s) because this rule incorporates a document by reference for which an Incorporation by Reference Statement is required pursuant to RSA 541-A:12, III.

12. Yes ☒ N/A ☐ The "Final Proposal-Annotated Text," indicating how the proposed rule was changed because the text of the rule changed from the Initial Proposal pursuant to RSA 541-A:12, II(e).

13. Yes ☐ N/A ☒ The amended fiscal impact statement because the change to the text of the Initial Proposal affects the original fiscal impact statement (FIS) pursuant to RSA 541-A:5, VI.

**TITLE XXXIV
PUBLIC UTILITIES**

**CHAPTER 362-A
LIMITED ELECTRICAL ENERGY PRODUCERS ACT**

Section 362-A:9

362-A:9 Net Energy Metering.

V. The commission shall adopt rules, pursuant to RSA 541-A, to establish reasonable interconnection requirements for safety, reliability, and power quality as it determines the public interest requires. Such rules shall not exceed applicable test standards of the American National Standards Institute (ANSI) or Underwriters Laboratory (UL).

Source. 1998, 261:10, eff. Aug. 25, 1998. 2000, 148:1, 2, eff. July 22, 2000. 2007, 174:2-4, eff. Aug. 17, 2007.

**TITLE XXXIV
PUBLIC UTILITIES**

**CHAPTER 365
COMPLAINTS TO, AND PROCEEDINGS BEFORE, THE COMMISSION**

Proceedings Before the Commission

Section 365:8

365:8 Rulemaking Authority - The commission shall adopt rules, pursuant to RSA 541-A, relative to:

I. The conduct of its hearings, including alternative processes in hearings and other forms of alternative dispute resolution.

II. Standards and procedures for streamlined review or other alternative processes to enhance the efficiency of the commission and respond to the needs of the utility's ratepayers and shareholders.

III. Standards and procedures for the creation, monitoring and evaluation of alternative forms of regulation.

IV. Standards and procedures for the handling of confidential information, in accordance with RSA 91-A.

V. Standards and procedures for filing requirements for tariffs, engineering, accounting, and other commission matters.

VI. Standards and procedures for franchise terms and conditions, including extended area telephone service.

VII. Standards and procedures for safe and reliable utility service and termination of service subject to RSA 363-B.

VIII. Standards and procedures for matters related to the proper administration of RSA 366 relative to utility relations with affiliates.

IX. Standards and procedures relative to a reasonable amount of the short-term notes, bonds or other evidences of indebtedness based upon the amount of the utility's respective plant investment which each utility shall not exceed without first obtaining the approval of the commission pursuant to RSA 369:7.

X. Standards and procedures for determination and recovery of rate case expenses.

XI. Standards and procedures for the conduct of investigations authorized under this title.

XII. Procedures necessary to provide for the proper administration of and to further the purposes of this title.

XIII. Standards and procedures by which those electricity suppliers and utilities that choose to offer renewable energy options will provide information to customers who take such service of the fuel source or sources and emissions associated with the electrical service that they take and to inform such customers of the resource mix and emissions associated with the electricity generated and sold in the New England region as a whole.

Source. 1911, 164:2. PL 238:9. RL 287:9. 1951, 203:11 par. 8. RSA 365:8. 1981, 220:4. 1994, 193:1, eff. July 23, 1994. 2005, 102:1, eff. June 15, 2005.

APPENDIX II-H

INCORPORATION BY REFERENCE STATEMENT

****PLEASE LIST THE FOLLOWING:**

1. Name of Agency. **New Hampshire Public Utilities Commission**
2. Person who has reviewed the material to be incorporated into the agency's rules:

Name:	Michael Cannata	Title:	Consulting Engineer
Address:	21 South Fruit Street, Suite 10 Concord, NH 03301	Phone #:	603-271-2431

3. Specific rule number where the material is incorporated: **Puc 906.01(a)(1)**

****PLEASE ATTACH THE FOLLOWING**, numbered to correspond to the number on this sheet (a separate sheet is not required for every item):

4. The complete title of the material which is to be incorporated including the date on which the material became effective (or a document identification number) and the title of the entity that created or promulgated the material.
5. How the agency modified the text of the material incorporated, clearly identifying where amendments have been made to the text.
6. How the material incorporated can be obtained by the public (include cost and the address of the out-of-state agency which published the material).
7. Why the agency did not choose to reproduce the incorporated material in full in its rules. The discussion shall include more than the obvious reason that it is less expensive to incorporate by reference.

****PLEASE SIGN THE FOLLOWING:**

I, the adopting authority,* certify that the text of the material which the agency is incorporating by reference in these rules has been reviewed by this agency. To the best of my knowledge and belief, this agency has complied with the requirements of RSA 541-A:12, IV and Section 3.12 of Chapter 4 of the Drafting and Procedure Manual for Administrative Rules. I further certify that the agency has the capability and the intent to enforce the material incorporated into the rules, as identified above.

Date: July 2, 2009

Signature:  _____

Name: Thomas B. Getz

Title: Chairman

*("Adopting authority" is the official empowered by statute to adopt the rule, or a member of the group of individuals empowered by statute to adopt the rule.)

APPENDIX II-H - INCORPORATION BY REFERENCE STATEMENT
ADDENDUM

PUC 900, Net Metering for Customer-Owned Renewable Energy
Generation Resources of 100 Kilowatts or Less
NOTICE NO. 2009-78

Puc 906.01(a)(1)

4) The "IEEE Recommended Practice for Utility Interconnections ANSI/IEEE STD 1547" was issued by the Institute of Electrical and Electronic Engineers, Inc., New York, NY, on July 28, 2003.

5) The PUC modified the text from the previous version of Puc 900 in order to update the effective date of the code from 2000 to 2003. The text reads:

() A net energy metered project which connects to the electric grid by means of a single-phase or three-phase inverter shall be deemed to be compliant with the technical specifications for the generation unit itself, as established by Puc 900, if the unit complies with the minimum requirements set forth in the following national standards:

(1) The "IEEE Recommended Practice for Utility Interconnections ANSI/IEEE STD 1547" issued by the Institute of Electrical and Electronic Engineers, Inc., New York, NY, July, 2003;

6) The "IEEE Recommended Practice for Utility Interconnections ANSI/IEEE STD 1547" issued by the Institute of Electrical and Electronic Engineers, Inc., New York, NY, July, 2003 may be obtained from the Institute of Electrical and Electronic Engineers, Inc. (IEEE), 3 Park Avenue, New York, NY 10016, whose telephone number is 212-419-7900 and internet address is www.ieee.org. The cost of downloading this material as of this date for a non-member of IEEE is \$89.00. The material may also be viewed and copied at the Commission at a cost of \$.25 per page.

7) The Commission chose not to reproduce the incorporated materials because the document is voluminous and is protected by copyright.

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****PLEASE LIST THE FOLLOWING:**

1. Name of Agency. **New Hampshire Public Utilities Commission**
2. Person who has reviewed the material to be incorporated into the agency's rules:

Name:	Michael Cannata	Title:	Consulting Engineer
Address:	21 South Fruit Street, Suite 10 Concord, NH 03301	Phone #:	603-271-2431

3. Specific rule number where the material is incorporated: **Puc 906.01(a)(2)**

****PLEASE ATTACH THE FOLLOWING**, numbered to correspond to the number on this sheet (a separate sheet is not required for every item):

4. The complete title of the material which is to be incorporated including the date on which the material became effective (or a document identification number) and the title of the entity that created or promulgated the material.

5. How the agency modified the text of the material incorporated, clearly identifying where amendments have been made to the text.

6. How the material incorporated can be obtained by the public (include cost and the address of the out-of-state agency which published the material).

7. Why the agency did not choose to reproduce the incorporated material in full in its rules. The discussion shall include more than the obvious reason that it is less expensive to incorporate by reference.

****PLEASE SIGN THE FOLLOWING:**

I, the adopting authority,* certify that the text of the material which the agency is incorporating by reference in these rules has been reviewed by this agency. To the best of my knowledge and belief, this agency has complied with the requirements of RSA 541-A:12, IV and Section 3.12 of Chapter 4 of the Drafting and Procedure Manual for Administrative Rules. I further certify that the agency has the capability and the intent to enforce the material incorporated into the rules, as identified above.

Date: July 2, 2009

Signature: 

Name: Thomas B. Getz

Title: Chairman

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APPENDIX II-H - INCORPORATION BY REFERENCE STATEMENT
ADDENDUM

PUC 900, Net Metering for Customer-Owned Renewable Energy
Generation Resources of 100 Kilowatts or Less
NOTICE NO. 2009-78

Puc 906.01(a)(2)

4) The "UL 1741, Standard for Inverters, Converters, Controllers with Interconnection System Equipment for Use with Distributed Generation Resources", issued by Underwriters Laboratories, Inc., of 333 Pfingsten Road, Northbrook, Illinois 60062, May, 2007.

5) The PUC modified the text from the previous version of Puc 900 in order to update the effective date of the text from 1999 to 2007. The text reads:

() A net energy metered project which connects to the electric grid by means of a single-phase or three-phase inverter shall be deemed to be compliant with the technical specifications for the generation unit itself, as established by Puc 900, if the unit complies with the minimum requirements set forth in the following national standards:

(b) The "UL 1741, Standard for Static Inverters and Charge Controllers for Use in Photovoltaic Power Systems", issued by Underwriters Laboratories, Inc., of 333 Pfingsten Road, Northbrook, Illinois 60062, May, 2007

6) The "UL 1741, Standard for Inverters, Converters, Controllers with Interconnection System Equipment for Use with Distributed Generation Resources ", may be obtained by Underwriters Laboratories, Inc., of 333 Pfingsten Road, Northbrook, Illinois 60062, May, 2007, whose telephone number is 877.854.3577 and whose internet address is www.ul.com. The cost for downloading a PDF version of UL 1741 is \$699.00 as of this date. The material may also be viewed and copied at the Commission at a cost of \$.25 per page.

7) The Commission chose not to reproduce the incorporated materials because the document is voluminous and is protected by copyright®.

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1. Name of Agency. **New Hampshire Public Utilities Commission**

2. Person who has reviewed the material to be incorporated into the agency's rules:

Name:	Michael Cannata	Title:	Consulting Engineer
Address:	21 South Fruit Street, Suite 10 Concord, NH 03301	Phone #:	603-271-2431

3. Specific rule number where the material is incorporated: **Puc 906.01(b) and Puc 907.01 (b)**

****PLEASE ATTACH THE FOLLOWING**, numbered to correspond to the number on this sheet (a separate sheet is not required for every item):

4. The complete title of the material which is to be incorporated including the date on which the material became effective (or a document identification number) and the title of the entity that created or promulgated the material.

5. How the agency modified the text of the material incorporated, clearly identifying where amendments have been made to the text.

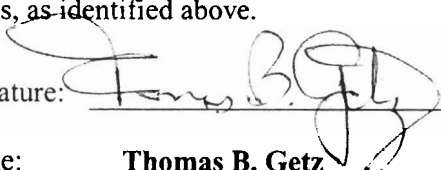
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7. Why the agency did not choose to reproduce the incorporated material in full in its rules. The discussion shall include more than the obvious reason that it is less expensive to incorporate by reference.

****PLEASE SIGN THE FOLLOWING:**

I, the adopting authority,* certify that the text of the material which the agency is incorporating by reference in these rules has been reviewed by this agency. To the best of my knowledge and belief, this agency has complied with the requirements of RSA 541-A:12, IV and Section 3.12 of Chapter 4 of the Drafting and Procedure Manual for Administrative Rules. I further certify that the agency has the capability and the intent to enforce the material incorporated into the rules, as identified above.

Date: July 2, 2009

Signature: 

Name: Thomas B. Getz

Title: Chairman

*("Adopting authority" is the official empowered by statute to adopt the rule, or a member of the group of individuals empowered by statute to adopt the rule.)

APPENDIX II-H - INCORPORATION BY REFERENCE STATEMENT
ADDENDUM

PUC 900, Net Metering for Customer-Owned Renewable Energy
Generation Resources of 100 Kilowatts or Less
NOTICE NO. 2009-78

Puc 906.01(c) and 907.01(b)

4) The National Electrical Code, 2008, issued by the National Fire Protection Association, Quincy, Massachusetts.

5) The PUC modified the text from the previous versions of 906.01(c) and 907.01(b) in order to update the effective date of the code from 1999 to 2008. The text reads:

(a) A net metered system shall be installed in accordance with the National Electrical Code, 2008, issued by the National Fire Protection Association, Quincy, Massachusetts;

6) The National Electrical Code, 2008, issued by the National Fire Protection Association, may be obtained by the National Fire Protection Association, of 1 Batterymarch Park, Quincy, MA 02269, whose telephone number is 617-770-3000 and whose internet address is www.nfpa.org. The cost for order a hard copy or downloading a PDF version of the National Electric Code, 2008 is \$82.50 for non-members, as of this date. The material may also be viewed and copied at the Commission at a cost of \$.25 per page.

7) The Commission chose not to reproduce the incorporated materials because the document is voluminous and is protected by copyright®.

Readopt with Amendment Chapter Puc 900, effective 1-12-09 (Document # 9353) to read as follows:

CHAPTER Puc 900 NET METERING FOR CUSTOMER-OWNED RENEWABLE ENERGY GENERATION RESOURCES OF 100 KILOWATT OR LESS

PART Puc 901 PURPOSE

Puc 901.01 Purpose. The purpose of Puc 900, pursuant to the mandate of RSA 362-A:9, is to establish reasonable interconnection requirements for safety, reliability and power quality for net energy metering as the public interest requires, and consistent with the legislative declaration of purpose set forth in RSA 362-A:1, in which the legislature found:

(a) It to be in the public interest to provide for small scale and diversified sources of supplemental electrical power to lessen the state's dependence upon other sources which may, from time to time, be uncertain;

(b) It to be in the public interest to encourage and support diversified electrical production that uses indigenous and renewable fuels and has beneficial impacts on the environment and public health; and

(c) That net energy metering for eligible customer-generators may be one way to provide a reasonable opportunity for small customers to choose interconnected self generation, encourage private investment in renewable energy resources, stimulate in-state commercialization of innovative and beneficial new technology, enhance the future diversification of the state's energy resource mix, and reduce interconnection and administrative costs.

PART Puc 902 DEFINITIONS

Puc 902.01 “Customer-generator” means “eligible customer-generator” as defined in RSA 362-A:1-a, II-b, namely an electric utility customer who owns and operates electrical generating facilities powered by renewable energy with a total peak generating capacity of not more than 100 kilowatts (kW) that is located on the customer’s premises, is interconnected and operates in parallel with the electric grid, and is intended primarily to offset part or all of the customer’s own electricity requirements.

Puc 902.~~01-02~~ “Distribution utility” means the company that owns and/or operates the distribution facilities delivering electricity to the ~~eligible~~ customer-generator’s premises.

Puc 902.~~02-03~~ “Electric utility customer” as used in the definition of “~~eligible~~ customer-generator” means any residential, commercial or industrial ratepayer of a distribution utility.

Puc 902.~~03-04~~ “Electricity suppliers” means “electricity suppliers” as defined in RSA 374-F:2, II, namely “suppliers of electricity generation services and includes actual electricity

generators and brokers, aggregators, and pools that arrange for the supply of electricity generation to meet retail customer demand, which may be municipal or county entities.”

~~Puc 902.04 “Eligible customer generator (“customer generator”) means “an electric utility customer who owns and operates electrical generating facilities powered by renewable energy with a total peak generating capacity of not more than 100 kilowatts (kW) that is located on the customer’s premises, is interconnected and operates in parallel with the electric grid, and is intended primarily to offset part or all of the customer’s own electricity requirements.”~~

Puc 902.05 “Generation capacity” means, for inverter based units, the kilowatt rating of the inverter, and for other interconnections, the kilowatt rating of the generation unit.

Puc 902.06 “Islanding” means a condition in which a portion of the utility system that contains both load and dispersed generation is isolated from the remainder of the utility system.

Puc 902.07 “Net energy metering” means “net energy metering” as defined in RSA 362-A:1, III-a, namely, “measuring the difference between the electricity supplied over the electric distribution system and the electricity generated by an eligible customer-generator which is fed back into the electric distribution system over a billing period.

Puc 902.08 “Renewable energy” means electricity produced by renewable resources including geothermal, tidal or wave, wind, solar, landfill gas, hydro, biomass, bio-oil, bio-synthetic gas and biodiesel resources.

Puc 902.09 “Witness test” means the process used by the electric utility following the interconnection of a customer ~~generator’s~~ generation facility to determine whether the interconnection affects the safety, reliability or power quality of the distribution system.

PART Puc 903 ~~GENERAL RULES, RIGHTS AND OBLIGATIONS~~ CONDITIONS TO INTERCONNECTION

Puc 903.01 General Rules, Rights and Obligations.

(a) Any distribution utility and any electricity supplier operating within the state of New Hampshire shall, upon request, provide net energy metering to ~~eligible customer~~ generators pursuant to Puc 900 and RSA 362-A:9.

(b) A distribution utility shall comply with Puc 900 in a non-discriminatory manner and shall not unreasonably withhold its permission to interconnect an ~~eligible customer’s~~ generator’s generating facility.

(c) Any electricity supplier operating within New Hampshire that is not the default service provider shall offer net metering pursuant to Puc 900 but may provide for rates and terms as provided in RSA 362-A:9, III and Puc 903.02(i).

(d) Any customer-generator who engages in net energy metering in New Hampshire shall comply with Puc 900.

(e) A customer-generator shall comply with:

(1) Applicable commission-approved rules, tariffs and terms and conditions of the distribution utility not in conflict with Puc 900; and

(2) Any local, state or federal law, statute or regulation which applies to the design, siting, construction, installation, operation, or any other aspect of the customer's ~~generator's~~ generating and interconnection facility.

(f) Interconnection with the distribution utility under Puc 900 shall not authorize a customer-generator to utilize the distribution utility's electric distribution system for the transmission or distribution of electric power.

(g) The distribution utility shall have the right to review the design of a customer's ~~generator's~~ generating and interconnection facility and to inspect such facility prior to the commencement of operation.

(h) The distribution utility may require a customer-generator to make modifications to its facility as necessary to comply with the requirements of Puc 900.

(i) The distribution utility's review and authorization for operation shall not be construed as confirming or endorsing the customer-generator's design or as warranting the generating or interconnection facility's safety, durability or reliability.

(j) The distribution utility shall not, by reason of such review or lack of review, be responsible for the strength, adequacy, or capacity of such facility's equipment.

(k) A customer's ~~generator's~~ generating and interconnection facilities shall be reasonably accessible to the distribution utility personnel as necessary for the distribution utility to perform its duties and exercise its rights under its tariffs and terms and conditions filed with and approved by the commission, and Puc 900.

(l) Any information pertaining to generating or interconnection facility provided to a distribution utility by a customer-generator shall be treated by the distribution utility in a confidential manner.

(m) A customer-generator shall operate and maintain its generating and interconnection facility in a manner that is as safe, dependable and efficient as practicable.

Puc 903.02 Statutory and Other Requirements.

(a) Electric distribution utilities shall make net energy metering available to ~~eligible~~ customer-generators, pursuant to RSA 362-A:9 and Puc 900.

(b) Eligibility for net energy metering shall be available on a first-come, first-served basis within each distribution utility service area under the jurisdiction of the commission until such time as the total rated generating capacity owned and operated by customer-generators totals 1.0 percent of the annual peak energy demand distributed by each such distribution utility as determined by the commission from time to time, pursuant to RSA 362-A:9.

(c) Net energy metering shall be accomplished using a single meter capable of registering the flow of electricity in two directions, pursuant to RSA 362-A:9.

(d) Notwithstanding (c) above, an additional meter or meters to monitor the flow of electricity in each direction may be installed, provided that it is not at the expense of the customer-generator unless requested by the customer-generator.

(e) If the output of the customer-~~s-generator's~~ facility will be measured for the purposes of recording renewable energy output under RSA 362-F:A, a second meter measuring the flow of electricity from the facility may be installed at the customer-~~s-generator's~~ expense.

(f) If an additional meter or meters are installed, as described in (d) above, the net energy metering calculation shall yield the same result as when a single meter is used, pursuant to RSA 362-A:9.

(g) The net energy metering calculation shall be made by taking the difference between the electricity supplied over the electric distribution system and the electricity generated by the customer-generator and fed back into the electric distribution system over the billing period, pursuant to RSA 362-A:9.

(h) Each electric distribution utility shall, pursuant to RSA 362-A:9, offer net energy metering to each customer-generator on terms which shall be identical, with respect to rates, rate structure, and periodic charges, to the contract or tariff to which the same customer-~~generator~~ would be assigned if such customer-~~generator~~ was not a customer-generator.

(i) Electricity suppliers may voluntarily determine the terms, conditions, and prices under which they will agree to provide generation supply to and purchase net generation output from customer-generators, however, electricity suppliers who provide default energy service to such a customer-~~generator~~ shall only bill for the net energy supplied as calculated in accordance with (h) above, pursuant to RSA 362-A:9.

(j) Pursuant to RSA 362-A:9, the following shall apply to net energy measurement:

(1) The net energy produced or consumed on a monthly basis shall be measured in accordance with normal metering practices;

(2) Where the electricity supplied to the customer-generator over the electric distribution system exceeds the electricity generated by the customer-generator during the billing period, the customer-generator shall be billed based on the net energy supplied for distribution services and other charges in accordance with this section and standard applicable rates; and

(3) Where the electricity generated by the customer-generator exceeds the electricity supplied by the electric grid, the customer-generator shall be credited over subsequent billing periods for the excess kilowatt hours generated in accordance with this section.

(k) Upon exit from the net energy metering system, there shall be no payment or credit to a customer-generator for any remaining excess generation.

(l) The commission shall waive any provision of Puc 900 or RSA 362-A after notice and an opportunity for a hearing, if it determines that waiver of the applicable statute or rule section is a net energy metering arrangement that is part of a utility strategy to minimize distribution costs, pursuant to RSA 362-A:9.

(m) The commission shall consider any request for a waiver, whether filed pursuant to (l) above or otherwise, pursuant to Puc 201.05, titled waiver of rules.

PART Puc 904 INTERCONNECTION APPLICATION PROCESS

Puc 904.01 Pre-application Review.

(a) Before purchasing or installing net energy metering equipment, a customer-generator may request that the customer-s-generator's distribution utility informally review the proposed project and provide information on:

(1) Whether the customer-generator's distribution utility is under the cap established by RSA 362-A:9,I;

(2) Whether the customer-generator's generation facility and electric grid interface unit, in the opinion of the distribution utility, is likely to comply with the requirements of Puc 900; and

(3) Whether the customer-generator is in an area or service location which is likely to require any upgrade or study.

(b) At the pre-application stage the distribution utility shall provide the customer-generator

its best evaluation, given the information it has available, but shall not be required to conduct a study or elaborate review of the project.

Puc 904.02 Interconnection Application.

(a) To initiate the process to engage in net energy metering, a customer-generator shall file with its distribution utility and, if applicable, its electricity supplier, an interconnection application form.

(b) When filing an application with the distribution utility, to obtain evidence of the filing and the date of filing, the applicant shall:

- (1) File the application by certified mail; or
- (2) Obtain a dated acknowledgment of receipt from the distribution utility; or
- (3) Obtain written or electronic verification of receipt from the distribution utility by other means consistent with (1) and (2) above.

(c) The interconnection application form shall include the following:

(1) Applicant information which shall include:

- a. The customer-generator's name;
- b. The customer-generator's full mailing address
- c. The facility location, if different from above;
- d. The customer-generator's daytime and evening telephone numbers;
- e. The information provided in a., b., and d. above for an alternative contact person when the customer-generator is unavailable;
- f. The name of the local distribution utility and the customer-generator's account number; and
- g. If different than the distribution utility, the name of the customer-generator's electricity supplier and the customer-generator's account number;

(2) Generating facility information, including:

- a. The generator type, whether solar, wind, ~~hydro~~—hydro or other renewable source as ~~defined~~ listed in RSA 362-F:4, I, (a) through (f) ;

- b. The generator manufacturer, model name and number;
- c. The number of phases of the unit, whether single or ~~three~~3-phase;
- d. The power rating of the generation output of the system in kilowatts;
- e. If applicable, the inverter manufacturer, model name and number;
- f. Whether a battery backup will be used or not; and
- g. Whether an exterior manual disconnect switch for utility use shall be installed, if the generation output of the unit is less than or equal to 10 kilowatts in size; and

(3) Installation information and certification, which shall include:

- a. Whether the generator shall be owner installed;
- b. The installation date;
- c. The anticipated interconnection date;
- d. The name, complete address, telephone number and license number of the installing electrician, if applicable;
- e. The name and company affiliation of the vendor selling the generator to the customer~~-generator~~;
- f. The signature, with the date of signature, of the vendor, certifying that the system hardware is in compliance with Puc 900;
- g. Certification, if applicable, that the system has been installed in compliance with the local municipal building and electrical codess in the form of:
 - 1. A signed and dated certificate by the applicable local code official; or
 - 2. A copy of a signed and dated final inspection certificate from the municipality; and
- h. A signed and dated certification by the customer~~-generator~~ that:
 - 1. The customer~~-generator~~ has installed and shall operate the generation system in compliance with~~-Pue 900~~ applicable electrical standards;

2. The initial start-up test required by Puc 905.04 has been successfully completed; and

3. To the best of the customer-generator's knowledge, all of the information contained in the interconnection notice is true and correct; and

i. Responses to the questions posed in Puc 904.01.

(d) A customer-generator may submit an interconnection application to its distribution utility when the customer-generator's facility has not been fully installed and tested, but shall:

(1) Provide in writing in connection with the interconnection application a description of any manner in which the facility is not fully connected, tested or is not yet otherwise in compliance;

(2) Fulfill any unmet requirements prior to interconnecting; and

(3) Upon completion of unmet interconnection requirements, provide the distribution utility with any necessary updated written certifications required by this part.

(e) The distribution utility shall not interconnect the facility until all requirements pursuant to (d) above are met.

(f) Upon request, the distribution utility shall provide the customer-generator written confirmation that the interconnection application has been received and the date of receipt as follows:

(1) When the application is filed in person, immediately; or

(2) When the application is filed by mail or other means, within 10 business days of receipt, with written acknowledgement that states that:

a. The application is complete; or

b. That the application is incomplete and what information is necessary to complete the requirements.

(g) When the distribution utility provides a receipt for an application it may clarify that the receipt acknowledges the date and fact of a filing, but not the approval of the filing.

(h) A sample interconnection application form is set forth in appendix II to Puc 900.

Puc 904.03Mutual Indemnity Provision.

~~(a) 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:~~

~~(1) The engineering, design, construction, maintenance, repair, operation, supervision, inspection, testing, protection or ownership of the party's facilities; or~~

~~(2) The making of replacements, additions, or improvements to, or reconstruction of, the party's facilities.—~~

~~(b) Neither party shall be indemnified by this provision for any loss, liability, damage, or expense resulting from its sole negligence or willful misconduct.~~

~~(c) Notwithstanding this indemnity provision, 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.~~

~~(d) This mutual indemnity provision shall become effective as between the respective parties upon interconnection of the ECG to the electric grid.~~

~~(e) The terms of indemnity provision described in this section shall not be construed to relieve any insurer of its obligations to pay any insurance claims in accordance with the provisions of any valid insurance policy.~~

(a) Unless both parties to the agreement have agreed, pursuant to (g) below, to not enter into or maintain the mutual indemnity agreement, prior to interconnection, the customer-generator, his or her distribution utility, and, if applicable, the customer-generator's electricity supplier shall:

(1) Execute the mutual indemnity agreement described in (b) below; and

(2) Maintain the terms of the agreement while the net energy metered unit is interconnected.

(b) With regard to the mutual indemnity agreement, each party to the agreement shall provide as follows:

(1) 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;

(2) Neither party shall be indemnified by the agreement for any loss, liability, damage, or expense resulting from its sole negligence or willful misconduct; and

(3) Notwithstanding the indemnity provisions contained in the agreement, 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.

(c) The mutual indemnity agreement shall become effective as between the respective parties executing and exchanging the document, upon interconnection of the customer-generator to the electric grid and mutual execution and exchange of the document by the distribution utility, the customer-generator and, if applicable, the electricity supplier.

(d) The distribution utility shall also execute the mutual indemnity agreement described in this section.

(e) The customer-generator, distribution utility, and, if applicable, the electricity supplier, shall each execute duplicate originals of the mutual indemnity agreement set forth in (b) above and each party to the agreement shall retain one executed original of the agreement.

(f) If an electricity supplier sells electric power to the customer-generator, it may require that the customer-generator enter into a mutual indemnity agreement with it, as described in this section.

(g) Notwithstanding (c) through (f) above, the customer-generator and the distribution utility with whom he or she interconnects and/or the electricity supplier of the customer-generator, separately or together, may at any time, by mutual agreement, elect not to enter into or to void the indemnity agreement set forth in (b) above.

(h) The provisions of the indemnity agreement described in this section shall not be construed to relieve any insurer of its obligations to pay any insurance claims in accordance with the provisions of any valid insurance policy.

Puc 904.04 Application Completeness Review.

(a) The interconnection process ~~begins~~ shall be deemed as beginning when the ~~eligible customer-~~generator submits a complete application pursuant to this part.

(b) The distribution utility shall evaluate the application for completeness and notify the customer-generator in writing within 10 business days of the application's receipt whether the application is or is not complete and, if the application is not complete, inform the customer-generator in writing what information is missing.

(c) The distribution utility shall verify that the customer-generator's facility equipment passes the requirements of Puc 905.

(d) If the distribution utility approves the application, the distribution utility shall sign the application and return the approved application to the customer-generator.

(e) If the distribution utility determines that interconnection of the customer generation facility would jeopardize the safety, reliability or power quality of the local distribution system, the distribution utility shall require the customer-generator to pay for necessary modifications to the distribution system before the application is approved.

(f) In the event that the distribution utility requires the customer-generator to pay for system modifications pursuant to (e) above, the distribution utility shall provide the customer-generator a description of work and an estimate of the cost for approval.

(g) If the customer-generator agrees to pay for the system modifications, the customer-generator shall sign the description of the work and submit a signed copy and the payment of the estimated costs to the distribution utility.

(h) Upon receipt of the customer-generator's approval and payment, the distribution utility shall perform the system modifications.

(i) Upon completion of the system modifications, the distribution utility shall sign the application approval and provide a copy of the signed approval to the customer-generator.

Puc 904 05. Installation and Interconnection of Facility

(a) Upon receipt of an application signed by the distribution utility, the customer-generator may install the generating facility.

(b) Following installation of the facility, the customer-generator shall arrange for inspection of the completed installation by the local building inspector or, if one is not available, a New Hampshire licensed electrician.

(c) The person who inspects the installation pursuant to (b) above shall sign a certificate of completion.

(d) If the facility was installed by an electrical contractor, the customer-generator shall also have the contractor complete a certificate of completion.

(e) When the customer-generator has the signatures pursuant to (c) and (d) above, the customer-generator shall provide the distribution utility with a copy of the certificates of completion.

(f) Following receipt of the certificate(s) of completion, the distribution utility may inspect the customer-generator's facility for compliance with standards by arranging for a witness test.

(g) Until a witness test has been performed, the customer-generator shall have no right to operate in parallel unless a witness test has been previously waived by the distribution utility on the application form.

(h) If the distribution utility elects to conduct a witness test, the distribution utility will attempt to conduct it within 10 business days of the receipt of the certificate of completion.

(i) All projects larger than 10 kW shall be subject to a witness test unless the distribution utility has waived the witness test on the application form.

(j) If the witness test shows that the facility is appropriately installed and functioning without jeopardizing the safety, reliability or power quality of the distribution system, the distribution utility shall notify the customer-generator in writing that the interconnection is authorized.

(k) If the witness test results indicate that the facility installation jeopardizes the safety, reliability or power quality of the distribution system, the distribution utility shall disconnect the facility provided that the distribution utility inform the customer-generator in writing what actions are required to mitigate the safety, reliability or power quality issues along approval of the facility interconnection.

(l) If the customer-generator does not substantially complete construction within 12 months after receiving application approval from the distribution utility, the distribution utility shall require the customer-generator to reapply for interconnection.

(m) As to a generating facility up to 25 kW that does not interface with the electric grid by means of an inverter, the distribution utility shall have a period of 75 days from the initial filing of the interconnection application to:

- (1) Assess the proposed system and the customer-generator's site characteristics;
- (2) Communicate with the customer-generator regarding adequate protective interface devices; and
- (3) Allow the applicant to interconnect or provide the customer-generator specific written reasons for objecting to interconnection.

(n) If the customer-generator and the distribution utility agree that the application reasonably requires more time before the distribution utility responds as provided in (m)) above, as applicable, they may agree to extend the deadline for response.

(o) Except as provided in (n) above, if the distribution utility is not able to respond to the applicant within the 10 day review period for inverter based systems or 75 day review period for non-inverter based systems and the customer-generator does not agree to an extension of the response time, the distribution utility shall:

- (1) Notify the commission and the customer-generator in writing no later than the expiration of the relevant period;
- (2) Petition the commission for an extension of a specified length; and
- (3) Cite the specific reasons why the deadline was not met and the basis for the length of the requested extension.

(p) The commission shall grant an extension for review of the application for the shortest time reasonable, if any, if it determines that it is necessary to provide the distribution utility additional time to assess the effect of the proposal on safety, reliability or power quality of the electric distribution system in light of:

- (1) The complexity of the characteristics of the site;
- (2) The complexity of the proposed generation and interconnection facilities; or
- (3) Delay occasioned by:

a. Failure of the customer-generator to timely provide the distribution utility information necessary to assess the potential impact of the system on safety, reliability or power quality of the electric grid;

b. Untimely response by the customer-generator to the distribution utility in response to a distribution utility request for information; or

c. Circumstances beyond the control of the distribution utility that prevent the

utility from responding within the time limits established by this section.

(q) The distribution utility shall notify the customer-generator as soon as reasonably possible of any required information not included in the customer-generator's interconnection application filing, but not later than 30 days following filing of an application that the customer-generator indicates is complete.

(r) If the distribution utility has not met the applicable deadline for responding to a completed application pursuant to (m) above and has not petitioned for an extension pursuant to (o) and (p) above, the customer-generator may:

- (1) Contact the distribution utility and commission and request resolution; or
- (2) File a complaint with the commission.

(s) Prior to operation, during normal business hours, the customer-generator shall:

- (1) Provide the distribution utility the opportunity to inspect the unit; and
- (2) Upon request, demonstrate to the distribution utility the operation of the unit.

(t) The distribution utility shall interconnect with any customer-generator which:

- (1) Receives electric service from the distribution utility;
- (2) Has completed the application process required by this section; and
- (3) Has installed a net energy metering system that complies with the interconnection and technical specification requirements of Puc 900.

(u) Facilities that meet the interconnection requirements of Puc 900 shall not be required by the distribution utility to meet additional requirements, perform or pay for additional tests, or pay additional interconnection-related charges, unless as otherwise provided.

(v) Nothing in (u) above shall prohibit a party from petitioning the commission, pursuant to Puc 201.05, as to any net energy metered facility, to require additional interconnection requirements, performance of or payment for additional tests, or payment of additional interconnection-related charges.

(w) A net metered customer-generator, a distribution company or an electricity supplier may install additional controls or meters or conduct additional tests, beyond those required by Puc 900, but if entry to the customer-generator's premises is necessary, shall first obtain consent to access the premises pursuant to Puc 908.03.

(x) The expenses associated with the additional tests, meters, and/or equipment described in (l) above shall be borne by the party desiring the additional tests, meters and/or equipment.

(y) For facilities larger than 25 kW, the distribution utility shall require a site specific interconnection review that may require additional protective equipment and may exceed the 75 day time frame by up to an additional 60 days.

Puc 904.06 Upgrades or Changes in the Net Metering System.

(a) The customer-generator shall provide the distribution utility with a written update of any of the information required to be provided on the interconnection application as any changes occur.

(b) The customer-generator shall re-certify to their distribution utility the applicable certifications required by Puc 904.05(c) and (d), when any of the following occurs:

- (1) The generation capacity is increased or its source is changed;
- (2) Any key component of the system, such as the inverter, is replaced or upgraded;
or
- (3) The relays for a non-inverter system, are replaced, rewired or upgraded.

Puc 904.07 Insurance

(a) The customer-generator shall not be required by the distribution utility or electricity supplier to purchase or maintain property insurance or comprehensive personal liability insurance to protect against potential liability resulting from the installation, operation or ownership of the generation and interconnection facility.

PART Puc 905 TECHNICAL REQUIREMENTS FOR INTERCONNECTION FOR FACILITIES

Puc 905.01 ~~Facilities or Less May Opt for No~~ Requirements for Disconnect Switches.

(a) No facility which connects to the electric grid by means of a single-phase or three-phase inverter that complies with Puc 906.01 shall be required to install and maintain a manual disconnect switch for utility use, unless:

- (1) The customer-generator's revenue meter is not routinely accessible to the utility;
- (2) The facility uses multiple inverters connected in series; or
- (3) The utility connection is through a transformer rated meter.

(b) For purposes of this section, a “transformer rated meter” means a meter panel or switchboard employing the use of potential and current transformers.

(bc) If the distribution utility finds it necessary for scheduled maintenance of which the customer-generator has received reasonable notice or in an emergency situation, to disconnect from the electric grid a customer-generator who does not maintain a manual disconnect switch for utility use, the utility may do so by:

- (1) Pulling the customer-generator’s meter;
- (2) Disconnecting the customer-generator’s service at the site transformer; or
- (3) Executing any other reasonable method of disconnection.

(ed) If the customer-generator has been notified of a scheduled maintenance or other event requiring disrupting generation or service, as an alternative to having his or her service disconnected, and upon agreement of the distribution utility, the customer-generator or their representative may be present at the scheduled time of disruption of service and demonstrate to the utility representative that generation has been isolated from the utility grid and remains isolated for the duration of the required period.

(de) If the customer-generator schedules a meeting with the distribution utility for disconnection of the system, as described in (c) above, and the customer-generator does not meet at the scheduled time, the distribution utility may disconnect the service as provided in (b) above.

(ef) If the customer-generator does not install a manual disconnect device accessible to the utility, the customer-generator:

- (1) Shall assume all risks and consequences associated with the loss of power to the customer-generator’s premises during any period when the distribution utility is required to disconnect the customer-generator’s electric service; and
- (2) Acknowledges that the service disconnection shall interrupt all electric service to the customer-generator site.

(fg) Any customer-generator may agree to install a manual disconnect device accessible to the distribution utility.

(gh) If the customer-generator elects not to install a disconnect switch for use by the distribution utility, the customer-generator shall install a warning label, to be provided by their distribution utility, on or near their service meter location.

Puc 905.02 Disconnect Switch.

~~—— (a) A facility that elects to install a manual disconnect switch for utility use shall meet the following requirements:~~

~~(1) The disconnect switch shall be an external, manual, visible, gang-operated, load-break disconnecting switch;~~

~~(2) The customer-generator shall purchase, install, own, and maintain the disconnect switch;~~

~~(3) The disconnect switch shall be located between the power-producing equipment and its interconnection point with the distribution utility system;~~

~~(4) The disconnect switch shall meet applicable standards established by Underwriters Laboratories, American National Standards Institute, the National Electrical Code and Institute of Electrical and Electronic Engineers;~~

~~(5) The disconnect switch shall be clearly marked, “Generator Disconnect Switch”, with permanent letters 3/8 inch or larger;~~

~~(6) The disconnect switch shall be located at a location on the property of the customer-generator mutually agreeable to the customer-generator and the distribution utility;~~

~~(7) The disconnect switch shall be readily accessible for operation and locking by distribution utility personnel; and~~

~~(8) The disconnect switch must be lockable in the open position with a standard padlock with a 3/8 inch shank.~~

~~(ba)~~ For purposes of this section, a “gang operated” switch, means a switch in which the separate switches for each phase are operated as a group from a single control.

(b) A facility that elects to install a manual disconnect switch for utility use shall meet the following requirements:

(1) The disconnect switch shall be an external, manual, visible, gang-operated, load break disconnecting switch;

(2) The customer-generator shall purchase, install, own, and maintain the disconnect switch;

(3) The disconnect switch shall be located between the power producing equipment and its interconnection point with the distribution utility system;

(4) The disconnect switch shall meet applicable standards established by Underwriters Laboratories, American National Standards Institute, the National Electrical Code and Institute of Electrical and Electronic Engineers;

(5) The disconnect switch shall be clearly marked, “Generator Disconnect Switch”, with permanent letters 3/8 inch or larger;

(6) The disconnect switch shall be located at a location on the property of the customer-generator mutually agreeable to the customer-generator and the distribution utility;

(7) The disconnect switch shall be readily accessible for operation and locking by distribution utility personnel; and

(8) The disconnect switch must be lockable in the open position with a standard padlock with a 3/8 inch shank.

Puc 905.03 Configuration of the Transformer Serving the Customer-Generator’s Generation Site.

(a) The existing site transformer serving the customer-generator load may be used if its use will not significantly degrade the power quality or voltage regulation on the secondary distribution system and if such usage will not create problems for distribution utility system relaying.

(b) For single phase distributed generators connected to 4-wire multi-grounded neutral systems, the high side of the step-up transformer shall be connected phase to neutral.

(c) A phase to phase high side connection shall be allowed if it does not degrade power quality or voltage regulation on the distribution system.

(d) For single phase distributed generators connected to ~~three~~3 wire or ~~four~~4 wire impedance grounded systems, the step-up transformer high-side winding shall be connected phase to phase.

(e) For ~~3~~3-phase distributed generators connected to 4-wire multi-grounded distribution systems, the step-up transformer may be an existing grounded-wye to grounded-wye transformer. “-Wye” as used in this section, means the configuration in which one end of each transformer winding is connected to a common point and the other to its appropriate line terminal, resembling the letter "Y".

(f) In cases as described in the paragraph above, the generator shall be impedance grounded as necessary to achieve effective grounding but limit the desensitization of the distribution utility system ground fault relaying.

(g) The generation system site shall be impedance grounded, as described in (f) above, if necessary, in a manner adequate to assure that the unit does not:

(1) Significantly degrade the power quality or voltage regulation on the distribution system;

(2) Create significant safety problems; or

(3) Create problems for distribution utility system relaying.

(h) To guard against over voltages on the unfaulted phases of a ~~three~~³-phase utility primary, if the transformer serving the customer-generator site is ungrounded, over voltage protection shall be used ~~to: which is designed to d~~

(1) Detect a situation where the utility has tripped due to a phase to ground fault, and the connected ungrounded generator ~~may might~~ not yet have tripped, and ~~to~~

(2) Trip the generator at high speed.

~~(i) "Wye" as used in this section, means the configuration in which one end of each transformer winding is connected to a common point and the other to its appropriate line-terminal, resembling the letter "Y".~~

(i) The cost of any improvements necessary to the site transformer serving the net metered facility shall be borne according to the distribution utility's approved tariff on file with the commission.

Puc 905.04 ~~—~~ Initial Testing.

(a) After installation of the generation facility and before final approval and interconnection to the electric grid, the customer-generator shall, in addition to the certifications required in connection with the interconnection application, conduct a load-break test on the generator, as described in (b) below, to confirm that the anti-islanding controls are functioning.

(b) When conducting a load-break test, the customer-generator shall demonstrate that after the main disconnect switch or circuit breaker of the residence or building is opened, the generation unit shuts down within 2 seconds.

(c) If the generation unit fails to shut down within 2 seconds after conducting the test as

| provided in (b) above, the customer-generator shall inform its distribution utility.

| (d) The customer-generator shall provide an initial test on a non-inverter interfaced system, by demonstrating that:

- (1) The relays function as designed;
- (2) The relays have been calibrated to settings as provided by the distribution utility pursuant to Puc 907.01(f);
- (3) All key components of the system function as designed; and
- (4) The anti-islanding function of the unit works properly.

(e) The testing of the relays of a non-inverter interfaced system shall be conducted by an individual that:

- (1) Utilizes test equipment:
 - a. Necessary to adequately test the key components of the system;
 - b. That is calibrated within tolerances sufficient to assure accurate testing; and
 - c. That is calibrated with a frequency consistent with industry standards;
- (2) Has received the education and training necessary to conduct the sophisticated testing of relays and other components of a non-inverter based generator; and
- (3) Maintains any professional accreditation or certification necessary for the testing of this nature.

(f) The individual conducting the testing of a non-inverter based system required by this section shall, upon request, provide the distribution utility information on his or her background and credentials, and equipment, maintenance and calibration of the equipment sufficient to allow the utility to assess the individual's competence to undertake the required testing.

| (g) Upon request, the customer-generator shall allow the distribution utility to have a representative present for the initial or periodic testing required by this part.

Puc 905.05 Periodic Testing.

| (a) As to a generator facility which interfaces with the electric grid by an inverter, the ~~ECG~~ customer-generator shall, if requested to do so by its distribution utility, conduct a load-break test, as described in Puc 905.04(b), once per year after installation.

(b) As to a generator that interfaces with the electric grid by a non-inverter, the ~~ECG~~ customer-generator shall:

(1) Conduct a load-break test, as described in Puc 905.04, once per year after installation; and

(2) Verify the proper calibration and protective function of the components and systems of the generation unit, which shall include the testing prescribed by the unit manufacturer:

a. Once every 4 years or according to the schedule recommended by the manufacturer, whichever is more frequent, for facilities rated greater than 25 kW; or

b. Once every 4 years for facilities rated 25 kW or less.

(c) The testing of the calibration and protective function of the components and systems of a non-inverter interfaced system shall be conducted by an entity qualified as provided in Puc 905.04(e) and (f).

(d) The customer-generator shall:

(1) Create a written record of the dates and procedures for tests conducted pursuant to this section; and

(2) Maintain the written record of verification testing for inspection by the distribution utility for a period of 4 years from the date of the respective test.

Puc 905.06 Studies and Analysis.

(a) A distribution utility may conduct detailed load flow, voltage regulation, or short circuit coordination studies of the primary feeder if it determines that the addition of a net metered generation unit will push the aggregate capacity of distributed generation on the feeder to the threshold level, described in (b) and (c) below.

(b) The distribution utility may deem the threshold of concern for aggregate distributed generation as reached if:

(1) The lower of 7.5% of the peak feeder demand as measured at the substation or 20% of the peak feeder demand downstream of the point of interconnection is reached;

(2) More than one net metered unit is proposed to be installed on the same secondary shared by many customers; or

(3) Any other reasonable means, consistent with (1) or (2) above, of determining that a study is necessary.

(c) The distribution utility shall deem the threshold of concern for aggregate distributed generation as reached if it determines that the addition of the proposed generation unit poses a reasonable threat to the continued safety, reliability or power quality to any significant portion of the electric grid.

(d) The distribution utility shall absorb the cost within its rate base for any studies or analyses which it deems necessary to evaluate a proposed net energy metered system and/or the electric grid relative to such a system.

Puc 905.07 Payment for Upgrades or Improvements to the Electric Grid.

~~(a)~~ If an upgrade or an improvement to the electric grid up to the customer-generator's meter is necessary for the distribution utility to interconnect to the ~~ECG's customer-generator's~~ net energy metered system, the expense shall be borne according to the utility's approved tariff on file with the commission.

PART Puc 906 COMPLIANCE PATH FOR INVERTER UNITS

Puc 906.01 Inverter Requirements.

(d) A net energy metered project which connects to the electric grid by means of a single-phase or three-phase inverter shall be deemed to be compliant with the technical specifications for the generation unit itself, as established by Puc 900, if the unit complies with the minimum requirements set forth in the following national standards:

(1) The "IEEE Recommended Practice for Utility Interconnections ANSI/IEEE STD 1547" issued by the Institute of Electrical and Electronic Engineers, Inc., ~~Piscataway, New Jersey~~ New York, NY, ~~May~~ July, 2000~~03~~; and

(2) The "UL 1741, ~~Standard for Static Inverters and Charge Controllers for Use in Photovoltaic Power Systems~~ Standard for Inverters, Converters, Controllers with Interconnection System Equipment for Use with Distributed Generation Resources", issued by Underwriters Laboratories, Inc., of 333 Pfingsten Road, Northbrook, Illinois 60062, May, 2007~~;~~ and

(e) A net metered system shall be installed in accordance with the National Electrical Code, 2008, issued by the National Fire Protection Association, Quincy, Massachusetts;

PART Puc 907 COMPLIANCE PATH FOR GENERATION UNITS NOT USING AN INVERTER

Puc 907.01 Interconnection Requirements.

(a) Except as provided in (b) below, any net energy metered generation system which interfaces with the electric grid by means other than an inverter shall:

(1) Meet the following safety and service quality requirements:

a. The system shall not compromise the safety of the distribution utility personnel, the ~~ECG~~customer-generator or other customers on the electric grid;

b. The system shall have:

1. Adequate non-islanding protection;

~~42.~~ Utility-grade protective devices to separate the facility from the electric distribution system, including:

(i) Time over-frequency protection;

(ii) Time under-frequency protection;

(iii) Time over-voltage protection; and

(iv) Time under-voltage protection;

~~53.~~ Protection devices at the primary voltage level for ground fault and ground current contribution;

~~64.~~ Adequate short circuit interrupting devices; and

~~75.~~ Reliable power sources for shunt-tripped short circuit interrupting devices. and

c. The generation facility shall not reduce the quality of service on the electric distribution system, including voltage fluctuations, excessive voltage and current harmonic content; and

d. Facilities greater than 35 kW shall certify that they are in compliance with IEEE Standard 1547 for harmonics;

(2) Interface with the electric distribution system according to the following

requirements:

- a. The system shall synchronize with the primary voltage level on the distribution grid;
- b. The transformer winding connection to be used at the primary voltage interconnecting point shall be adequate to coordinate with the distribution grid;
- c. The generation facility shall synchronize with the electric grid; and
- d. The generation facility shall correct the power factor, if necessary;

(3) Not impair the quality of service standards maintained by the electric distribution system;

(4) Provide other protections and devices necessary, consistent with the requirements of this section, to assure safety, quality of service, reliability and power quality of the electric distribution system; and

(5) As to relays, use utility grade relays.

(b) A non-inverter based system shall be installed in accordance with the National Electrical Code, 2008, issued by the National Fire Protection Association, Quincy, Massachusetts.

(c) When seeking to interconnect with the distribution utility, the applicant shall provide the distribution utility the following:

(1) The interconnection application form required by Puc 904.02;

(2) Alternating current (AC) and direct current (DC) elementary and schematic diagrams describing the planned protection package; and

(3) A one-line diagram of the net energy metering system showing how the system protection shall be wired.

(d) The customer-generator shall provide for testing of the relays of the net energy metering system once the settings have been applied to confirm that they perform the intended function.

(e) As to the testing of relays described in (d) above:

(1) The testing shall be conducted by a individual qualified for testing as described in Puc 905.04(e) and (f); and

(2) The customer-~~generator~~ shall provide the distribution utility the opportunity to:

- a. Be present at and observe the testing; or
- b. Conduct the testing of the relays by a qualified utility representative.

(f) If the customer-~~generator~~ and the electric distribution utility cannot agree to the interconnection requirements, they shall file with the commission for review and determination.

(g) In determining interconnection requirements for a non-inverter system, the commission shall consider safety, reliability and power quality in the context of the legislative intent of RSA 362-A:9.

PART Puc 908 PROCEDURAL REQUIREMENTS FOR INTERCONNECTED UNITS

Puc 908.01 Emergencies, Maintenance.

(a) The customer-generator shall, during the period it operates as a customer-~~generator~~, provide the distribution utility a current telephone number(s).

(b) The distribution utility shall make arrangements for routine utility repairs or inspections that ~~may~~might involve the net energy metered system during normal business hours.

(c) The customer-generator shall not supply power to the electric distribution grid during any outages of the distribution system that serves the customer-generator.

(d) The customer-~~s-generator's~~ generating facility may be operated during outages referred to in (b) above only with an open tie to the distribution utility.

(e) The customer-~~s-generator's~~ generating facility shall not:

- (1) Create an islanding situation on the grid; or
- (2) Energize a de-energized utility circuit for any reason.

Puc 908.02 Procedures for Disconnection.

(a) When an emergency condition, described in (b) below, exists and when it is necessary under the circumstances to do so, the distribution utility may disconnect the customer-~~s-generator's~~ net energy metered system and electric service.

(b) An emergency condition shall have occurred when the interconnection represents a condition which:

(1) Is likely to result in imminent significant disruption of service to the distribution utility's customers;

(2) Is imminently likely to endanger life or property;

(3) Constitutes emergency or pre-emergency conditions on the utility system;

(4) Constitutes a hazardous condition; or

(5) Reveals that a protective device tampering has occurred on the customer-generator's generation facility.

(c) The distribution utility may open the disconnect switch or disconnect the customer-generator's service, as applicable, after notice to the customer-generator has been delivered and a reasonable time to correct the condition, consistent with the conditions, has elapsed, if:-

(1) The customer-generator has failed to make available records of required verification tests and, in the case of a non-inverter interfaced system, maintenance of its protective devices;

(2) The customer-generator's generation facility:

a. Impedes the normal use of distribution utility equipment or equipment belonging to other distribution utility customers in a negative manner; or

b. Impedes the normal quality of service of adjoining customers in a negative manner; or

(3) Has been modified so that it is not in compliance with Puc 900.

(d) When the customer-generator has corrected the problem and restored the system to compliance with Puc 900 and notifies the distribution utility of such compliance, the utility shall:

(1) Within 2 business days:

a. Provide written verification to the customer-generator of their compliance; or

b. Provide written notice to the customer-generator of the specifics of their continued non-compliance; and

(2) When the system is in compliance, reconnect or allow re-connection as soon as possible under the circumstances.

(e) The customer-generator may reconnect to the electric grid in coordination with the distribution utility, upon receipt of verification as provided in (d) above if the ECG, upon distribution utility request or otherwise, disconnected itself from the grid.

(f) If the distribution utility disconnects the customer's-generator's net metering system for one of the emergency conditions referred to in (a) above, it shall notify the customer-generator of the disconnection:

(1) Within 24 hours of the disconnection; or

(2) As soon as possible in circumstances where a widespread emergency or other significant extenuating circumstances preclude utility personnel contacting the customer-generator within the 24 hour period.

(g) If the emergency referred to in (a) above was not caused by the net metered system, then the distribution utility shall reconnect the system upon cessation of the emergency.

(h) Notwithstanding any special notification and re-connection requirements for customer-generators established by Puc 908, the distribution utility shall not be required to provide for special notification or re-connection for a customer-generator that differs from its usual and regular policies and protocol in a disconnection situation, if:

(1) The disconnection is not for reasons associated with the net metered system; and

(2) The distribution utility does not open the customer's-generator's disconnect switch or pull the customer's-generator's meter.

(i) If the emergency referred to in (a) above was caused by the net metered system, then the distribution utility shall communicate the nature of the problem to the customer-generator within 5 days, and attempt to resolve the issue with the customer-generator.

(j) Within 30 days of the disconnection referred to in (h) above, the distribution utility shall file a disconnection petition with the commission if the distribution utility and the customer-generator have not reached a mutually agreed-upon resolution.

(k) Non-emergency disconnections of the net metered system by a distribution utility shall follow the same process as emergency disconnections of such systems, except that the utility shall:

(1) Give the customer-generator no less than 5 working days' prior notice of the disconnection; and

(2) Communicate in the notice to the customer-generator the reasons for the disconnection.

(l) If the net metered system is not the reason for the disconnection, the distribution utility shall reconnect the system as soon as the activity, such as line maintenance, necessitating the disconnection, ceases.

(m) When a utility disconnects the metering system of a customer-generator, the customer-generator may file a complaint with the commission at any time after disconnection.

(n) If a disconnection complaint is filed with the commission, it shall hold a hearing on the matter within 30 days and rule on whether the net metering system has violated a condition necessary for it to operate.

(o) In any hearing as referred to in (m) above, the disconnecting utility shall carry the burden of proof.

(p) A customer-generator shall not re-close a disconnect device which has been opened and tagged by its distribution utility or attempt to re-install a pulled meter without the prior permission of the distribution utility, or in the event of a dispute, the commission.

(q) A customer-generator shall be allowed to disconnect the net energy metered generation from the distribution utility without prior notice in order to self-generate but shall notify the distribution utility as soon as practical following disconnection.

Puc 908.03 Distribution Utility Access to Net Metered System.

(a) The distribution utility may inspect the net energy metered system at its own expense at a time mutually agreeable to the customer-~~generator~~ upon reasonable notice to the ~~eligible-owner~~customer-generator.

(b) Except in emergency circumstances, the distribution utility shall provide not less than 5 business days notice to the customer-generator to enter the customer-generator's property to inspect the net metered system, install additional controls or meters or conduct additional tests.

(c) A customer-generator shall not withhold allowing access to the distribution utility to inspect the net metered system, install additional controls or meters or conduct additional tests.

Puc 908.04 Complaints and Investigations.

(a) The procedures set forth in Puc 200 shall be applicable to filing and resolution of any complaint and investigation arising out of Puc 900.

(b) Any party may file with the commission a complaint or request for resolution of a dispute relating to Puc 900.

Puc 908.05 Notifying Public of Net Energy Metering.

(a) When a customer initiates an inquiry and requests information on net energy metering, the distribution utility shall provide a copy of Puc 900 to the customer and- the name and telephone number of a contact person(s) at the utility and a description of net energy metering.

(b) The distribution utility shall provide to each customer in a billing insert or a billing message in the customer bill stating a brief description of the availability of net energy metering of one paragraph or more in length.

(c) The distribution utility shall provide the information described in (b) above at annual intervals.

Puc 908.06Violations of Authorization to Interconnect.

(a) After notice and an opportunity for a hearing, the commission shall revoke, suspend, or condition the authorization for a customer-generator to interconnect a net energy metered system, or take such other action consistent with the above that it deems provident if it finds good cause.

(b) Good cause, as referred to in (a) above shall exist if the commission finds one or more of the following:

(1) The customer-generator was granted authority to operate based on false or misleading information supplied by the applicant which:

a. Is material; and

b. The applicant knew or should have known was false or misleading;

(2) The system was not installed or is not being operated substantially in accordance with the National Electrical Code or applicable interconnection requirements;

(3) The customer-generator has failed to comply with the conditions of approval to operate or representations made in their filing for approval to operate; or

(4) Other conditions, consistent with (1) through (3) above, exist which the commission finds necessitates revocation, suspension or placing conditions on the authorization to interconnect.

(c) In determining the consequences of its finding in (a) above, the commission shall consider the following:

(1) The severity of the consequences resulting from the violation such that the more

severe the infraction, the more severe the consequence;

(2) Mitigating circumstances, such as how quickly the customer-generator took action to rectify the situation, how much control the customer-generator had over the situation, and other circumstance which would tend to lessen fault; and

(3) Prior violations of Puc 900.

Puc 908.07 Utilities shall Report Number and Size of Net Energy Metered Units.

(a) Each distribution utility shall:

(1) Track the number and size of net energy metered systems on their lines;

(2) Report to the commission annually by April 1 of each year for the prior year, the following as regards net energy metered units:

a. The number of units operating;

b. The generation output rating of the units in kilowatts; and

c. The total capacity of units' generation output operating on the utility's distribution system relative to the 1.0% of annual peak energy demand limitation mandated by RSA 362-A:9,I; and

(3) Notify the commission within 10 business days when the distribution utility has reached the 1.0% of its annual peak energy demand limit mandated by RSA 362-A:9,I.

Puc 908.08 Existing Systems Grandfathered.

(a) Net energy metering systems that have been interconnected with the distribution utility with the knowledge of the distribution utility as of the initial effective date of Puc 900 shall:

(1) Be deemed to be registered; and

(2) Not be required, due to the adoption of Puc 900, to:

a. Re-apply for interconnection pursuant to Puc 904; or

b. Upgrade to meet the applicable requirements for interconnection of Puc 905, the requirements for inverter units of Puc 906, or the requirements for non-inverters of Puc 907.

(b) The grandfathered systems referred to in (a) above shall comply with the procedural requirements for interconnected units contained in Puc 908.

(c) A customer-generator may repair his or her net energy metered system that is grandfathered under (a) above, such as by repairing relays in a non-inverter system, but if a customer-generator changes the inverter or adds to the generation output or otherwise upgrades or alters the system as provided in Puc 904.05, the customer-generator shall update the qualifications of the system as provided in Puc 904.05.

(d) The distribution utility or electricity supplier may request and the customer-generator shall provide, as to any system grandfathered under this section, the information required in connection with the interconnection application form set forth in Puc 904.02, and the customer-generator shall, without request, update such information as it may change.

(e) A generation system that has been interconnected with its distribution utility prior to the initial adoption of Puc 900 without the knowledge of the distribution utility shall not be grandfathered for purposes of this section.

Puc 908.09 Relationship to Other Commission Rules

(a) Unless otherwise specified, Puc 900 shall not supersede any other rule of the commission but, supplement such rules.

Puc 908.10 Transferability.

(a) An customer-generator's certificate to operate a net metered system shall transfer to the new owner when the property with the net metered system is sold or otherwise conveyed, if the new owner provides the distribution utility in writing:

(1) Any changed information provided in connection with the interconnection application described in Puc 904.02; and

(2) An agreement to operate and maintain the net metering system according to Puc 900, RSA 362-A and other applicable requirements.

(b) The distribution utility shall not deny a new owner acquiring a currently duly registered net energy metering facility, which otherwise complies with the requirements of Puc 900, the right to register, as long as the new owner complies with (a) above.

(c) The new customer-generator owner, as described in (a) and (b) above, shall notify the distribution utility of the transfer and of the applicable information required by the interconnection application in Puc 904.02.

(d) Transfers of a net metered facility as described in the section shall not be construed as exiting from the system and Puc 902.03(j) shall not apply to any such transfer.

(e) If any change or upgrade in a system would otherwise require new approval pursuant to Puc 904.05, mere ownership transfer shall not relieve the customer-generator from the requirement.

APPENDIX

Rule(s)	State Statue (RSA)
Puc 900 (other specific statute provisions implemented by specific rules are listed below)	RSA 362-A:9,V
Puc 904.02	RSA 541-A:16,I(b)
Puc 908.03	RSA 365:8,I
Puc 908.05	RSA 541-A:30,II
Puc 908.06	RSA 374:15

Simplified Process Interconnection Application and Service Agreement

Contact Information: Date Prepared: _____

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

Customer or Company Name (print): _____ Contact Person, if Company: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____ (Evening): _____

Facsimile Number: _____ E-Mail Address: _____

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

Name: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____ (Evening): _____

Facsimile Number: _____ E-Mail Address: _____

Electrical Contractor Contact Information (if appropriate):

Name: _____ Telephone: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

License No. _____

Facility Information:

Address of Facility: _____

City: _____ State: _____ Zip Code: _____

License No. _____

Electric Utility Company: _____ Account Number: _____ Meter Number: _____

Competitive Electric Supplier (if not supplied by local electric utility) _____ Account No. _____

Inverter Manufacturer: _____ Model Name and Number: _____ Quantity: _____

Nameplate Rating: _____ (kW) _____ (kVA) _____ (AC Volts) Single _____ or Three _____ Phase

System Design Capacity: _____ (kVA) _____ (kVA)

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 _____

UL 1741.1 (IEEE 1547.1) Listed? Yes _____ No _____

Estimated Install Date: _____ Estimated In-Service Date: _____

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 on the following page:

Interconnecting Customer Signature: _____ Title: _____ Date: _____

Please attach any documentation provided by the inverter manufacturer describing the inverter's UL 1741 listing.

Approval to Install Facility (For Company use only)

Installation of the Facility is approved contingent upon the terms and conditions of this Agreement, and agreement to any system modifications, if required (Are system modifications required? Yes ___ No ___ To be Determined ___):

Company Signature: _____ Title: _____ Date: _____

Company waives inspection/Witness Test? Yes ___ No ___

Application ID No.

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: _____

Address of Facility (if different from above): _____

City: _____ State: _____ Zip Code: _____

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: _____

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):

Name (printed): _____

Date: _____

As a condition of interconnection you are required to send/fax a copy of this form to (insert
Company's name below):

Name: _____

Company: _____

Mail 1: _____

Mail 2: _____

City, State ZIP: _____

Fax No.: _____

Readopt with Amendment Chapter Puc 900, effective 1-12-09 (Document # 9353) to read as follows:

**CHAPTER Puc 900 NET METERING FOR CUSTOMER-OWNED RENEWABLE
ENERGY GENERATION RESOURCES OF 100 KILOWATT OR LESS**

PART Puc 901 PURPOSE

Puc 901.01 Purpose. The purpose of Puc 900, pursuant to the mandate of RSA 362-A:9, is to establish reasonable interconnection requirements for safety, reliability and power quality for net energy metering as the public interest requires, and consistent with the legislative declaration of purpose set forth in RSA 362-A:1, in which the legislature found:

(a) It to be in the public interest to provide for small scale and diversified sources of supplemental electrical power to lessen the state's dependence upon other sources which may, from time to time, be uncertain;

(b) It to be in the public interest to encourage and support diversified electrical production that uses indigenous and renewable fuels and has beneficial impacts on the environment and public health; and

(c) That net energy metering for eligible customer-generators may be one way to provide a reasonable opportunity for small customers to choose interconnected self generation, encourage private investment in renewable energy resources, stimulate in-state commercialization of innovative and beneficial new technology, enhance the future diversification of the state's energy resource mix, and reduce interconnection and administrative costs.

PART Puc 902 DEFINITIONS

Puc 902.01 “Customer-generator” means “eligible customer-generator” as defined in RSA 362-A:1-a, II-b, namely an electric utility customer who owns and operates electrical generating facilities powered by renewable energy with a total peak generating capacity of not more than 100 kilowatts (kW) that is located on the customer’s premises, is interconnected and operates in parallel with the electric grid, and is intended primarily to offset part or all of the customer’s own electricity requirements.

Puc 902.02 “Distribution utility” means the company that owns and/or operates the distribution facilities delivering electricity to the customer-generator’s premises.

Puc 902.03 “Electric utility customer” as used in the definition of “customer-generator” means any residential, commercial or industrial ratepayer of a distribution utility.

Puc 902.04 “Electricity suppliers” means “electricity suppliers” as defined in RSA 374-F:2, II, namely “suppliers of electricity generation services and includes actual electricity generators

and brokers, aggregators, and pools that arrange for the supply of electricity generation to meet retail customer demand, which may be municipal or county entities.”

Puc 902.05 “Generation capacity” means, for inverter based units, the kilowatt rating of the inverter, and for other interconnections, the kilowatt rating of the generation unit.

Puc 902.06 “Islanding” means a condition in which a portion of the utility system that contains both load and dispersed generation is isolated from the remainder of the utility system.

Puc 902.07 “Net energy metering” means “net energy metering” as defined in RSA 362-A:1, III-a, namely, “measuring the difference between the electricity supplied over the electric distribution system and the electricity generated by an eligible customer-generator which is fed back into the electric distribution system over a billing period.

Puc 902.08 “Renewable energy” means electricity produced by renewable resources including geothermal, tidal or wave, wind, solar, landfill gas, hydro, biomass, bio-oil, bio-synthetic gas and biodiesel resources.

Puc 902.09 “Witness test” means the process used by the electric utility following the interconnection of a customer-generator’s generation facility to determine whether the interconnection affects the safety, reliability or power quality of the distribution system.

PART Puc 903 CONDITIONS TO INTERCONNECTION

Puc 903.01 General Rules, Rights and Obligations.

(a) Any distribution utility and any electricity supplier operating within the state of New Hampshire shall, upon request, provide net energy metering to customer-generators pursuant to Puc 900 and RSA 362-A:9.

(b) A distribution utility shall comply with Puc 900 in a non-discriminatory manner and shall not unreasonably withhold its permission to interconnect an customer-generator’s generating facility.

(c) Any electricity supplier operating within New Hampshire that is not the default service provider shall offer net metering pursuant to Puc 900 but may provide for rates and terms as provided in RSA 362-A:9, III and Puc 903.02(i).

(d) Any customer-generator who engages in net energy metering in New Hampshire shall comply with Puc 900.

(e) A customer-generator shall comply with:

- (1) Applicable commission-approved rules, tariffs and terms and conditions of the distribution utility not in conflict with Puc 900; and
 - (2) Any local, state or federal law, statute or regulation which applies to the design, siting, construction, installation, operation, or any other aspect of the customer-generator's generating and interconnection facility.
- (f) Interconnection with the distribution utility under Puc 900 shall not authorize a customer-generator to utilize the distribution utility's electric distribution system for the transmission or distribution of electric power.
- (g) The distribution utility shall have the right to review the design of a customer-generator's generating and interconnection facility and to inspect such facility prior to the commencement of operation.
- (h) The distribution utility may require a customer-generator to make modifications to its facility as necessary to comply with the requirements of Puc 900.
- (i) The distribution utility's review and authorization for operation shall not be construed as confirming or endorsing the customer-generator's design or as warranting the generating or interconnection facility's safety, durability or reliability.
- (j) The distribution utility shall not, by reason of such review or lack of review, be responsible for the strength, adequacy, or capacity of such facility's equipment.
- (k) A customer-generator's generating and interconnection facilities shall be reasonably accessible to the distribution utility personnel as necessary for the distribution utility to perform its duties and exercise its rights under its tariffs and terms and conditions filed with and approved by the commission, and Puc 900.
- (l) Any information pertaining to generating or interconnection facility provided to a distribution utility by a customer-generator shall be treated by the distribution utility in a confidential manner.
- (m) A customer-generator shall operate and maintain its generating and interconnection facility in a manner that is as safe, dependable and efficient as practicable.

Puc 903.02 Statutory and Other Requirements.

- (a) Electric distribution utilities shall make net energy metering available to customer-generators, pursuant to RSA 362-A:9 and Puc 900.
- (b) Eligibility for net energy metering shall be available on a first-come, first-served basis within each distribution utility service area under the jurisdiction of the commission until such

time as the total rated generating capacity owned and operated by customer-generators totals 1.0 percent of the annual peak energy demand distributed by each such distribution utility as determined by the commission from time to time, pursuant to RSA 362-A:9.

(c) Net energy metering shall be accomplished using a single meter capable of registering the flow of electricity in two directions, pursuant to RSA 362-A:9.

(d) Notwithstanding (c) above, an additional meter or meters to monitor the flow of electricity in each direction may be installed, provided that it is not at the expense of the customer-generator unless requested by the customer-generator.

(e) If the output of the customer-generator's facility will be measured for the purposes of recording renewable energy output under RSA 362-F:A, a second meter measuring the flow of electricity from the facility may be installed at the customer-generator's expense.

(f) If an additional meter or meters are installed, as described in (d) above, the net energy metering calculation shall yield the same result as when a single meter is used, pursuant to RSA 362-A:9.

(g) The net energy metering calculation shall be made by taking the difference between the electricity supplied over the electric distribution system and the electricity generated by the customer-generator and fed back into the electric distribution system over the billing period, pursuant to RSA 362-A:9.

(h) Each electric distribution utility shall, pursuant to RSA 362-A:9, offer net energy metering to each customer-generator on terms which shall be identical, with respect to rates, rate structure, and periodic charges, to the contract or tariff to which the same customer-generator would be assigned if such customer-generator was not a customer-generator.

(i) Electricity suppliers may voluntarily determine the terms, conditions, and prices under which they will agree to provide generation supply to and purchase net generation output from customer-generators, however, electricity suppliers who provide default energy service to such a customer-generator shall only bill for the net energy supplied as calculated in accordance with (h) above, pursuant to RSA 362-A:9.

(j) Pursuant to RSA 362-A:9, the following shall apply to net energy measurement:

(1) The net energy produced or consumed on a monthly basis shall be measured in accordance with normal metering practices;

(2) Where the electricity supplied to the customer-generator over the electric distribution system exceeds the electricity generated by the customer-generator during the billing period, the customer-generator shall be billed based on the net energy supplied for distribution services and other charges in accordance with this

section and standard applicable rates; and

(3) Where the electricity generated by the customer-generator exceeds the electricity supplied by the electric grid, the customer-generator shall be credited over subsequent billing periods for the excess kilowatt hours generated in accordance with this section.

(k) Upon exit from the net energy metering system, there shall be no payment or credit to a customer-generator for any remaining excess generation.

(l) The commission shall waive any provision of Puc 900 or RSA 362-A after notice and an opportunity for a hearing, if it determines that waiver of the applicable statute or rule section is a net energy metering arrangement that is part of a utility strategy to minimize distribution costs, pursuant to RSA 362-A:9.

(m) The commission shall consider any request for a waiver, whether filed pursuant to (l) above or otherwise, pursuant to Puc 201.05, titled waiver of rules.

PART Puc 904 INTERCONNECTION APPLICATION PROCESS

Puc 904.01 Pre-application Review.

(a) Before purchasing or installing net energy metering equipment, a customer-generator may request that the customer-generator's distribution utility informally review the proposed project and provide information on:

(1) Whether the customer-generator's distribution utility is under the cap established by RSA 362-A:9,I;

(2) Whether the customer-generator's generation facility and electric grid interface unit, in the opinion of the distribution utility, is likely to comply with the requirements of Puc 900; and

(3) Whether the customer-generator is in an area or service location which is likely to require any upgrade or study.

(b) At the pre-application stage the distribution utility shall provide the customer-generator its best evaluation, given the information it has available, but shall not be required to conduct a study or elaborate review of the project.

Puc 904.02 Interconnection Application.

(a) To initiate the process to engage in net energy metering, a customer-generator shall file with its distribution utility and, if applicable, its electricity supplier, an interconnection

application form.

(b) When filing an application with the distribution utility, to obtain evidence of the filing and the date of filing, the applicant shall:

- (1) File the application by certified mail; or
- (2) Obtain a dated acknowledgment of receipt from the distribution utility; or
- (3) Obtain written or electronic verification of receipt from the distribution utility by other means consistent with (1) and (2) above.

(c) The interconnection application form shall include the following:

(1) Applicant information which shall include:

- a. The customer-generator's name;
- b. The customer-generator's full mailing address
- c. The facility location, if different from above;
- d. The customer-generator's daytime and evening telephone numbers;
- e. The information provided in a., b., and d. above for an alternative contact person when the customer-generator is unavailable;
- f. The name of the local distribution utility and the customer-generator's account number; and
- g. If different than the distribution utility, the name of the customer-generator's electricity supplier and the customer-generator's account number;

(2) Generating facility information, including:

- a. The generator type, whether solar, wind, hydro or other renewable source as listed in RSA 362-F:4, I, (a) through (f) ;
- b. The generator manufacturer, model name and number;
- c. The number of phases of the unit, whether single or 3-phase;
- d. The power rating of the generation output of the system in kilowatts;

- e. If applicable, the inverter manufacturer, model name and number;
- f. Whether a battery backup will be used or not; and
- g. Whether an exterior manual disconnect switch for utility use shall be installed, if the generation output of the unit is less than or equal to 10 kilowatts in size; and

(3) Installation information and certification, which shall include:

- a. Whether the generator shall be owner installed;
- b. The installation date;
- c. The anticipated interconnection date;
- d. The name, complete address, telephone number and license number of the installing electrician, if applicable;
- e. The name and company affiliation of the vendor selling the generator to the customer-generator;
- f. The signature, with the date of signature, of the vendor, certifying that the system hardware is in compliance with Puc 900;
- g. Certification, if applicable, that the system has been installed in compliance with the local municipal building and electrical codes in the form of:
 - 1. A signed and dated certificate by the applicable local code official; or
 - 2. A copy of a signed and dated final inspection certificate from the municipality; and
- h. A signed and dated certification by the customer-generator that:
 - 1. The customer-generator has installed and shall operate the generation system in compliance with applicable electrical standards;
 - 2. The initial start-up test required by Puc 905.04 has been successfully completed; and
 - 3. To the best of the customer-generator's knowledge, all of the information contained in the interconnection notice is true and correct; and

i. Responses to the questions posed in Puc 904.01.

(d) A customer-generator may submit an interconnection application to its distribution utility when the customer-generator's facility has not been fully installed and tested, but shall:

(1) Provide in writing in connection with the interconnection application a description of any manner in which the facility is not fully connected, tested or is not yet otherwise in compliance;

(2) Fulfill any unmet requirements prior to interconnecting; and

(3) Upon completion of unmet interconnection requirements, provide the distribution utility with any necessary updated written certifications required by this part.

(e) The distribution utility shall not interconnect the facility until all requirements pursuant to (d) above are met.

(f) Upon request, the distribution utility shall provide the customer-generator written confirmation that the interconnection application has been received and the date of receipt as follows:

(1) When the application is filed in person, immediately; or

(2) When the application is filed by mail or other means, within 10 business days of receipt, with written acknowledgement that states that:

a. The application is complete; or

b. That the application is incomplete and what information is necessary to complete the requirements.

(g) When the distribution utility provides a receipt for an application it may clarify that the receipt acknowledges the date and fact of a filing, but not the approval of the filing.

(h) A sample interconnection application form is set forth in appendix II to Puc 900.

Puc 904.03 Mutual Indemnity Provision.

(a) Unless both parties to the agreement have agreed, pursuant to (g) below, to not enter into or maintain the mutual indemnity agreement, prior to interconnection, the customer-generator, his or her distribution utility, and, if applicable, the customer-generator's electricity supplier shall:

- (1) Execute the mutual indemnity agreement described in (b) below; and
- (2) Maintain the terms of the agreement while the net energy metered unit is interconnected.

(b) With regard to the mutual indemnity agreement, each party to the agreement shall provide as follows:

(1) 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;

(2) Neither party shall be indemnified by the agreement for any loss, liability, damage, or expense resulting from its sole negligence or willful misconduct; and

(3) Notwithstanding the indemnity provisions contained in the agreement, 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.

(c) The mutual indemnity agreement shall become effective as between the respective parties executing and exchanging the document, upon interconnection of the customer-generator to the electric grid and mutual execution and exchange of the document by the distribution utility, the customer-generator and, if applicable, the electricity supplier.

(d) The distribution utility shall also execute the mutual indemnity agreement described in this section.

(e) The customer-generator, distribution utility, and, if applicable, the electricity supplier, shall each execute duplicate originals of the mutual indemnity agreement set forth in (b) above and each party to the agreement shall retain one executed original of the agreement.

(f) If an electricity supplier sells electric power to the customer-generator, it may require that the customer-generator enter into a mutual indemnity agreement with it, as described in this

section.

(g) Notwithstanding (c) through (f) above, the customer-generator and the distribution utility with whom he or she interconnects and/or the electricity supplier of the customer-generator, separately or together, may at any time, by mutual agreement, elect not to enter into or to void the indemnity agreement set forth in (b) above.

(h) The provisions of the indemnity agreement described in this section shall not be construed to relieve any insurer of its obligations to pay any insurance claims in accordance with the provisions of any valid insurance policy.

Puc 904.04 Application Completeness Review.

(a) The interconnection process shall be deemed as beginning when the customer-generator submits a complete application pursuant to this part.

(b) The distribution utility shall evaluate the application for completeness and notify the customer-generator in writing within 10 business days of the application's receipt whether the application is or is not complete and, if the application is not complete, inform the customer-generator in writing what information is missing.

(c) The distribution utility shall verify that the customer-generator's facility equipment passes the requirements of Puc 905.

(d) If the distribution utility approves the application, the distribution utility shall sign the application and return the approved application to the customer-generator.

(e) If the distribution utility determines that interconnection of the customer generation facility would jeopardize the safety, reliability or power quality of the local distribution system, the distribution utility shall require the customer-generator to pay for necessary modifications to the distribution system before the application is approved.

(f) In the event that the distribution utility requires the customer-generator to pay for system modifications pursuant to (e) above, the distribution utility shall provide the customer-generator a description of work and an estimate of the cost for approval.

(g) If the customer-generator agrees to pay for the system modifications, the customer-generator shall sign the description of the work and submit a signed copy and the payment of the estimated costs to the distribution utility.

(h) Upon receipt of the customer-generator's approval and payment, the distribution utility shall perform the system modifications.

(i) Upon completion of the system modifications, the distribution utility shall sign the application approval and provide a copy of the signed approval to the customer-generator.

Puc 904 05. Installation and Interconnection of Facility

(a) Upon receipt of an application signed by the distribution utility, the customer-generator may install the generating facility.

(b) Following installation of the facility, the customer-generator shall arrange for inspection of the completed installation by the local building inspector or, if one is not available, a New Hampshire licensed electrician.

(c) The person who inspects the installation pursuant to (b) above shall sign a certificate of completion.

(d) If the facility was installed by an electrical contractor, the customer-generator shall also have the contractor complete a certificate of completion.

(e) When the customer-generator has the signatures pursuant to (c) and (d) above, the customer-generator shall provide the distribution utility with a copy of the certificates of completion.

(f) Following receipt of the certificate(s) of completion, the distribution utility may inspect the customer-generator's facility for compliance with standards by arranging for a witness test.

(g) Until a witness test has been performed, the customer-generator shall have no right to operate in parallel unless a witness test has been previously waived by the distribution utility on the application form.

(h) If the distribution utility elects to conduct a witness test, the distribution utility will attempt to conduct it within 10 business days of the receipt of the certificate of completion.

(i) All projects larger than 10 kW shall be subject to a witness test unless the distribution utility has waived the witness test on the application form.

(j) If the witness test shows that the facility is appropriately installed and functioning without jeopardizing the safety, reliability or power quality of the distribution system, the distribution utility shall notify the customer-generator in writing that the interconnection is authorized.

(k) If the witness test results indicate that the facility installation jeopardizes the safety, reliability or power quality of the distribution system, the distribution utility shall disconnect the facility provided that the distribution utility inform the customer-generator in writing what

actions are required to mitigate the safety, reliability or power quality issues along approval of the facility interconnection.

(l) If the customer-generator does not substantially complete construction within 12 months after receiving application approval from the distribution utility, the distribution utility shall require the customer-generator to reapply for interconnection.

(m) As to a generating facility up to 25 kW that does not interface with the electric grid by means of an inverter, the distribution utility shall have a period of 75 days from the initial filing of the interconnection application to:

- (1) Assess the proposed system and the customer-generator's site characteristics;
- (2) Communicate with the customer-generator regarding adequate protective interface devices; and
- (3) Allow the applicant to interconnect or provide the customer-generator specific written reasons for objecting to interconnection.

(n) If the customer-generator and the distribution utility agree that the application reasonably requires more time before the distribution utility responds as provided in (m)) above, as applicable, they may agree to extend the deadline for response.

(o) Except as provided in (n) above, if the distribution utility is not able to respond to the applicant within the 10 day review period for inverter based systems or 75 day review period for non-inverter based systems and the customer-generator does not agree to an extension of the response time, the distribution utility shall:

- (1) Notify the commission and the customer-generator in writing no later than the expiration of the relevant period;
- (2) Petition the commission for an extension of a specified length; and
- (3) Cite the specific reasons why the deadline was not met and the basis for the length of the requested extension.

(p) The commission shall grant an extension for review of the application for the shortest time reasonable, if any, if it determines that it is necessary to provide the distribution utility additional time to assess the effect of the proposal on safety, reliability or power quality of the electric distribution system in light of:

- (1) The complexity of the characteristics of the site;
- (2) The complexity of the proposed generation and interconnection facilities; or

(3) Delay occasioned by:

- a. Failure of the customer-generator to timely provide the distribution utility information necessary to assess the potential impact of the system on safety, reliability or power quality of the electric grid;
- b. Untimely response by the customer-generator to the distribution utility in response to a distribution utility request for information; or
- c. Circumstances beyond the control of the distribution utility that prevent the utility from responding within the time limits established by this section.

(q) The distribution utility shall notify the customer-generator as soon as reasonably possible of any required information not included in the customer-generator's interconnection application filing, but not later than 30 days following filing of an application that the customer-generator indicates is complete.

(r) If the distribution utility has not met the applicable deadline for responding to a completed application pursuant to (m) above and has not petitioned for an extension pursuant to (o) and (p) above, the customer-generator may:

- (1) Contact the distribution utility and commission and request resolution; or
- (2) File a complaint with the commission.

(s) Prior to operation, during normal business hours, the customer-generator shall:

- (1) Provide the distribution utility the opportunity to inspect the unit; and
- (2) Upon request, demonstrate to the distribution utility the operation of the unit.

(t) The distribution utility shall interconnect with any customer-generator which:

- (1) Receives electric service from the distribution utility;
- (2) Has completed the application process required by this section; and
- (3) Has installed a net energy metering system that complies with the interconnection and technical specification requirements of Puc 900.

(u) Facilities that meet the interconnection requirements of Puc 900 shall not be required by the distribution utility to meet additional requirements, perform or pay for additional tests, or pay additional interconnection-related charges, unless as otherwise provided.

(v) Nothing in (u) above shall prohibit a party from petitioning the commission, pursuant to Puc 201.05, as to any net energy metered facility, to require additional interconnection requirements, performance of or payment for additional tests, or payment of additional interconnection-related charges.

(w) A net metered customer-generator, a distribution company or an electricity supplier may install additional controls or meters or conduct additional tests, beyond those required by Puc 900, but if entry to the customer-generator's premises is necessary, shall first obtain consent to access the premises pursuant to Puc 908.03.

(x) The expenses associated with the additional tests, meters, and/or equipment described in (l) above shall be borne by the party desiring the additional tests, meters and/or equipment.

(y) For facilities larger than 25 kW, the distribution utility shall require a site specific interconnection review that may require additional protective equipment and may exceed the 75 day time frame by up to an additional 60 days.

Puc 904.06 Upgrades or Changes in the Net Metering System.

(a) The customer-generator shall provide the distribution utility with a written update of any of the information required to be provided on the interconnection application as any changes occur.

(b) The customer-generator shall re-certify to their distribution utility the applicable certifications required by Puc 904.05(c) and (d), when any of the following occurs:

- (1) The generation capacity is increased or its source is changed;
- (2) Any key component of the system, such as the inverter, is replaced or upgraded;
or
- (3) The relays for a non-inverter system, are replaced, rewired or upgraded.

Puc 904.07 Insurance

(a) The customer-generator shall not be required by the distribution utility or electricity supplier to purchase or maintain property insurance or comprehensive personal liability insurance to protect against potential liability resulting from the installation, operation or ownership of the generation and interconnection facility.

PART Puc 905 TECHNICAL REQUIREMENTS FOR INTERCONNECTION FOR FACILITIES

Puc 905.01 Requirements for Disconnect Switches.

(a) No facility which connects to the electric grid by means of a single-phase or three-phase inverter that complies with Puc 906.01 shall be required to install and maintain a manual disconnect switch for utility use, unless:

- (1) The customer-generator's revenue meter is not routinely accessible to the utility;
- (2) The facility uses multiple inverters connected in series; or
- (3) The utility connection is through a transformer rated meter.

(b) For purposes of this section, a "transformer rated meter" means a meter panel or switchboard employing the use of potential and current transformers.

(c) If the distribution utility finds it necessary for scheduled maintenance of which the customer-generator has received reasonable notice or in an emergency situation, to disconnect from the electric grid a customer-generator who does not maintain a manual disconnect switch for utility use, the utility may do so by:

- (1) Pulling the customer-generator's meter;
- (2) Disconnecting the customer-generator's service at the site transformer; or
- (3) Executing any other reasonable method of disconnection.

(d) If the customer-generator has been notified of a scheduled maintenance or other event requiring disrupting generation or service, as an alternative to having his or her service disconnected, and upon agreement of the distribution utility, the customer-generator or their representative may be present at the scheduled time of disruption of service and demonstrate to the utility representative that generation has been isolated from the utility grid and remains isolated for the duration of the required period.

(e) If the customer-generator schedules a meeting with the distribution utility for disconnection of the system, as described in (c) above, and the customer-generator does not meet at the scheduled time, the distribution utility may disconnect the service as provided in (b) above.

(f) If the customer-generator does not install a manual disconnect device accessible to the utility, the customer-generator:

- (1) Shall assume all risks and consequences associated with the loss of power to the customer-generator's premises during any period when the distribution utility is required to disconnect the customer-generator's electric service; and

(2) Acknowledges that the service disconnection shall interrupt all electric service to the customer-generator site.

(g) Any customer-generator may agree to install a manual disconnect device accessible to the distribution utility.

(h) If the customer-generator elects not to install a disconnect switch for use by the distribution utility, the customer-generator shall install a warning label, to be provided by their distribution utility, on or near their service meter location.

Puc 905.02 Disconnect Switch.

(a) For purposes of this section, a “gang operated” switch means a switch in which the separate switches for each phase are operated as a group from a single control.

(b) A facility that elects to install a manual disconnect switch for utility use shall meet the following requirements:

(1) The disconnect switch shall be an external, manual, visible, gang-operated, load break disconnecting switch;

(2) The customer-generator shall purchase, install, own, and maintain the disconnect switch;

(3) The disconnect switch shall be located between the power producing equipment and its interconnection point with the distribution utility system;

(4) The disconnect switch shall meet applicable standards established by Underwriters Laboratories, American National Standards Institute, the National Electrical Code and Institute of Electrical and Electronic Engineers;

(5) The disconnect switch shall be clearly marked, “Generator Disconnect Switch”, with permanent letters 3/8 inch or larger;

(6) The disconnect switch shall be located at a location on the property of the customer-generator mutually agreeable to the customer-generator and the distribution utility;

(7) The disconnect switch shall be readily accessible for operation and locking by distribution utility personnel; and

(8) The disconnect switch must be lockable in the open position with a standard

padlock with a 3/8 inch shank.

Puc 905.03 Configuration of the Transformer Serving the Customer-Generator's Generation Site.

(a) The existing site transformer serving the customer-generator load may be used if its use will not significantly degrade the power quality or voltage regulation on the secondary distribution system and if such usage will not create problems for distribution utility system relaying.

(b) For single phase distributed generators connected to 4-wire multi-grounded neutral systems, the high side of the step-up transformer shall be connected phase to neutral.

(c) A phase to phase high side connection shall be allowed if it does not degrade power quality or voltage regulation on the distribution system.

(d) For single phase distributed generators connected to 3 wire or 4 wire impedance grounded systems, the step-up transformer high-side winding shall be connected phase to phase.

(e) For 3-phase distributed generators connected to 4-wire multi-grounded distribution systems, the step-up transformer may be an existing grounded-wye to grounded-wye transformer. "Wye" as used in this section, means the configuration in which one end of each transformer winding is connected to a common point and the other to its appropriate line terminal, resembling the letter "Y".

(f) In cases as described in the paragraph above, the generator shall be impedance grounded as necessary to achieve effective grounding but limit the desensitization of the distribution utility system ground fault relaying.

(g) The generation system site shall be impedance grounded, as described in (f) above, if necessary, in a manner adequate to assure that the unit does not:

(1) Significantly degrade the power quality or voltage regulation on the distribution system;

(2) Create significant safety problems; or

(3) Create problems for distribution utility system relaying.

(h) To guard against over voltages on the unfaulted phases of a 3-phase utility primary, if the transformer serving the customer-generator site is ungrounded, over voltage protection shall be used to:

(1) Detect a situation where the utility has tripped due to a phase to ground fault, and

the connected ungrounded generator might not yet have tripped and

(2) Trip the generator at high speed.

(i) The cost of any improvements necessary to the site transformer serving the net metered facility shall be borne according to the distribution utility's approved tariff on file with the commission.

Puc 905.04 Initial Testing.

(a) After installation of the generation facility and before final approval and interconnection to the electric grid, the customer-generator shall, in addition to the certifications required in connection with the interconnection application, conduct a load-break test on the generator, as described in (b) below, to confirm that the anti-islanding controls are functioning.

(b) When conducting a load-break test, the customer-generator shall demonstrate that after the main disconnect switch or circuit breaker of the residence or building is opened, the generation unit shuts down within 2 seconds.

(c) If the generation unit fails to shut down within 2 seconds after conducting the test as provided in (b) above, the customer-generator shall inform its distribution utility.

(d) The customer-generator shall provide an initial test on a non-inverter interfaced system, by demonstrating that:

(1) The relays function as designed;

(2) The relays have been calibrated to settings as provided by the distribution utility pursuant to Puc 907.01(f);

(3) All key components of the system function as designed; and

(4) The anti-islanding function of the unit works properly.

(e) The testing of the relays of a non-inverter interfaced system shall be conducted by an individual that:

(1) Utilizes test equipment:

a. Necessary to adequately test the key components of the system;

b. That is calibrated within tolerances sufficient to assure accurate testing; and

c. That is calibrated with a frequency consistent with industry standards;

- (2) Has received the education and training necessary to conduct the sophisticated testing of relays and other components of a non-inverter based generator; and
- (3) Maintains any professional accreditation or certification necessary for the testing of this nature.

(f) The individual conducting the testing of a non-inverter based system required by this section shall, upon request, provide the distribution utility information on his or her background and credentials, and equipment, maintenance and calibration of the equipment sufficient to allow the utility to assess the individual's competence to undertake the required testing.

(g) Upon request, the customer-generator shall allow the distribution utility to have a representative present for the initial or periodic testing required by this part.

Puc 905.05 Periodic Testing.

(a) As to a generator facility which interfaces with the electric grid by an inverter, the customer-generator shall, if requested to do so by its distribution utility, conduct a load-break test, as described in Puc 905.04(b), once per year after installation.

(b) As to a generator that interfaces with the electric grid by a non-inverter, the customer-generator shall:

(1) Conduct a load-break test, as described in Puc 905.04, once per year after installation; and

(2) Verify the proper calibration and protective function of the components and systems of the generation unit, which shall include the testing prescribed by the unit manufacturer:

a. Once every 4 years or according to the schedule recommended by the manufacturer, whichever is more frequent, for facilities rated greater than 25 kW; or

b. Once every 4 years for facilities rated 25 kW or less.

(c) The testing of the calibration and protective function of the components and systems of a non-inverter interfaced system shall be conducted by an entity qualified as provided in Puc 905.04(e) and (f).

(d) The customer-generator shall:

(1) Create a written record of the dates and procedures for tests conducted pursuant to this section; and

(2) Maintain the written record of verification testing for inspection by the distribution utility for a period of 4 years from the date of the respective test.

Puc 905.06 Studies and Analysis.

(a) A distribution utility may conduct detailed load flow, voltage regulation, or short circuit coordination studies of the primary feeder if it determines that the addition of a net metered generation unit will push the aggregate capacity of distributed generation on the feeder to the threshold level, described in (b) and (c) below.

(b) The distribution utility may deem the threshold of concern for aggregate distributed generation as reached if:

(1) The lower of 7.5% of the peak feeder demand as measured at the substation or 20% of the peak feeder demand downstream of the point of interconnection is reached;

(2) More than one net metered unit is proposed to be installed on the same secondary shared by many customers; or

(3) Any other reasonable means, consistent with (1) or (2) above, of determining that a study is necessary.

(c) The distribution utility shall deem the threshold of concern for aggregate distributed generation as reached if it determines that the addition of the proposed generation unit poses a reasonable threat to the continued safety, reliability or power quality to any significant portion of the electric grid.

(d) The distribution utility shall absorb the cost within its rate base for any studies or analyses which it deems necessary to evaluate a proposed net energy metered system and/or the electric grid relative to such a system.

Puc 905.07 Payment for Upgrades or Improvements to the Electric Grid.

If an upgrade or an improvement to the electric grid up to the customer-generator's meter is necessary for the distribution utility to interconnect to the customer-generator's net energy metered system, the expense shall be borne according to the utility's approved tariff on file with the commission.

PART Puc 906 COMPLIANCE PATH FOR INVERTER UNITS

Puc 906.01 Inverter Requirements.

(d) A net energy metered project which connects to the electric grid by means of a single-phase or three-phase inverter shall be deemed to be compliant with the technical specifications for the generation unit itself, as established by Puc 900, if the unit complies with the minimum requirements set forth in the following national standards:

- (1) The “IEEE Recommended Practice for Utility Interconnections ANSI/IEEE STD 1547” issued by the Institute of Electrical and Electronic Engineers, Inc., New York, NY, July, 2003; and
 - (2) The “UL 1741, Standard for Inverters, Converters, Controllers with Interconnection System Equipment for Use with Distributed Generation Resources”, issued by Underwriters Laboratories, Inc., of 333 Pfingsten Road, Northbrook, Illinois 60062, May, 2007.
- (e) A net metered system shall be installed in accordance with the National Electrical Code, 2008, issued by the National Fire Protection Association, Quincy, Massachusetts;

PART Puc 907 COMPLIANCE PATH FOR GENERATION UNITS NOT USING AN INVERTER

Puc 907.01 Interconnection Requirements.

(a) Except as provided in (b) below, any net energy metered generation system which interfaces with the electric grid by means other than an inverter shall:

(1) Meet the following safety and service quality requirements:

a. The system shall not compromise the safety of the distribution utility personnel, the customer-generator or other customers on the electric grid;

b. The system shall have:

1. Adequate non-islanding protection;

2. Utility-grade protective devices to separate the facility from the electric distribution system, including:

(i) Time over-frequency protection;

(ii) Time under-frequency protection;

(iii) Time over-voltage protection; and

(iv) Time under-voltage protection;

3. Protection devices at the primary voltage level for ground fault and

ground current contribution;

4. Adequate short circuit interrupting devices; and

5. Reliable power sources for shunt-tripped short circuit interrupting devices.

c. The generation facility shall not reduce the quality of service on the electric distribution system, including voltage fluctuations, excessive voltage and current harmonic content; and

d. Facilities greater than 35 kW shall certify that they are in compliance with IEEE Standard 1547 for harmonics;

(2) Interface with the electric distribution system according to the following requirements:

a. The system shall synchronize with the primary voltage level on the distribution grid;

b. The transformer winding connection to be used at the primary voltage interconnecting point shall be adequate to coordinate with the distribution grid;

c. The generation facility shall synchronize with the electric grid; and

d. The generation facility shall correct the power factor, if necessary;

(3) Not impair the quality of service standards maintained by the electric distribution system;

(4) Provide other protections and devices necessary, consistent with the requirements of this section, to assure safety, quality of service, reliability and power quality of the electric distribution system; and

(5) As to relays, use utility grade relays.

(b) A non-inverter based system shall be installed in accordance with the National Electrical Code, 2008, issued by the National Fire Protection Association, Quincy, Massachusetts.

(c) When seeking to interconnect with the distribution utility, the applicant shall provide the distribution utility the following:

(1) The interconnection application form required by Puc 904.02;

(2) Alternating current (AC) and direct current (DC) elementary and schematic diagrams describing the planned protection package; and

(3) A one-line diagram of the net energy metering system showing how the system protection shall be wired.

(d) The customer-generator shall provide for testing of the relays of the net energy metering system once the settings have been applied to confirm that they perform the intended function.

(e) As to the testing of relays described in (d) above:

(1) The testing shall be conducted by a individual qualified for testing as described in Puc 905.04(e) and (f); and

(2) The customer-generator shall provide the distribution utility the opportunity to:

a. Be present at and observe the testing; or

b. Conduct the testing of the relays by a qualified utility representative.

(f) If the customer-generator and the electric distribution utility cannot agree to the interconnection requirements, they shall file with the commission for review and determination.

(g) In determining interconnection requirements for a non-inverter system, the commission shall consider safety, reliability and power quality in the context of the legislative intent of RSA 362-A:9.

PART Puc 908 PROCEDURAL REQUIREMENTS FOR INTERCONNECTED UNITS

Puc 908.01 Emergencies, Maintenance.

(a) The customer-generator shall, during the period it operates as a customer-generator, provide the distribution utility a current telephone number(s).

(b) The distribution utility shall make arrangements for routine utility repairs or inspections that might involve the net energy metered system during normal business hours.

(c) The customer-generator shall not supply power to the electric distribution grid during any outages of the distribution system that serves the customer-generator.

(d) The customer-generator's generating facility may be operated during outages referred to in (b) above only with an open tie to the distribution utility.

(e) The customer-generator's generating facility shall not:

- (1) Create an islanding situation on the grid; or
- (2) Energize a de-energized utility circuit for any reason.

Puc 908.02 Procedures for Disconnection.

(a) When an emergency condition, described in (b) below, exists and when it is necessary under the circumstances to do so, the distribution utility may disconnect the customer-generator's net energy metered system and electric service.

(b) An emergency condition shall have occurred when the interconnection represents a condition which:

- (1) Is likely to result in imminent significant disruption of service to the distribution utility's customers;
- (2) Is imminently likely to endanger life or property;
- (3) Constitutes emergency or pre-emergency conditions on the utility system;
- (4) Constitutes a hazardous condition; or
- (5) Reveals that a protective device tampering has occurred on the customer-generator's generation facility.

(c) The distribution utility may open the disconnect switch or disconnect the customer-generator's service, as applicable, after notice to the customer-generator has been delivered and a reasonable time to correct the condition, consistent with the conditions, has elapsed, if:

- (1) The customer-generator has failed to make available records of required verification tests and, in the case of a non-inverter interfaced system, maintenance of its protective devices;
- (2) The customer-generator's generation facility:
 - a. Impedes the normal use of distribution utility equipment or equipment belonging to other distribution utility customers in a negative manner; or
 - b. Impedes the normal quality of service of adjoining customers in a negative manner; or
- (3) Has been modified so that it is not in compliance with Puc 900.

(d) When the customer-generator has corrected the problem and restored the system to compliance with Puc 900 and notifies the distribution utility of such compliance, the utility shall:

(1) Within 2 business days:

- a. Provide written verification to the customer-generator of their compliance; or
- b. Provide written notice to the customer-generator of the specifics of their continued non-compliance; and

(2) When the system is in compliance, reconnect or allow re-connection as soon as possible under the circumstances.

(e) The customer-generator may reconnect to the electric grid in coordination with the distribution utility, upon receipt of verification as provided in (d) above if the ECG, upon distribution utility request or otherwise, disconnected itself from the grid.

(f) If the distribution utility disconnects the customer-generator's net metering system for one of the emergency conditions referred to in (a) above, it shall notify the customer-generator of the disconnection:

(1) Within 24 hours of the disconnection; or

(2) As soon as possible in circumstances where a widespread emergency or other significant extenuating circumstances preclude utility personnel contacting the customer-generator within the 24 hour period.

(g) If the emergency referred to in (a) above was not caused by the net metered system, then the distribution utility shall reconnect the system upon cessation of the emergency.

(h) Notwithstanding any special notification and re-connection requirements for customer-generators established by Puc 908, the distribution utility shall not be required to provide for special notification or re-connection for a customer-generator that differs from its usual and regular policies and protocol in a disconnection situation, if:

(1) The disconnection is not for reasons associated with the net metered system; and

(2) The distribution utility does not open the customer-generator's disconnect switch or pull the customer-generator's meter.

(i) If the emergency referred to in (a) above was caused by the net metered system, then the distribution utility shall communicate the nature of the problem to the customer-generator within 5 days, and attempt to resolve the issue with the customer-generator.

(j) Within 30 days of the disconnection referred to in (h) above, the distribution utility shall file a disconnection petition with the commission if the distribution utility and the customer-generator have not reached a mutually agreed-upon resolution.

(k) Non-emergency disconnections of the net metered system by a distribution utility shall follow the same process as emergency disconnections of such systems, except that the utility shall:

(1) Give the customer-generator no less than 5 working days' prior notice of the disconnection; and

(2) Communicate in the notice to the customer-generator the reasons for the disconnection.

(l) If the net metered system is not the reason for the disconnection, the distribution utility shall reconnect the system as soon as the activity, such as line maintenance, necessitating the disconnection, ceases.

(m) When a utility disconnects the metering system of a customer-generator, the customer-generator may file a complaint with the commission at any time after disconnection.

(n) If a disconnection complaint is filed with the commission, it shall hold a hearing on the matter within 30 days and rule on whether the net metering system has violated a condition necessary for it to operate.

(o) In any hearing as referred to in (m) above, the disconnecting utility shall carry the burden of proof.

(p) A customer-generator shall not re-close a disconnect device which has been opened and tagged by its distribution utility or attempt to re-install a pulled meter without the prior permission of the distribution utility, or in the event of a dispute, the commission.

(q) A customer-generator shall be allowed to disconnect the net energy metered generation from the distribution utility without prior notice in order to self-generate but shall notify the distribution utility as soon as practical following disconnection.

Puc 908.03 Distribution Utility Access to Net Metered System.

(a) The distribution utility may inspect the net energy metered system at its own expense at a time mutually agreeable to the customer-generator upon reasonable notice to the customer-generator.

(b) Except in emergency circumstances, the distribution utility shall provide not less than 5

business days notice to the customer-generator to enter the customer-generator's property to inspect the net metered system, install additional controls or meters or conduct additional tests.

(c) A customer-generator shall not withhold allowing access to the distribution utility to inspect the net metered system, install additional controls or meters or conduct additional tests.

Puc 908.04 Complaints and Investigations.

(a) The procedures set forth in Puc 200 shall be applicable to filing and resolution of any complaint and investigation arising out of Puc 900.

(b) Any party may file with the commission a complaint or request for resolution of a dispute relating to Puc 900.

Puc 908.05 Notifying Public of Net Energy Metering.

(a) When a customer initiates an inquiry and requests information on net energy metering, the distribution utility shall provide a copy of Puc 900 to the customer and the name and telephone number of a contact person(s) at the utility and a description of net energy metering.

(b) The distribution utility shall provide to each customer in a billing insert or a billing message in the customer bill stating a brief description of the availability of net energy metering of one paragraph or more in length.

(c) The distribution utility shall provide the information described in (b) above at annual intervals.

Puc 908.06 Violations of Authorization to Interconnect.

(a) After notice and an opportunity for a hearing, the commission shall revoke, suspend, or condition the authorization for a customer-generator to interconnect a net energy metered system, or take such other action consistent with the above that it deems provident if it finds good cause.

(b) Good cause, as referred to in (a) above shall exist if the commission finds one or more of the following:

(1) The customer-generator was granted authority to operate based on false or misleading information supplied by the applicant which:

a. Is material; and

b. The applicant knew or should have known was false or misleading;

(2) The system was not installed or is not being operated substantially in accordance with the National Electrical Code or applicable interconnection requirements;

(3) The customer-generator has failed to comply with the conditions of approval to operate or representations made in their filing for approval to operate; or

(4) Other conditions, consistent with (1) through (3) above, exist which the commission finds necessitates revocation, suspension or placing conditions on the authorization to interconnect.

(c) In determining the consequences of its finding in (a) above, the commission shall consider the following:

(1) The severity of the consequences resulting from the violation such that the more severe the infraction, the more severe the consequence;

(2) Mitigating circumstances, such as how quickly the customer-generator took action to rectify the situation, how much control the customer-generator had over the situation, and other circumstance which would tend to lessen fault; and

(3) Prior violations of Puc 900.

Puc 908.07 Utilities shall Report Number and Size of Net Energy Metered Units.

(a) Each distribution utility shall:

(1) Track the number and size of net energy metered systems on their lines;

(2) Report to the commission annually by April 1 of each year for the prior year, the following as regards net energy metered units:

a. The number of units operating;

b. The generation output rating of the units in kilowatts; and

c. The total capacity of units' generation output operating on the utility's distribution system relative to the 1.0% of annual peak energy demand limitation mandated by RSA 362-A:9,I; and

(3) Notify the commission within 10 business days when the distribution utility has reached the 1.0% of its annual peak energy demand limit mandated by RSA 362-A:9,I.

Puc 908.08 Existing Systems Grandfathered.

(a) Net energy metering systems that have been interconnected with the distribution utility with the knowledge of the distribution utility as of the initial effective date of Puc 900 shall:

(1) Be deemed to be registered; and

(2) Not be required, due to the adoption of Puc 900, to:

a. Re-apply for interconnection pursuant to Puc 904; or

b. Upgrade to meet the applicable requirements for interconnection of Puc 905, the requirements for inverter units of Puc 906, or the requirements for non-inverters of Puc 907.

(b) The grandfathered systems referred to in (a) above shall comply with the procedural requirements for interconnected units contained in Puc 908.

(c) A customer-generator may repair his or her net energy metered system that is grandfathered under (a) above, such as by repairing relays in a non-inverter system, but if a customer-generator changes the inverter or adds to the generation output or otherwise upgrades or alters the system as provided in Puc 904.05, the customer-generator shall update the qualifications of the system as provided in Puc 904.05.

(d) The distribution utility or electricity supplier may request and the customer-generator shall provide, as to any system grandfathered under this section, the information required in connection with the interconnection application form set forth in Puc 904.02, and the customer-generator shall, without request, update such information as it may change.

(e) A generation system that has been interconnected with its distribution utility prior to the initial adoption of Puc 900 without the knowledge of the distribution utility shall not be grandfathered for purposes of this section.

Puc 908.09 Relationship to Other Commission Rules

(a) Unless otherwise specified, Puc 900 shall not supersede any other rule of the commission but, supplement such rules.

Puc 908.10 Transferability.

(a) An customer-generator's certificate to operate a net metered system shall transfer to the new owner when the property with the net metered system is sold or otherwise conveyed, if the new owner provides the distribution utility in writing:

(1) Any changed information provided in connection with the interconnection application described in Puc 904.02; and

(2) An agreement to operate and maintain the net metering system according to Puc 900, RSA 362-A and other applicable requirements.

(b) The distribution utility shall not deny a new owner acquiring a currently duly registered net energy metering facility, which otherwise complies with the requirements of Puc 900, the right to register, as long as the new owner complies with (a) above.

(c) The new customer-generator owner, as described in (a) and (b) above, shall notify the distribution utility of the transfer and of the applicable information required by the interconnection application in Puc 904.02.

(d) Transfers of a net metered facility as described in the section shall not be construed as exiting from the system and Puc 902.03(j) shall not apply to any such transfer.

(e) If any change or upgrade in a system would otherwise require new approval pursuant to Puc 904.05, mere ownership transfer shall not relieve the customer-generator from the requirement.

APPENDIX

Rule(s)	State Statute (RSA)
Puc 900 (other specific statute provisions implemented by specific rules are listed below)	RSA 362-A:9,V
Puc 904.02	RSA 541-A:16,I(b)
Puc 908.03	RSA 365:8,I
Puc 908.05	RSA 541-A:30,II
Puc 908.06	RSA 374:15

Simplified Process Interconnection Application and Service Agreement

Contact Information:

Date Prepared: _____

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

Customer or Company Name (print): _____ Contact Person, if Company: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____ (Evening): _____

Facsimile Number: _____ E-Mail Address: _____

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

Name: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____ (Evening): _____

Facsimile Number: _____ E-Mail Address: _____

Electrical Contractor Contact Information (if appropriate):

Name: _____ Telephone: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

License No. _____

Facility Information:

Address of Facility: _____

City: _____ State: _____ Zip Code: _____

License No. _____

Electric Utility Company: _____ Account Number: _____ Meter Number: _____

Competitive Electric Supplier (if not supplied by local electric utility) _____ Account No. _____

Inverter Manufacturer: _____ Model Name and Number: _____ Quantity: _____

Nameplate Rating: _____ (kW) _____ (kVA) _____ (AC Volts) Single _____ or Three _____ Phase

System Design Capacity: _____ (kVA) _____ (kVA)

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 _____

UL 1741.1 (IEEE 1547.1) Listed? Yes _____ No _____

Estimated Install Date: _____ Estimated In-Service Date: _____

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 on the following page:

Interconnecting Customer Signature: _____ Title: _____ Date: _____

Please attach any documentation provided by the inverter manufacturer describing the inverter's UL 1741 listing.

Approval to Install Facility (For Company use only)

Installation of the Facility is approved contingent upon the terms and conditions of this Agreement, and agreement to any system modifications, if required (Are system modifications required? Yes ___ No ___ To be Determined ___):

Company Signature: _____ Title: _____ Date: _____

Company waives inspection/Witness Test? Yes ___ No ___

Application ID No.

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: _____

Address of Facility (if different from above): _____

City: _____ State: _____ Zip Code: _____

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: _____

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):

Name (printed): _____

Date: _____

As a condition of interconnection you are required to send/fax a copy of this form to (insert Company's name below):

Name: _____

Company: _____

Mail 1: _____

Mail 2: _____

City, State ZIP: _____

Fax No.: _____