N.H. Code of Admin. Rules, Puc 903.02 (i)

Puc 903.02 Statutory and Other Requirements

(i) Unless an electric distribution utility elects otherwise as provided in paragraph (k) below, and except as may be provided otherwise pursuant to paragraph (p) below, the commission shall annually determine the rates for utility avoided costs for energy and capacity consistent with the requirements of the Public Utilities Regulatory Policy Act of 1978 (PURPA) (16 USC § 824a-3 and 18 CFR § 292.304) and as set forth below:

(1) On or before April 15 of each year, the commission shall publish on its website its calculation of the rates for avoided costs of energy and capacity for the previous year ending March 31 to be used by utilities to calculate the economic value of surplus net metered generation for the previous year which may be paid or credited starting in the May billing cycle, along with supporting calculations, an explanation of assumptions and data sources, and estimated portions of annual surplus generated during the hour or hours used to calculate avoided capacity costs pursuant to (6) and (7) below (capacity factors) if actual hourly surplus generation data is not used for such calculation pursuant to (5) below;

(2) The rates for avoided energy costs shall be based on the short-term avoided energy costs for the New Hampshire load zone in the wholesale electricity market administered by ISO New England, Inc., consisting of the hourly real time locational marginal price (LMP) of electricity plus generation related ancillary service charges, all adjusted for the average line loss in New Hampshire between the wholesale metering point and the retail metering point;

(3) The rate for the avoided generation related capacity costs shall be based on the applicable ISO New England, Inc. Forward Capacity Market (FCM) price for the power year most closely matching the 12 months ending in the March billing cycle. The avoided FCM price shall be adjusted to account for any peak energy rent payments made from the energy market that reduce direct capacity

costs charged to load and for average line loss in New Hampshire between the wholesale metering point and the retail metering point. Such adjusted price shall be used to determine the rate for avoided capacity costs in dollars per kW to be used by utilities to calculate the value of generation capacity associated with surplus generation on a customer by customer basis. If there is more than one hour in each power year on which ISO New England, Inc. allocates FCM costs to load, the commission shall structure the rate proportionally to ISO New England, Inc.'s allocation of such costs;

(4) In determining the customer specific value of avoided capacity costs each utility shall multiply the quantity (in kW) of each customer-generator's surplus generation fed into the distribution grid at the hour or hours of capacity peak on which the FCM costs are allocated to load, whether actual, pursuant to (5) below, or estimated, pursuant to (6) or (7) below, as applicable, by the rate or rates determined by the commission pursuant to (1) and (3) above;

(5) If hourly meter data is available for a customer-generator's net meter and the utility has the technical capability to utilize that data for avoided cost calculations, the utility, at its election by written notice to the commission on or before May 1 of each year, shall calculate the value of avoided capacity costs or avoided energy costs, or both, for each such customer-generator using actual hourly surplus generation data. The value of avoided energy costs shall be individually calculated by weighting the actual avoided energy costs for each hour of the 12 months ending the immediately preceding March 31, as determined by the commission pursuant to (1) and (2) above, by the actual hourly surplus electricity fed into the distribution system in each hour for the same period to determine a customer-specific average rate for the energy value of net surplus generation;

(6) For all types of net metered systems other than solar photovoltaic (PV) systems, and for which actual hourly data is not utilized pursuant to (5) above:

a. The rate for avoided energy costs shall be calculated by using a simple average of hourly cost data from ISO New England, Inc. for the 12 months ending the immediately preceding March 31, assuming that surplus generation is, on average, equally distributed over all hours of the year; and

b. The portion of surplus generation estimated to be produced during the hour or hours of capacity peak on which FCM costs are allocated to load shall be equal to the number of such hours divided by 8760;

(7) For net metered PV systems for which actual hourly data is not utilized pursuant to (5) above, the rate for avoided energy costs shall be calculated as a weighted average annual rate by weighting the actual avoided costs for each hour of the 12 months ending the immediately preceding March 31 by the hourly generation output profile for PV systems in New Hampshire determined as follows:

a. If verifiable hourly generation output data is available and on file at the commission by April 5 for the applicable year from at least 25 kW of PV system capacity operating within New Hampshire, then the output profile for PV systems shall be the hourly average of all such data; or

b. If such data is not available the hourly generation output profile shall be the modeled hourly PV performance data output produced by the U.S. Department of Energy, National Renewable Energy Laboratory, PVWatts software, version 1, (available at http://www.nrel.gov/rredc/pvwatts/site_specific.html) with the default settings for Concord, New Hampshire; and

c. The portion of surplus generation estimated to be produced during the hour or hours of capacity peak on which FCM costs are allocated to load shall be in the same proportion as the output profile utilized pursuant to (7) a. or b. above.

220 CMR 8.00: SALE OF ELECTRICITY BY QUALIFYING FACILITIES AND ON-SITE GENERATING FACILITIES TO DISTRIBUTION COMPANIES, AND SALES OF ELECTRICITY BY DISTRIBUTION COMPANIES TO QUALIFYING FACILITIES AND ON-SITE GENERATING FACILITIES

Section

8.01: Purpose and Scope

(1) Purpose: 220 CMR 8.00 establishes regulations governing the rates, terms, and conditions of sales of electricity by qualifying facilities and on-site generating facilities to distribution companies. Similarly, 220 CMR 8.00 establishes regulations governing the rates, terms, and conditions of sales of electricity by distribution companies to qualifying facilities and on-site generating facilities. 220 CMR 8.00 also establishes regulations:

(a) for the interconnection of qualifying facilities and on-site generating facilities to distribution company systems;
(b) for the metering of qualifying facilities and on-site generating facilities; and
(c) regarding payment to qualifying facilities and on-site generating facilities.
220 CMR 8.00 implements the provisions of the Public Utility Regulatory Policies Act of 1978 (PURPA), Title II, Sections 201 and 210, and regulations promulgated by the Federal Energy Regulatory Commission (FERC) in 18 C.F.R. 292 (Section 292).

(2) Scope.

(a) 220 CMR 8.00 applies to sales and purchases between qualifying facilities, on-site generating facilities, and distribution companies. Nothing in 220 CMR 8.00 limits the ability of any party to agree to rates, terms, or conditions of purchase which differ from the rates, terms, or conditions which would otherwise be required by 220 CMR 8.00.
(b) 220 CMR 8.00 addresses the distribution company's obligation to interconnect qualifying facilities and on-site generating facilities. 220 CMR 8.00 prescribes interconnection standards and assign cost responsibilities.
(c) 220 CMR 8.00 addresses metering requirements for qualifying facilities and on-site generating facilities.
(d) 220 CMR 8.00 addresses the payment method for qualifying facilities.
(e) 220 CMR 8.00 prescribes reporting requirements for distribution companies with respect to interconnected qualifying facilities and on-site generating facilities.

8.02: Definitions

Distribution Company means an electric utility company engaging in the distribution of electricity owning, operating, or controlling distribution facilities and subject to the ratemaking authority of the Department of Public Utilities (Department); provided, however, a distribution company shall not include any entity that owns or operates plant or equipment used to produce electricity, steam, and chilled water, or any affiliate engaged solely in the provision of such electricity, steam, and chilled water, where the electricity produced by such entity or its affiliate is primarily for the benefit of hospitals and non-profit educational institutions, and where such plant and equipment was in operation prior to January 1, 1986.

Distribution means the delivery of electricity over lines which operate at a voltage level typically equal to or greater than 110 volts and less than 69,000 volts to an end-use customer within the commonwealth.

8.02: continued

Distribution Facility means plant or equipment used for the distribution of electricity and which is not a transmission facility, a cogeneration facility, or a small power production facility.

Independent System Operator or ISO means ISO New England, Inc., authorized by the Federal Energy Regulatory Commission to operate the New England bulk power system and administer New England's organized wholesale electricity market pursuant to the ISO Tariff and operation agreements with transmission owners.

NEPOOL means the New England Power Pool, and its successors.

On-site Generating Facility means any plant or equipment that is used to produce, manufacture, or otherwise generate electricity and that is not a transmission facility and that has a design capacity of 60 KW or less.

Qualifying Facility means small power producers and cogenerators that meet the criteria specified by FERC in 18 C.F.R. §§ 292.203(a) and (b).

Short-run Rate means the hourly market clearing price for energy and the monthly market clearing price for capacity, as determined by the ISO and its successors.

Transmission means the delivery of power over lines that operate at a voltage level typically equal to or greater than 69,000 volts from generating facilities across interconnected high voltage lines to where it enters a distribution system.

Transmission Facility means plant or equipment used for the transmission of electricity, as determined by the FERC pursuant to federal law and regulation.

8.03: General Terms and Conditions

(1) Power Purchase Contracts.
(a) Nothing in 220 CMR 8.00 shall be construed to affect, modify or amend terms and conditions of any existing Qualifying Facility's contract.
(b) A Qualifying Facility may sell its generation output to a Distribution Company under one of the following arrangements:
1. A standard contract available to all Qualifying Facilities for sales at the Short-run Rate only; or
2. A negotiated contract executed by a Qualifying Facility and a Distribution Company.
(c) When a Qualifying Facility submits an offer to sell generation output to a Distribution Company, the Distribution Company must respond to the offer within 30 days of receipt of the offer. If, within 90 days of a Qualifying Facility submitting an offer to a Distribution Company, there is a failure to agree to terms, the Qualifying Facility may petition the Department to investigate the reasonableness of the Distribution Company's actions.

(2) Other General Terms and Conditions.
(a) Information, Rules, and Requirements. A Qualifying Facility shall comply with any and all applicable NEPOOL and ISO information requests, rules, and requirements that are necessary for a Qualifying Facility's generation output to be sold to the ISO power exchange by a Distribution Company. The Qualifying Facility shall provide such information to the Distribution Company in a timely manner.
(b) Fines, Penalties, Sanctions. In the event that a fine, penalty, or sanction is levied on a Distribution Company by NEPOOL or the ISO as a result of a Qualifying Facility's failure to comply with a NEPOOL or ISO information request, rule, or requirement, then the Qualifying Facility shall be responsible for the costs of such fines, penalties, or sanctions imposed by NEPOOL or the ISO on the Distribution Company.

8.04: Interconnection. Metering, and Payment

(1) Distribution Company Procedures for Interconnection, Metering, and Payment. Each Distribution Company shall file with the Department written procedures addressing provisions 220 CMR 8.04(2) through (9), within 60 days of the effective date of 220 CMR 8.00.

8.04: continued

(2) Inspection. At the request of a Qualifying Facility or an On-site Generating Facility, a Distribution Company shall conduct an initial site inspection of the proposed Qualifying Facility or On-site Generating Facility to determine the equipment necessary for protecting the Distribution Company's system, and, where necessary to estimate the cost of additional engineering studies that will be used to provide a more accurate assessment of interconnection costs. Such initial inspection shall be made within 45 days of the request by the Qualifying Facility or On-site Generating Facility at the Distribution Company's expense.

(3) Interconnection Cost Estimate. If a thorough estimate of interconnection costs cannot be determined after the initial site inspection, the Distribution Company shall provide a complete estimate of interconnection costs upon request by the Qualifying Facility or On-site Generating Facility. The cost of providing this estimate, including engineering studies where necessary, shall be paid by the Qualifying Facility or On-site Generating Facility to the Distribution Company. Each Distribution Company shall develop, for public review, written procedures for estimating interconnection costs. If the parties cannot reach an agreement on interconnection costs within 90 days of the Qualifying Facility's or the On-site Generating Facility's request for an estimate, the parties may petition the Department to review the reasonableness of the Distribution Company's interconnection cost estimate.

(4) Standards for Interconnection.

(a) All Qualifying Facility and On-site Generating Facility interconnections shall provide protection against the following:

1. Inadvertent and unwanted reenergization of a Distribution Company dead line or bus;
2. Interconnection while out of synchronization;
3. Ground faults and phase fault;
4. Frequency outside permissible limits; and
5. Voltage generated outside permissible limits.

(b) Protections proposed for implementation, in addition to those listed in 220 CMR 8.04(4)(a), require a thorough explanation, particularly if applicable to On-site Generating Facilities.

(c) The Qualifying Facility or On-site Generating Facility equipment must be compatible with the character of service supplied by the Distribution Company at the location of the Qualifying Facility or On-site Generating Facility.

(d) Prior to delivering power to a Distribution Company, the Qualifying Facility or On-site Generating Facility shall provide the Distribution Company with written certification by qualified personnel or from a qualified testing agency that protective devices and related equipment are installed and have been successfully tested.

(5) Distribution Company Right to Inspect. The Distribution Company has the right to periodically inspect, test, and certify in writing the accuracy of any metering equipment owned by the Qualifying Facility or the On-site Generating Facility. The Distribution Company has the right to periodically inspect, test, and certify in writing the Qualifying Facility's or the On-site Generating Facility's compliance with the protection standards described in 220 CMR 8.04(4)(a). The Distribution Company has the right to inspect and test the electrical interface at any time to certify its proper operation. There will be no charge to the Qualifying Facility or On-site Generating Facility for such inspections, tests, or certifications by the Distribution Company.

(6) Conditions for Interconnection.

(a) Distribution Company's Obligation to Interconnect. A Distribution Company is not required to interconnect with a Qualifying Facility or On-site Generating Facility until 90 days after the Qualifying Facility or On-Site Generating Facility has notified the Distribution Company in writing that it intends to interconnect with the Distribution Company's system. Upon notice to the Qualifying Facility or On-site Generating Facility and the Department, the Distribution Company may petition the Department for additional time when extensive modifications or additions to the Distribution Company transmission or distribution system are required to accommodate an interconnection. Additional time may also be granted by the Department if a petition under 220 CMR 8.03(1)(c) or 220 CMR 8.04(3) is before the Department. The Department, upon a petition by a Qualifying Facility or On-site Generating Facility, or on its own motion, may, after notice and public hearing, order a Distribution Company to interconnect with a Qualifying Facility or On-site Generating Facility in a timely manner.

8.04: continued

(b) Notice of Intent to Interconnect. A Qualifying Facility or On-site Generating Facility shall provide the following information, in writing, to the Distribution Company at the time it files its notice of intent to interconnect:

1. The name and address of the applicant and location of the Qualifying Facility or On-site Generating Facility;
2. A brief description of the type of Qualifying Facility or On-site Generating Facility, including a statement indicating whether such Qualifying Facility or On-site Generating Facility is a small power production facility or a cogeneration facility;
3. The primary energy source used or to be used by the Qualifying Facility or On-site Generating Facility;
4. The power production capacity of the Qualifying Facility or On-site Generating Facility and the maximum net energy that may be delivered to the Distribution Company's system;
5. The owners of the Qualifying Facility or On-site Generating Facility, including the percentage ownership by any electric utility or by any public utility holding company, or by any entity owned by either;
6. The expected date of installation and the anticipated on-line date;
7. The anticipated purchase and sale of power to the Distribution Company (simultaneous purchase and sale, net purchase and sale, net metering, or other method);
8. A description of any power conditioning equipment to be located between the Qualifying Facility or On-site Generating Facility and the Distribution Company's system; and
9. A description of the type of generator used in the Qualifying Facility or On-site Generating Facility installation (synchronous, induction, photovoltaic, or other).

(7) Interconnection Costs. The Qualifying Facility or On-site Generating Facility shall reimburse the Distribution Company for the incremental cost, i.e., the costs resulting solely from interconnecting the power production equipment with the Distribution Company's system, including meter installation where applicable. Such costs are to be calculated as follows:

(a) The incremental cost of interconnection shall be the sum of all costs incurred by the Distribution Company that are a direct result of connecting the Qualifying Facility or On-site Generating Facility power production equipment to the Distribution Company's system. This sum includes the costs of installation, the operations and maintenance expense, property taxes, and all incremental modifications to the distribution and transmission system to the extent that such incremental modifications are for the sole benefit of the Qualifying Facility or On-site Generating Facility and are necessary to incorporate its generation into the Distribution Company's system. Costs of system improvements and equipment installed to provide retail service to the Qualifying Facility or On-site Generating Facility consistent with each Distribution Company's. Terms and Conditions for Distribution Service shall be excluded from the incremental cost of interconnection.
(b) In the case where, during the term of a contract, a Qualifying Facility or On-site Generating Facility will purchase electricity from the interconnecting Distribution Company under a standard rate tariff or special contract that includes interconnection costs, the incremental costs of interconnection shall be the difference between the interconnection cost of the Qualifying Facility or On-site Generating Facility and the customer interconnection costs recovered through the tariff or special contract.
(c) For Qualifying Facilities selling electricity to the Distribution Company under Short-run Rates pursuant to 220 CMR 8.05, interconnection costs may be amortized over a period of up to three years, with the period of amortization chosen by the Qualifying Facility. If the charges are amortized, the Qualifying Facility will pay a monthly charge designed to recover the interconnection costs plus interest computed at the Distribution Company's average weighted cost of capital. The Qualifying Facility may instead elect to pay all interconnection costs at the time of interconnection.

(8) Metering. The Qualifying Facility or On-site Generating Facility shall furnish and install the necessary meter socket and wiring in accordance with accepted electrical standards. The Distribution Company shall furnish, read, and maintain the metering equipment.

8.04 continued

(a) Qualifying Facilities with a design capacity of one megawatt (MW) or greater shall use bidirectional, interval recording metering with remote access capability. Such remote access capability may include telemetering to the extent required by NEPOOL standards. Such meter shall be in compliance with NEPOOL standards and requirements for meters on generation resources. The interval recording metering will be controlled, tested, maintained, and read by the Distribution Company.
(b) Qualifying Facilities with a design capacity greater than 60 KW but less than one MW shall use a metering system that can record sales to the Distribution Company.
(c) Qualifying Facilities with a design capacity of 60 KW or less shall use a metering system that can record sales to the Distribution Company.
(d) On-site Generating Facilities with a design capacity of 60 KW or less that net meter shall use a standard service meter capable of running backwards.
(e) Where the. Qualifying Facility or On-site Generating Facility chooses to own the meter, the Qualifying Facility or On-site Generating Facility shall pay to the Distribution Company a monthly charge to cover meter maintenance and incremental reading and billing costs.
(f) Where the Qualifying Facility or On-site Generating Facility chooses to have the Distribution Company own the meter, the Qualifying Facility or On-site Generating Facility shall pay to the Distribution Company a monthly charge which covers taxes, meter maintenance, incremental reading and billing costs, the allowable return on the invoice cost of the meter, and the depreciation of the meter.

(9) Payment.
(a) A Qualifying Facility or On-site Generating Facility selling power to a Distribution Company may choose to receive a check from the Distribution Company as payment for power supplied or may have payment credited towards its bill from the Distribution Company.
(b) Costs charged to a Qualifying Facility or On-site Generating Facility for interconnection equipment, meters, and meter reading shall be the standard charges approved by the Department in a tariff filed by the Distribution Company. Where standard charges are not applicable, the Distribution Company shall charge the Qualifying Facility or On-site Generating Facility the Distribution Company's invoice cost of such equipment. Interconnection costs which are not standardized or invoiced shall be estimated on a case-by-case basis.

8.05: Terms and Conditions for Sales of Electricity by Qualifying Facilities and On-site Generating Facilities to Distribution Companies

(1) Eligibility. All Qualifying Facilities, regardless of size, are eligible to receive Short-run Rates.

(2) Standard Terms of Purchase.
(a) Qualifying Facilities that have a design capacity of one MW or greater shall have their output metered and purchased at rates equal to the payments received by the Distribution Company from the ISO power exchange for' such output for the hours in which the Qualifying Facility generated electricity in excess of its requirements.
(b) Qualifying Facilities with a design capacity greater than 60 KW but less than one MW shall have their output metered and purchased at rates equal to the arithmetic average of the Short-run Energy rate in the prior calendar month for the KWH which the Qualifying Facility generated electricity in excess of its requirements
(c) Qualifying Facilities with a design capacity of 60 KW or less shall have the option to have their output metered and purchased at rates equal to the arithmetic average of the Short-run Energy rate in the prior calendar month for the KWH which the Qualifying Facility generated electricity in excess of its requirements. Qualifying Facilities with a design capacity of 60 KW or less shall have the option to run their meters backward and may choose to receive a credit from the Distribution Company equal to the arithmetic average of the Short-run Energy rte in the prior calendar month for any month during which there was a positive net difference between KWH generated and consumed. Such credit shall appear on the following month’s bill. Distribution Companies shall be prohibited from imposing special fees on these customers, such as backup charges and demand charges, or

8.05: continued

additional controls, or liability insurance, as long as the facility meets the Interconnection Standard and all relevant safety and power quality standards. These customers must still pay the minimum charge for Distribution Service (as shown in an appropriate rate schedule on file with the Department) and all other charges for each net KWH delivered by the Distribution Company in each billing period.

(3) Net Metering. Certain On-site Generating Facilities may elect net metering consistent with 220 CMR 18.00.

(4) Standard Contracts. Each Distribution Company must offer a Standard Contract providing for payment at the Short-run Rate to any Qualifying Facility making a request for such a contract.

(5) Effective Date for Short-run Energy and Capacity Rates. Payment of ISO power exchange Short-run energy and capacity rates shall take effect on the first day of the month immediately following the effective date of 220 CMR 8.00. For the period prior to such effective date, Distribution Companies shall pay Qualifying Facility rates currently approved by the Department.

(6) Line Loss Factors. Energy for purchases shall be adjusted to reflect the costs or savings in line losses that result from purchases from the Qualifying Facility. Each Distribution Company shall file with the Department its line loss factors. Line loss factors shall be in accordance with the NEPOOL Market Rules and Procedures.

(7) Short-run Capacity or Reserves Payments. A Distribution Company shall make payments to a Qualifying Facility for capacity and/or reserves-related products if the sale is recognized by NEPOOL as a capacity and/or reserves-related product sale. The Distribution Company shall pay rates equal to the payments received for the sale of any capacity and/or reserves-related products associated with such Qualifying Facility output to the ISO power exchange.

8.06: Terms and Conditions for Sales of Electricity by Distribution Companies to Qualifying Facilities and On-site Generating Facilities

(1) Each Distribution Company shall, upon request by a Qualifying Facility or On-site Generating Facility, supply to a Qualifying Facility or On-site Generating Facility supplementary, back-up, maintenance, and interruptible power pursuant to 18 C.F.R. 292.305(b) under rate schedules applicable to all customers, regardless of whether they generate their own power.

(2) Where it is possible for a Qualifying Facility or On-site Generating Facility to receive power under the applicability clauses of more than one rate schedule, the Qualifying Facility or On-site Generating Facility may choose the rate schedule under which it will be served.

8.07: Reporting Requirements

(1) Each Distribution Company shall file with the Department a report of new Qualifying Facility and On-site Generating Facility activity in a calendar year, by April 1st of the subsequent year. Such filing shall include:

(a) The name and address of the owner, and the address where the Qualifying Facility or On-site Generating Facility is located;
(b) A brief description of the type of Qualifying Facility or On-site Generating Facility;
(c) The primary energy source used by the Qualifying Facility or On-site Generating Facility;
(d) The date of installation and the on-line date;
(e) The method of delivering power to the Distribution Company (contract or net metering);
(f) The design capacity of the Qualifying Facility or On-site Generating Facility;
(g) A brief discussion identifying any Qualifying Facility or On-site Generating Facility that was denied interconnection by the Distribution Company, including a statement of reasons for such denial.

8.07: continued

(2) Each Distribution Company shall file with the Department a report describing the incremental reductions in the purchases of electricity during a calendar year due to customer operations of, or purchases from, on-site renewable energy technologies; fuel cells; cogeneration equipment; On-site Generating Facilities eligible for net metering; or cogeneration facilities eligible for net metering. Such filing shall be submitted to the Department by April 1st of the subsequent year, and it shall include:

(a) A brief discussion of the incremental reductions in purchases of electricity during the calendar year due to customer operations of, or purchases from:
1. on-site renewable energy technologies;
2. fuel cells;
3. cogeneration equipment with a combined heat and power system efficiency of at least 50% based upon the higher heating value of the fuel used in the system;
4. On-site Generation Facilities eligible for net metering; or
5. cogeneration facilities eligible for net metering;

(b) A brief discussion of the effect of 220 CMR 8.07(2)(a) on the Distribution Company's transition charge, including a quantitative estimate of the lost dollar contribution to the Distribution Company's transition charge during the calendar year;
(c) A brief discussion of the effect of 220 CMR 8.07(2)(a) on the Distribution Company's kilowatt hour sales during the calendar year;
(d) An estimate of the percent of the Distribution Company's gross annual revenues that have been lost during the calendar year due to 220 CMR 8.07(2)(a);
(e) A brief narrative identifying all customers that have given notice to the Distribution Company of their plans to reduce electricity purchases due to operations of, or purchases from a facility described in 220 CMR 8.07(2)(a).

8.08: Miscellaneous

(1) Each Distribution Company shall file with the Department and maintain on file for inspection' at its place of business the current rates, prices, charges, and terms and conditions established pursuant to 220 CMR 8.00 et seq.

(2) If, at any time, a Qualifying Facility or On-site Generating Facility is aggrieved by an action of a Distribution Company pursuant to 220 CMR 8.00, the Qualifying Facility or On-site Generating Facility may petition the Department to investigate such action. The Department may, at its discretion, open an investigation and, if it deems necessary, hold public hearings regarding any such petition.

(3) The Department may, where appropriate, grant an exception from any provision of 220 CMR 8.00.

REGULATORY AUTHORITY

220 CMR 8.00: M.G.L. c. 25, § 5; c. 164, § 76C.

THE CONNECTICUT LIGHT AND POWER COMPANY, DBA EVERSOURCE ENERGY

NON-FIRM POWER PURCHASE RATE 980

AVAILABILITY: This purchase arrangement is available to any self generation facility.

CUSTOMER CHARGES: The Company shall install, maintain and read the metering equipment necessary to measure the flow of energy from the facility to the Company. If the facility owns the necessary metering equipment and relieves the Company of all investment, the charge for installation and maintenance shall be the actual cost, and the monthly customer charge for reading and handling shall be $3.00. If the Company owns the metering equipment, the monthly customer charge shall be the capitalized cost of the metering equipment times 2.5% plus the reading and handling charge of $3.00.

PURCHASE OF CUSTOMER GENERATION: The Company will purchase electric energy supplied by the facility in accordance with either of the following two alternatives.

<u>Alternative A</u>: If a time differentiated meter is installed, the Company will determine the energy payment as the sum of delivered energy for each hour in the billing period times the appropriate hourly Connecticut ISO-NE Wholesale Electric Market Real-Time Locational Marginal Price ("RT-LMP") clearing price for such hour. The hourly prices shall be appropriately adjusted to reflect line loss savings. Under this alternative the Customer shall install and maintain communication technology that provides remote access for the Company to read the meter(s) at all times. The location of such facilities shall be at the sole discretion of the Company; however, the Company shall consult with the customer regarding the location of these facilities. The Customer will choose to either provide a dedicated direct dial analog phone line(s), or other mutually agreed communication technology that is compatible with the Company's meter data collection systems. The interconnection of communications equipment that provides for remote meter reading shall be within reasonable proximity of the electric meter as determined by the Company's specifications and is the sole responsibility of the Customer. The Customer shall be the owner of all telephone lines or the remote communications technology and shall maintain them in operable condition at all times. The Company will be responsible for the installation and maintenance of the connection between the Company meter(s) and the Customer's communication system.

<u>Alternative B</u>: If no time differentiated meter is installed, all electric energy will be purchased at the appropriate RT-LMP average clearing price over the billing period. The average price for the billing period shall be appropriately adjusted to reflect line loss savings.

MARKET-CLEARING PRICES: In accordance with Standard Market Design, the RT-LMP for Connecticut is the basis for the market-clearing price. The market-clearing price for Generation recognized in the ISO-NE settlement system is the appropriate Node. The market-clearing price for all other generation is the Connecticut Zone. In the future, LMP may be replaced with another market mechanism. If this occurs, Rate 980 will make payments based on the subsequent market mechanism for calculating the market-clearing price.

Supersedes Rate 980
Effective January 1, 2000
By Supplemental Decision dated December 15, 1999
Docket No. 99-03-36

Effective March 27, 2006
by Decision dated March 27, 2006
Docket No. 05-07-17
Revised to Reflect New Trade Name October 1, 2015
Docket No. 14-05-06

THE CONNECTICUT LIGHT AND POWER COMPANY, DBA EVERSOURCE ENERGY

ADJUSTMENT IN MARKET CLEARING PRICE FOR LINE LOSS SAVINGS: The purchase voltage shall be determined in accordance with the voltage level at which interconnection is made with the Company's system. The voltage level at which purchases are made shall be the level at which sales are made by the Company to the customer, unless otherwise agreed by the Company. Purchases at Transmission voltage levels of 69 kV or higher are paid at the appropriate RT-LMP market-clearing price. For purchases at voltage levels less than 69 kV the appropriate RT-LMP market-clearing prices will be increased by the percentage shown below:

	Alternative A (hourly metering)		Alternative B
Purchase Voltage	On-Peak Hrs.	Off-Peak Hrs.	No time differential meter
Bulk Substation	0.50%	0.34%	0.42%
Primary Distribution	4.38%	2.89%	3.60%
Secondary Distribution	7.13%	4.59%	5.80%

On-Peak Hours: 7 a.m. to 11 p.m. Eastern Standard Time, weekdays.
Off-Peak Hours: All other hours.

Secondary Distribution is defined as purchase voltages below 2.4 kV. All other connections to the distribution system will be Primary Distribution. Customers connected through a bulk substation or at voltages of 69 kV or higher are not considered Distribution.

OWNERSHIP OF CAPACITY RIGHTS: There shall be no capacity payment under any alternative. The Company shall retain the capacity rights for generating units up to the capacity that has been subsidized by ratepayers through the monetary grant process approved in the Decision dated March 27, 2006, in Docket No. 05-07-16. All base load customer-side Distributed Generation ("DG") projects including combined heat and power projects that receive a monetary grant are required to transfer the capacity rights to the Company for fifteen (15) years from the date the facility begins operation.

The Customer shall retain capacity rights if one of the following conditions exists:

1.) The project is an emergency generator; or

2.) All of the following three criteria are met: (1) the generating unit is not under a long-term power purchase contract whose original term is or was one year or longer; (2) the generating unit has a settlement account with ISO-NE; and (3) the generating unit is entitled to the capacity in excess of that subsidized by ratepayers through the monetary grant process. In the unique and limited situations where the generating unit is entitled to the capacity in excess of that subsidized by the ratepayers through the monetary grant process, the Company will work with the generating facility to ensure that any capacity value retained by the generating unit is properly calculated, claimed and allocated.

THE CONNECTICUT LIGHT AND POWER COMPANY, DBA EVERSOURCE ENERGY

RENEWABLE ENERGY CERTIFICATES ("RECs") OWNERSHIP: The Company shall retain ownership of RECs for power purchases made pursuant to a long-term purchase power contract which uses Rate 980 as a pricing mechanism for some or all of the output to be purchased under the contract, or if the contract provides for the Company to retain ownership of RECs. A long-term contract is any contract for power purchase whose original term is or was one year or longer. DG projects that are not under a long-term contract, including those that receive monetary grants, will retain the RECs associated with their generation unit.

DETERMINATION OF THE COMPANY'S PURCHASE: Where the metering facilities are on the facility's side of the transformer, the metered energy shall be reduced by 0.35% to determine the Company's purchase.

TERM OF CONTRACT: All base load customer-side DG capacity that receives a monetary grant through the monetary grant process approved in the Decision dated March 27, 2006, in Docket No. 05-07-16 must take service under Rate 980 for a minimum period of fifteen (15) years. For a generating unit that does not receive a monetary grant and where the Customer owns the metering equipment, there will be no term of contract; otherwise, the term of contract shall be for one year and thereafter until the Company shall have received not less than one month's written notice of termination from the facility.

INTERRUPTION OF PURCHASES: The Company reserves the right, upon 48 hours prior notice where practicable, to interrupt purchases and to refuse to purchase energy at times of system emergency or severe operational circumstances in accordance with any applicable New England Power Pool (NEPOOL), Independent System Operator New England (ISO-NE) and Northeast Power Coordinating Council (NPCC) operating procedures.

65-407 PUBLIC UTILITIES COMMISSION

Chapter 315: SMALL GENERATOR AGGREGATION

SUMMARY - This rule establishes the requirements for standard offer providers to purchase the electricity from small generators.

TABLE OF CONTENTS

§ 1 PURPOSE

The purpose of this Chapter is to ensure that small generators have reasonable access to the regional wholesale market.

§ 2 DEFINITIONS

A. **Eligible Generator**. "Eligible generator" means a generator with a nameplate capacity of 5 megawatts or less.

B. **GIS Certificates**. "GIS certificates" means certificates created pursuant to the NEPOOL Generation Information System that represent attributes of electric power and that may be traded separately from the energy commodity.

C. **ISO-NE**. "ISO-NE" means the Independent System Operator of the New England bulk power system or successor organization.

D. **Northern Maine**. "Northern Maine" means the area of Maine that is part of the Maritimes control area.

E. **Real-Time Nodel Clearing Price**. "Real-time nodal clearing price" means the wholesale price for electric energy received or furnished at the applicable nodal location, as determined by ISO-NE for settlement in the New England real-time energy market.

F. **Standard Offer Provider**. "Standard offer provider" means a provider of standard offer service chosen pursuant to Chapter 301 of the Commission's rules.

§ 3 PURCHASE OBLIGATION

A. **Purchase Requirement**. The standard offer provider designated pursuant to Chapter 301 of the Commission's rules to serve residential customers within the ISO-NE control area shall purchase any electricity available from any eligible generator located in the transmission and distribution service territory in which the standard offer provider is obligated to provide service, if requested to do so by the entity who own or controls the eligible generator. Requests for a standard offer provider to purchase electricity pursuant to this subsection shall be made through the transmission and distribution utility charged with administering the transaction between the eligible generator and the standard offer provider.

B. **Purchase Price**. The standard offer provider shall purchase the energy from an eligible generator at the ISO-NE real-time nodal clearing price for the node on which the generator is located. The purchase price under this subsection shall be reduced for any incremental ISO-NE system administrative costs charged to the purchasing standard offer provider as a result of the requirements of this Chapter. The Commission by order may change the applicable purchase price upon a finding that another price would result in the transaction being financially neutral to the standard offer provider consistent with the purposes of this Chapter.

C. **Multiple Providers**. If there are multiple standard offer providers serving residential customers within a transmission and distribution utility service territory, the purchase obligation shall be apportioned according to each provider's share of the standard offer load obligation.

D. **Northern Maine**. The purchase requirements of this Chapter shall become applicable to entities in northern Maine upon a finding by the Commission that the market design in northern Maine will accommodate the purchase of electricity from eligible generators by a standard offer provider in a manner that is financially neutral to the standard offer provider. In the event the Commission makes the requisite finding, it shall determine the appropriate means of establishing the purchase price.

§ 4 ADMINISTRATION

Transmission and distribution utilities shall administer the purchase and sale of electricity required by this Chapter for eligible generators located within their service territories. Eligible generators shall pay the utility's administrative costs pursuant to a rate schedule approved by the Commission. Each transmission and distribution utility within the ISO-NE control area shall file a proposed rate schedule within 30 days of the effective date of this Chapter.

§ 5 FINANCIAL NEUTRALITY

The Commission shall issue an order suspending the operation of this Chapter if it finds that the purchase and sale of electricity from eligible generators cannot be accomplished in a manner that is financially neutral to the standard offer provider.

§ 6 NET ENERGY BILLING

A customer that has elected net energy billing pursuant to Chapter 313 of the Commission's rules may opt to sell its monthly excess generation to the standard offer provider pursuant to this Chapter rather than applying excess kilowatt-hour credits against future kilowatt-hour usage pursuant to section 3(D) of Chapter 313. A customer that opts to sell generation pursuant to this section must affirmatively elect the option through the execution of a contract with the transmission and distribution utility. Net energy billing customers may not change between the sale of excess generation option and the application of excess kilowatt-hour credits against future usage option more than once in a calendar year.

§ 7 STANDARD CONTRACTS

Each transmission and distribution utility within the ISO-NE control area shall develop a standard contract to govern interactions with eligible generators that is consistent with the provisions of this Chapter. Any interested person may request that the Commission order a modification to the standard contract. Nothing in this Chapter exempts eligible generators from other legal requirements regarding the execution of contracts.

§ 8 GIS CERTIFICATES

An eligible generator that sells electricity pursuant to this Chapter is not required to transfer GIS certificates to the purchasing standard offer provider.

§ 9 TECHNICAL SPECIFICATIONS

The Director of Technical Analysis may adopt technical specifications that are necessary or useful in implementing the requirements of this Chapter. All technical specifications adopted pursuant to this section shall be consistent with applicable ISO-NE requirements. Any interested person may request that the Director of Technical Analysis adopt technical specifications pursuant to this section.

§ 10 WAIVER OR EXEMPTION

Upon the request of any person subject to this Chapter or upon its own motion, the Commission may, for good cause, waive any requirement of this Chapter that is not required by statute. The waiver may not be inconsistent with the purposes of this Chapter or Title 35-A. The Commission, the Director of Technical Analysis, or the Presiding Officer assigned to a proceeding related to this Chapter may grant the waiver.

STATUTORY AUTHORITY: 35-A M.R.S.A. §§ 104, 111, 1301 and 3210-A.

EFFECTIVE DATE: This rule, filing 2004-397, was approved as to form and legality by the Attorney General on September 10, 2004. It was filed with the Secretary of State on September 13, 2004 and will be effective on September 18, 2004.

THE NARRAGANSETT ELECTRIC COMPANY
QUALIFYING FACILITIES POWER PURCHASE RATE

I. Applicability

The Company will purchase the electrical output from any qualifying facility as defined under the Public Utility Regulatory Policies Act of 1978 and constructed after November 9, 1978, under the following terms and conditions. Qualifying facilities include the following:

a. Small power production facilities of 20 megawatts or less which use biomass, waste, renewable resources, or any combination thereof for at least 75 percent of their total energy input in the aggregate during any calendar year period.

b. Cogeneration facilities of 20 megawatts or less which first generate electricity and then use at least five percent of the total energy output for thermal production, provided that the useful power output of the facility plus one-half the useful thermal energy output must be:

   1) no less than 42.5 percent of the total energy input of natural gas and oil to the facility in any calendar year; or

   2) if the useful thermal energy output is less than 15 percent of the total energy output of the facility, no less than 45 percent of the total energy input of natural gas and oil to the facility in any calendar year.

c. Cogeneration facilities of 20 megawatts or less which first provide useful thermal energy and then use reject heat to generate electricity, provided that the useful power output must be no less than 45 percent of the total energy input of natural gas and oil during any calendar year period.

II. Terms and Conditions

1. Any qualifying facility that desires to sell electricity to the Company must provide the Company with sufficient prior written notice. At the time of notification, the qualifying facility shall provide the Company with the following information:

   a. The name and address of the applicant and location of the qualifying facility.
   b. A brief description of the qualifying facility, including a statement indicating whether such facility is a small power production facility or a cogeneration facility.
   c. The primary energy source used or to be used by the qualifying facility.
   d. The power production capacity of the qualifying facility and the maximum net energy to be delivered to the Company's facilities at any clock hour.
   e. The owners of the qualifying facility including the percentage of ownership by any electric utility or by any public utility holding company, or by any entity owned by either.
   f. The expected date of installation and the anticipated on-line date.
   g. The anticipated method of delivering power to the Company.
   h. A copy of the qualifying facility's Federal Energy Regulatory Commission certification as a qualifying facility.

   Such notice shall be sent to:

   Director, Wholesale Electric Supply
   Energy Procurement
   National Grid USA Service Company, Inc.
   100 East Old Country Rd.
   Hicksville, NY 11801

   Following such notification, the qualifying facility and the Company shall execute the standard purchase power agreement setting forth the terms of the sale, a form of which is attached in Schedule A, which shall be executed no later than thirty (30) days prior to the desired commencement date of the sale. The actual commencement date of the sale shall be the first day of the calendar month following the acceptance by ISO-New England, Inc. ("ISO-NE") of the registration of the qualifying facility in the ISO-NE settlement system.

2. The qualifying facility shall furnish and install the necessary meter socket and wiring in accordance with the Company's Standards for Connecting Distributed Generation.

3. The qualifying facility shall install equipment approved by the Company which prevents the flow of electricity into the Company's system when the Company's supply is out of service, unless the qualifying facility's generation equipment can be controlled by the Company's supply.

4. The qualifying facility's equipment must be compatible with the character of service supplied by the Company at the qualifying facility's location.

5. The qualifying facility shall be required to install metering pursuant to the requirements contained in the Company's Standards for Connecting Distributed Generation.

6. The qualifying facility shall enter into an interconnection agreement and follow all other procedures outlined in the Company's Standards for Connecting Distributed Generation, as amended and superseded from time to time.

7. The qualifying facility shall reimburse the Company for any equipment and the estimated total cost of construction (excluding costs which are required for system improvements or for sales to the qualifying facility, such as the cost of a standard metering installation, in accordance with the Company's Terms and Conditions) which are necessary to meter purchases under this rate and to interconnect the qualifying facility to the Company's distribution or transmission

system in accordance with the Company's Standards for Connecting Distributed Generation. The Company will install, own, and maintain the equipment.

8. The qualifying facility shall save and hold harmless the Company from all claims for damage to the qualifying facility's equipment or injury to any person arising out of the qualifying facility's use of generating equipment in parallel with the Company's system; provided that nothing in this paragraph shall relieve the Company from liability for damage or injury caused by its own fault or neglect.

9. As a condition to receiving any payments required by this rate, the qualifying facility must comply with any and all applicable New England Power Pool ("NEPOOL") and ISO-NE rules, requirements, or information requests that are necessary for the qualifying facilities' output to be sold into the ISO-NE administered markets (whether the Company or the qualifying facility is actually submitting information to ISO-NE). The Company is not obligated to seek to obtain capacity market payments from ISO-NE for qualifying facilities. If the Company must provide to NEPOOL or ISO-NE any information regarding the operation, output, or any other data in order to sell the output of the qualifying facility into the ISO-NE administered markets, the qualifying facility must provide such information to the Company in a timely manner. The Company will not be liable to pay the qualifying facility for the output of the qualifying facility if the Company is unable to sell the output into the ISO-NE administered markets because of a failure of the qualifying facility to provide to the Company, NEPOOL or ISO-NE any information on a timely basis that was required for sale

of the facility output into the ISO-NE administered markets. For any perceived errors or omissions in the data reported to NEPOOL or ISO-NE or the transactions from ISO-NE to the Company or qualifying facility, the qualifying facility must notify the Company within 30 days of such error or omission occurring.

10. NEPOOL and ISO-NE have the authority to impose fines, penalties, and/or sanctions on participants if it is determined that a participant is violating established rules in certain instances. Accordingly, to the extent that a fine, penalty, or sanction is levied by NEPOOL or the ISO-NE as a result of the qualifying facility's failure to comply with a NEPOOL or ISO-NE rule or information request, the qualifying facility will be responsible for the costs incurred by the Company, if any, associated with such fine, penalty or sanction.

III. <u>Rates for Purchases</u>

<u>Rates for Qualifying Facilities</u>

For qualifying facilities not eligible for net metering under the Company's Net Metering Provision, R.I.P.U.C. No. 2075, as amended and superseded from time to time, the Company will pay the following rates:

1. For facilities meeting the definition of renewable energy resources as defined in R.I.G.L. Section 39-26-5, the Company will pay the Standard Offer Service rate for the applicable retail delivery rate as determined in

Section IV for each kilowatt-hour generated in excess of the facility requirements.

2. For all other qualifying facilities, the Company will pay the hourly clearing prices at the ISO-NE for the hours in which the qualifying facility generated electricity in excess of its requirements. Additionally, the Company shall make payments to a qualifying facility for capacity and/or reserves-related products if the sale is recognized by NEPOOL or ISO-NE as a capacity and/or reserves-related product sale. The Company shall pay rates equal to the payments received for the sale of any capacity and/or reserves-related products associated with such qualifying facility output to ISO power exchange.

IV. <u>Rates for Distribution Service to Qualifying Facilities</u>

Retail distribution delivery service by the Company to the qualifying facility shall be governed by the tariffs, rates, terms, conditions, and policies for retail delivery service which are on file with the Public Utilities Commission. The selection of the appropriate retail rate will be determined as follows:

1) for qualifying facilities with generating capacity of less than 10kW, the appropriate residential or small general service rate will apply unless the customer's load necessitates use of G-02, G-32, or G-62 rate;

2) for qualifying facilities serving non-profit affordable housing, Residential Rate A-16 will apply;

3) for qualifying facilities with generating capacity of at least 10kW but not more than 200 kW, Rate G-02 will apply, unless the customer's load necessitates the use of the G-32 or G-62 rate;

4) for qualifying facilities with generating capacity of at least 200kW but not more than 3,000 kW, Rate G-32 will apply unless the customer's load necessitate the use of the G-62 rate;

5) for qualifying facilities with generating capacity of 3,000 kW or more, Rate G-62 will apply.

V. **Cost Recovery**

The Company shall be entitled to recover the difference between the payments made to qualifying facilities for purchases pursuant to Section III. and the actual energy market payments received by ISO-NE for the electricity generated by those qualifying facilities from all customers through a uniform per kilowatt hour (kWh) surcharge embedded in the distribution component of the rates reflected on customer bills.

Effective: April 1, 2012

Schedule A

THE NARRAGANSETT ELECTRIC COMPANY
QUALIFYING FACILITY POWER PURCHASE AGREEMENT

The Agreement is between ____________________________ , a Qualifying Facility ("QF") and The Narragansett Electric Company (the "Company") for energy purchases by the Company from the QF's facility located at ____________________________, Rhode Island.

Agreement to Purchase under the Qualifying Facilities Power Purchase Rate Tariff

Effective as of ____________, the Company agrees to purchase electricity from the QF and QF agrees to sell electricity to the Company under the terms and conditions of the Company's Qualifying Facilities Power Purchase Rate Tariff as currently in effect or amended by the Company in the Company's sole discretion. The QF agrees to comply with the terms and conditions of the Qualifying Facilities Power Purchase Rate Tariff, the Company's Standards for Connecting Distributed Generation, as currently in effect or as amended from time to time, and associated policies of the Company that are on file with the Rhode Island Public Utilities Commission as currently in effect or as modified, amended, or revised by the Company, and to pay any metering and interconnection costs required under such tariff and policies.

Payments for Energy

The Company will pay the QF at the rates in effect at the time of delivery as provided for in the Qualifying Facilities Power Purchase Rate Tariff.

Notice

The Company or QF may terminate this agreement on thirty (30) days written notice which includes a statement of reasons for such termination.

Agreed and Accepted

________________________ ________________________
Date

____________________________ ________________________
The Narragansett Electric Company Date

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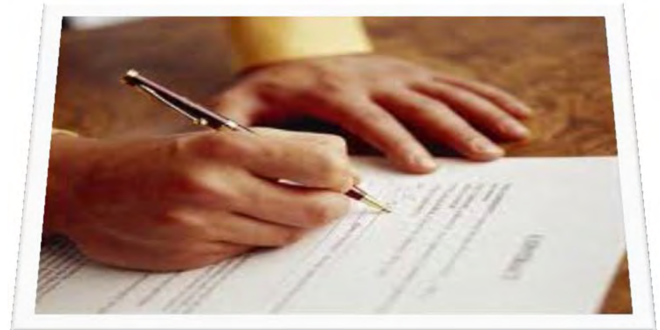
Public Utility Regulatory Policies Act (PURPA) Compliance Methods



Presented by: ***John Athas & Mary Neal***
La Capra Associates, Inc.

Presented to: **Green Mountain Power**

February 19, 2015

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Topics Covered

I. **Introduction to PURPA**

II. **FERC Response to Issues Regarding PURPA & Market Access**

III. **New England State Rules**

IV. **Other RTO Regions**

I. INTRODUCTION TO PURPA

- PURPA Goals
- PURPA Requirements
- Energy Policy Act of 2005

Source: Carolyn Elefant, "A Survey of Avoided Cost Ratemaking Methodologies Under the Public Utilities Regulatory Policies Act (PURPA)", March 2014, http://www.narucmeetings.org/Presentations/25%20PURPA%20Avoided%20Cost%20Calculation%20Differences%20Across%20States-Carolyn%20Elefant.pdf

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PURPA Goals

- **Encourage alternative energy/distributed generation development in order to conserve energy and increase utility efficiency**
- **Grant qualified facility (QF) status to eligible cogeneration and small renewable generating facilities**
  - **Utilities obligated to purchase power from facilities with QF status**
- **Maintain equitable rates for consumers**
  - **Electric rates unaffected by QF purchase**

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PURPA Requirements

- **Utilities must purchase power from QFs at avoided cost based rates**
- **FERC defines avoided cost as "the incremental cost to the electric utility of electric energy or capacity or both which, but for the purchase from the QF or QFs, such utility would generate itself or purchase from another source." §CFR 292.101(b)(6)**
- **Legal standards**
  - **Just, reasonable and in the public interest**
  - **Non-discrimination among co-generators or small power producers**

Source: 18 CFR S292.304(a)(i) and S292.301(b)

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Energy Policy Act of 2005 amends PURPA's must purchase obligation and avoided cost

- **Utilities may terminate (with FERC permission) mandatory purchase obligation if QFs have non-discriminatory access to competitive markets**
- **FERC Order 688 determined that:**
  - **ISO-NE, NYISO, PJM, and MISO meet statuary criteria for competitive markets**
  - **QFs of more than 20 MW assumed to have non-discriminatory access to at least one of these competitive markets**
- **For QFs still entitled to sell power at avoided cost in places with Day 2 Markets, the avoided costs are most often based on market prices**

II. FERC RESPONSE TO ISSUES REGARDING PURPA & MARKET ACCESS

- **Small QFs**
- **Congestion Issues**
- **Treatment of RECs**

FERC protects QF status for facilities under 20 MW

- **FERC has shown reluctance to eliminate mandatory purchase obligation from QFs smaller than 20 MW, even in Day 2 Market Environments**
  - **FERC granted BED relief from this requirement in the case of Winooski One (there may also be one additional recent case) – these exemptions are rare and on a case by case basis.**
- **In 2010, FERC denied PSNH's request to eliminate the mandatory purchase obligation for QFs between 5 and 20 MW**
- **In 2013, FERC denied PPL Electric's request to eliminate the mandatory purchase obligation for the planned 18.1 MW Souderton cogeneration plant**
  - **FERC stated PPL Electric's application lacked a necessary QF-specific analysis demonstrating the QF has non-discriminatory market access**

Sources: PSNH- 131 FERC ¶ 61,027; PPL-145 FERC ¶ 61,053

FERC considers congestion for QF status termination

- **Some utilities have also been denied request to terminate mandatory purchase obligation due to market congestion**
- **As an example, in 2008, Southwestern Public Service (SPS) Company was denied its request to eliminate mandatory purchase obligation for QFs larger than 20 MW**
  - **SPS is a member of SPP**
  - **JD Wind, a QF owner, provided evidence of curtailment due to transmission constraints and the lack of ability to secure a third-party purchase agreement for its JD Wind No. 4 project**
  - **Only one QF in SPS had an OASIS reservation and only for a small fraction of its output**

Sources: SPS- 122 FERC ¶ 61,048

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FERC excludes RECs from PURPA statute

- **FERC has stated that contracts for the sale of QF energy and capacity pursuant to PURPA do not automatically include RECs**
- **RECs may be transferred to the utility from the QFs per a separate contractual provision or through state law, but not PURPA**
- **REC policies vary by state**

Sources: 105 FERC ¶ 61,004

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III. NEW ENGLAND STATE RULES

- New Hampshire
- Connecticut
- Rhode Island
- Maine
- Massachusetts

Summary of New England States

Common Elements

- All states except Vermont use short term ISO-NE marginal energy prices (spot prices and not forward prices)
  - Allco Renewable Energy petitioned FERC for enforcement action against MA DPU for only allowing short term avoided cost rates and not long-term contract rates; FERC did not bring such an enforcement action
- Most States pay FCM value as well as energy
- States allow long term contracting at negotiated rates
- All States adjust for losses
- Most states try to have some connection between their QF rate and net metering rate design
- Most states have tiers by size of QF giving slight differences in rate structure

Distinctions among States

- Varies among states on Nodal versus Zonal and Day Ahead or Real time markets
- NH and Maine adjust their payments to QFs to account for administrative costs

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Summary of New England States (cont.)

	MA	CT	ME	RI	NH	VT
Mechanism	Statute	Utility Tariff	PUC Rules	Utility Tariff	Utility Tariff	PSB-Approved Rates Statewide
Energy Price	Equal to payments received by utility from ISO-NE	RT LMP at generator node or Zone	RT LMP at generator node or negotiated between utility and QF	Standard Offer Price or Hourly clearing prices – RT or DA not specified	Zonal RT LMP or contract	Based on long-term forecast from consultant
Capacity Price	Included if recognized by NEPOOL or ISO-NE	Included in long-term contract	Negotiated between utility and QF	Included if recognized by NEPOOL or ISO-NE	FCM Price less PER	Based on long-term forecast from consultant
Losses	Each company files line loss factors with DPU	No adjustments if 69kV or more; fixed peak and off-peak % for <69kV	Commission may consider losses	No line loss adjustment specified in tariff	Line losses wholesale to retail meter point	Adjusted for Local T & D
RECs	REC transfer not covered by statute	Included if long-term contract under tariff or if contract includes it	Retained by QF	REC transfer not specified in tariff	Retained by QF	Retained by QF
Frequency of price updates	Short-term Prices	Short-term Prices	Filed by QF annually	Short-term prices; annual reconciliation	Short-term Prices	Annually per Rule 4.100
Length of contract	N/A	No specified contract length	No specified contract length	N/A	One 20-year contract; could be others	5, 10, 15, 20, or 30-year options

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IV. Other RTO Regions

- NYISO
  - Niagara Mohawk
  - Con Ed
- PJM
  - Public Service Electric & Gas
  - Virginia Electric and Power
  - Baltimore Gas and Electric
- MISO
  - Entergy

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Summary of Other RTO Regions

Common Elements

- All states used short term marginal energy prices, varying between RT and DA
- Most States pay capacity value as well as energy
- States allow long term contracting at negotiated rates
- All States adjust for losses
- Some states adjusts their payments to QF to account for administrative costs
- Most states have tiers by size of QF giving slight differences in rate structure

Distinctions from New England

- Con Ed has QFs over 1MW provide schedule of output for Day Ahead Market
- Most states do not have a direct connection between their QF rate and net metering rate design

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Summary of Other RTO Regions

	NY	NJ	VA	MD	VT
Mechanism	Utility Tariff	Utility Tariff	Utility Tariff	Utility Tariff	PSB-Approved Rates Statewide
Energy Price	Real-Time LBMPs – floor price of 6.0 cents/kWh	Load weighted average LMP	Day-Ahead LMP	PJM market prices for time period energy is produced	Based on long-term forecast from consultant
Capacity Price	Based on LBMCP using unforced capacity	Based on revenue from PJM (must qualify for PJM auction)	Based on PJM capacity resource clearing prices	PJM market prices	Based on long-term forecast from consultant
Losses	Con Ed has factor of 1.066 for delivery at secondary distribution	N/A	2.8% for line losses	N/A	Adjusted for Local T & D
RECs	REC transfer not covered by statute	N/A	N/A	N/A	Retained by QF
Frequency of price updates	N/A	N/A	N/A	N/A	Annually per Rule 4.100
Length of contract	N/A	N/A	N/A	N/A	5, 10, 15, 20, or 30-year options

End of Presentation

■ ■ ■

Additional Discussion or Questions ?

Contact Information:

John Athas
Tel: 617-778-5515 x 131
jathas@lacapra.com

Mary Neal
Tel: 617-778-5515 x 120
mneal@lacapra.com

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APPENDIX

- State level detail
  - New England
  - Other states
- Qualifying Facilities in New England

New Hampshire: Limited Electrical Energy Producers Act

- **Utilities purchasing power from qualifying facilities "shall pay rates per kilowatt hour to be set from time to time by the commission. Such rates shall be based on the purchasing utility's avoided costs... either calculated for the time of delivery or calculated for a specified term at the time of qualifying small power producer or qualifying co-generator agrees to be obligated to deliver for the specific term." NH Statutes Chapter 362-A**
- **Commission considers any mutually agreed upon contract that differs from the rate or terms that would otherwise be required by the Commission**

Effective August 25, 1998

Source: http://www.gencourt.state.nh.us/rsa/html/nhtoc/NHTOC-XXXIV-362-A.htm

New Hampshire Net Metering: NH Code of Administrative Rules PUC 900

- **Commission annually determines net metering rates consistent with requirements of PURPA published on NH PUC website: http://www.puc.state.nh.us/electric/electric.htm**
- **Net metering rates for avoided costs based on short-term avoided energy costs for the New Hampshire load zone**
  - **RT-LMP of electricity plus generation related ancillary service charges, all adjusted for the average line loss in New Hampshire between the wholesale metering point and the retail metering point**
  - **Capacity costs based on applicable FCM price, adjusted to account for any peak energy rent payments made from energy market reducing direct capacity costs charged to load and for average line loss**

Source: http://www.puc.nh.gov/Regulatory/Rules/PUC900.pdf

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New Hampshire – Public Service New Hampshire (PSNH)

- **FERC granted PSNH request to terminate mandatory purchase obligation for QFs larger than 20 MW (131 FERC ¶ 61,027)**
- **PSNH tariff specifies rates for QF power sales (Section 33 of Electricity Delivery Service Tariff – NHPUC No. 8)**
  - **QF may sell to PSNH or wheel through PSNH (wheeling charges may apply which include distribution) through separate contract or "Short Term Avoided Cost Rate"**
  - **"Short Term Avoided Cost Rate" is based on revenues from PSNH's resale to ISO-NE market, adjusted for "line losses, wheeling costs, and administrative costs"**
  - **Net Metering available to renewable facilities less than 1,000 kW**
- **QF maintains rights to RECs**
- **PSNH signed 20-year contract for Berlin biomass facility**

Sources: http://elibrary.ferc.gov/idmws/file_list.asp?document_id=13808630; https://www.psnh.com/downloads/Electric%20Delivery%20Service%20Tariff.pdf?id=4294988540&dl=t http://www.puc.state.nh.us/electric/electric.htm; http://www.puc.state.nh.us/Regulatory/Orders/2011orders/25213e.pdf

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Connecticut – Connecticut Light and Power (CL&P)

- **CL&P maintains Rate 980 for Non-Firm Power Purchases from "any self-generation facility"**
- **CL&P maintains Rider N for Non-Class 1 Renewable and QF Self-Generator Net Energy Billing Service**
  - **Available to QFs under 50 kW for customers taking service under certain rates**
  - **If energy sold to CL&P exceeds energy purchases, the net sales will be credited per Rate 980**

https://www.cl-p.com/Home/AboutCLP/Service_Territory_Map/?MenuID=4294985160

Sources: http://www.cl-p.com/downloads/rate980.pdf?id=4294986720&dl=t
https://www.cl-p.com/downloads/RiderN_NonClass.pdf?id=4294986717&dl=t

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Connecticut – Connecticut Light and Power (CL&P)

- **Rate 980 Energy**
  - **If the facility has a time-differentiated meter, then power is purchased at ISO-NE hourly RT-LMP clearing price, either at the generator node—if it exists—or the Connecticut Zone price**
  - **With no time-differentiated meter, energy is purchased at the average RT-LMP over the billing period**
- **Rate 980 Capacity**
  - **CL&P retains capacity rights without any capacity payment if the generation unit was subsidized by ratepayers through certain grants**
  - **Customer retains capacity rights if it is an emergency generator or if the customer is not under long-term contract, has a settlement account with ISO-NE and the generating unit entitled to capacity is in excess of that subsidized by ratepayers**

Source: http://www.cl-p.com/downloads/rate980.pdf?id=4294986720&dl=t

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Connecticut – Connecticut Light and Power (CL&P)

- **Rate 980 RECs**
  - **CL&P retains RECs if power purchase was made through long-term contract which uses Rate 980 as pricing mechanism or if the contract provides it**
  - **DG projects not under long-term contract retain RECs**
- **Rate 980 Adjustments to Line Losses**
  - **Purchases made at voltage levels of 69kV or higher are paid the appropriate RT-LMP market clearing price**
  - **Purchases made at levels less than 69 kV:**

Purchase Voltage	Alternative A (hourly metering) On Peak	Alternative A (hourly metering) Off Peak	Alternative B (No time differentiated meter)
Bulk Substation	0.5%	0.34%	0.42%
Primary Distribution	4.38%	2.89%	3.60%
Secondary Distribution	7.13%	4.59%	5.80%

Source: http://www.cl-p.com/downloads/rate980.pdf?id=4294986720&dl=t

Rhode Island – Narragansett Electric Company (NEC)

- **NEC maintains tariff R.I.P.U.C. No. 2098 specifying QF power purchase rates for QFs less than 20 MW and *not* eligible for net metering:**

QF Criteria	Rate
Facilities meeting definition of renewable energy resources (Defined in R.I.G.L. Section 39-26-5)	Standard Offer Service (SOS) rate for the applicable retail delivery rate (based on QF capacity) for each kWh in excess of facility requirements.
All other QFs	Hourly clearing prices at ISO-NE for electricity generated in excess of requirements. QFs may receive payments for capacity and/or reserves-related products if recognized by NEPOOL or ISO-NE.

- **Resources meeting net metering eligibility subject to Net Metering Provision, R.I.P.U.C. No. 2075**
- **<u>NEC entitled to cost recovery for any differences in payments to QFs and actual payments received from ISO-NE through a uniform surcharge embedded in the distribution component from all customers</u>**

Sources: http://www.nationalgridus.com/narragansett/non_html/rates_tariff.pdf
http://webserver.rilin.state.ri.us/Statutes/title39/39-26/39-26-5.HTM
http://www.nationalgridus.com/non_html/RI_DG_Net_Metering_Tariff.pdf

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Maine – Maine PUC Rules Chapter 360

- **Chapter 360 specifies rates for sales of power from small power producers and cogeneration units**
  - **Short-term energy purchases**
    - Each T&D utility that has a QF contract shall file rates annually with the Commission calculated as "the sale prices accepted pursuant to the sale of the rights to the energy component of QF contracts"
  - **Standard rates for energy and capacity (QFs <1000 kW)**
    - Each T&D utility that has QF contract shall file rates annually with the Commission calculated as "the sale prices accepted pursuant to the sale of the rights to the energy and capacity components of QF contracts"
- **Maine statute indicates that rates are negotiated between the utility and the generator and if they are unable to agree they are set by the Commission**

Sources: http://www.maine.gov/mpuc/legislative/rules/part3-electric.shtml
http://www.mainelegislature.org/legis/statutes/35-A/title35-Asec3306.html

Maine – Maine PUC Rules Chapter 360

- **Net Metering: Any QF that has an installed capacity of 100 kW or less may opt to sell electricity to an electric utility on a net energy billing basis**
  - **If QF obtains retail generation service from a competitive electricity provider, net energy shall be purchased at rates agreed upon by the QF and the competitive electricity provider**
  - **If QF obtains SOS, net energy shall be purchased at rates established pursuant to the existing contract**
- **Line Losses: In determining rates for purchase of energy, the Commission may consider the costs or savings resulting from variations in lines losses from those that would have existed in the absence of purchases from a QF**

Sources: http://www.maine.gov/mpuc/legislative/rules/part3-electric.shtml
http://www.mainelegislature.org/legis/statutes/35-A/title35-Asec3306.html

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Maine – Maine PUC Rules Chapter 315

- **Under Chapter 315, eligible generators shall pay the utility's administrative costs pursuant to a rate schedule approved by the Commission**
- **Chapter 315 specifies standard offer provider purchase obligations of power from facilities 5 MW or less**
  - **Price is equal to the ISO-NE RT nodal clearing price at the node which the generator is located as adjusted for administrative costs or another price accepted by the Commission**
  - **Standard Offer Provider has transmission and distribution service territory where the eligible generator is located**
  - **Generator retains rights to GIS certificates**

Source: http://www.maine.gov/mpuc/legislative/rules/part3-electric.shtml

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Massachusetts - MA CMR 220, §. 8.05

- **Net Metering: On-site Generating Facilities (OSGF) less than 60 kW may elect net metering. Generation must serve the load at the same physical location as the QF or OSGF.**
- **Rates are market-based and set as follows:**

QF Capacity	Rate
>= 1 MW	"…equal to payments received by the Distribution Company from the ISO power exchange for such output for the hours in which the Qualifying Facility generated electricity in excess of its requirement." 220 CMR 8.05 (2)(a)
>60 kW and <1 MW	"…equal to the arithmetic average of the Short-run Energy rate in the prior calendar month for the KWH which the Qualifying Facility generated electricity in excess of its requirements."220 CMW 8.05 (2)(b)
<= 60 kW	Option to have same rates as QFs between 60 kW and 1 MW or to use net metering. 220 CMR 8.05 (2)(c)

Sources: 220 CMR 8.05 (6); 220 CMR 18.0; https://www.nationalgridus.com/masselectric/non_html/rates_tariff.pdf
http://www.lawlib.state.ma.us/source/mass/cmr/cmrtext/220CMR8.pdf

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Massachusetts - MA CMR 220, §. 8.05

- **Line Losses: Rates adjusted for line losses. Each Company files its line loss factors with the DPU.**
- **Capacity and Reserves: The Company shall make payments to a QF for capacity and/or reserves-related products if the sale is recognized by NEPOOL. The Company shall pay rates equal to the payments received for the sale of any capacity and/or reserves-related products associated with such QF output to the ISO power exchange.**
- **Allco Renewable Energy petitioned FERC for enforcement action against MA DPU for only allowing short term avoided cost rates and not long-term contract rates; FERC did not bring such an enforcement action**

Sources: 220 CMR 8.05 (6); 220 CMR 18.0; https://www.nationalgridus.com/masselectric/non_html/rates_tariff.pdf
http://www.lawlib.state.ma.us/source/mass/cmr/cmrtext/220CMR8.pdf; Allco Docket: EL14-84

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NYISO-Niagara Mohawk

- **Niagara Mohawk's tariff has Service Classification No. 6 for QFs**
  - **Energy payments based on Real Time LBMPs**
  - **Capacity payments made based on LBMCP paid based on the amount of unforced capacity supplied by the generator per NYISO rules**
  - **Minimum unit rate of no less than 6.0 cents/kWh averaged over the year may apply**
  - **Average LBMP rates may be used if no interval metering is available**
  - **QF may take payment directly from NYISO for ancillary services**
  - **Certain small renewable QFs with less than 5 MW of nameplate capacity may elect to take payment based on a Day Ahead LBMP and avoided ancillary service rate (no capacity payments)**

Sources: https://www2.dps.ny.gov/ETS/jobs/display/download/5589992.pdf

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NYISO-Con Ed

- **Con Ed's tariff has Service Classification No. 11 for buyback service for QFs**
  - **Customers may elect to sell capacity and energy directly into NYISO market or sell to Con Ed and be paid at NYISO market rates**
  - **For customers selling to Con Ed and are >1 MW, they submit a schedule of electricity export**
    - Scheduled deliveries are paid the Day Ahead price
    - Differences between scheduled and actual deliveries are paid the lower of the Real Time price or Day Ahead price, not to be lower than zero
  - **Customers selling to Con Ed that are less than 1 MW are paid a monthly average real-time price for all deliveries**
  - **Adjustment factor: for customers delivering at secondary distribution (delivery to NYISO or Con Ed), the LMP price will be increased by a factor of adjustment of 1.066 taken to the nearest cent**

Sources: https://www2.dps.ny.gov/ETS/jobs/display/download/5521018.pdf

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NYISO-Others

- **NYSEG has Service Classification No. 10 for QFs**
- **Rochester Gas and Electric has Service Classification No. 5 for Buy-Back Service for QFs**
- **Both provide market-based rates similar to the other utilities in the state**

Sources: https://www2.dps.ny.gov/ETS/jobs/display/download/5527506.pdf; https://www2.dps.ny.gov/ETS/jobs/display/download/5526916.pdf

PJM- Public Service Electric & Gas (PSE&G)

- **Distinct rate for Qualifying Facility as defined by PURPA**
- **Rate includes service charge, energy payment, and capacity payment**
  - **Energy payment in an month is based on "avoided energy cost by time period or by hour, as applicable, in that month (defined as the load weighted average Location Marginal Price (LMP) for the Public Service Transmission Zone)"**
  - **Capacity payment applicable when capacity exceeds 100 kw and capacity meets PJM criteria. If applicable, payments are based on revenue received by Public Service for selling such capacity in the final PJM capacity auction prior to delivery, "adjusted for all penalties and other charges assessed for non-performance or unavailability of such capacity"**

Tariff: B.P.U.N.J No. 15 Electric

Source: https://www.pseg.com/family/pseandg/tariffs/electric/pdf/electric_tariff.pdf Original Sheet No. 176

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PJM-Virginia Electric and Power

- **Schedule 19 provides for power purchases from QFs up to 20 MW**
- **QFs 10 kW or less may contract to supply energy only**
  - **Payments are based on average PJM market prices and are not time-differentiated**
  - **QFs cannot contract for more than 20,000 kW in capacity if electing for both**
- **Otherwise, QFs contract to supply energy and capacity**
  - **Energy is paid based on the hourly PJM Day Ahead LMP divided by 10 and multiplied by the hourly net generation as recorded by the Company's time differentiated meter, as adjusted for line losses**
    - Energy purchases are increased by 2.8% to account for line losses. A QF may request that the percentage be calculated from a line loss study at the location of interconnection, but the QF must bear the cost of the study
  - **Capacity is based on PJM's capacity resource clearing prices in the Dominion zone**

Source: https://www.dom.com/library/domcom/pdfs/virginia-power/rates/business-rates/schedule-19.pdf

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PJM-Baltimore Gas and Electric

- **Schedule X provides for power purchases from qualified cogenerator or small power producer**
- **Energy and capacity payments are paid based on applicable PJM market prices for time period when energy is produced and delivered to the Company, less any ancillary services costs and other related costs**

Source:http://www.bge.com/myaccount/billsrates/ratestariffs/electricservice/electric%20services%20rates%20and%20tariffs/p3_sch_x.pdf

MISO-Entergy

- **Entergy has significant QF capacity in its Louisiana service territory**
- **Entergy joined MISO in December of 2013**
  - **Integrating QF load into the market and paying QFs at market-based rates was part of the value proposition for Entergy to join an RTO**
- **Once Entergy joined MISO, QFs had the choice to either become MISO market participants or continue to put their energy to Entergy at avoided cost rates**
  - **The latter are called Behind the Meter (BTM) QFs**
- **The LPSC approved Entergy's request to pay BTM QFs at market-based rates after joining MISO (Order U-32628-A)**
  - **Prices are primarily based on Real Time LMPs**

Source: http://lpscstar.louisiana.gov/star/ViewFile.aspx?Id=203972a6-82b8-4e10-969d-954e8cf6e581

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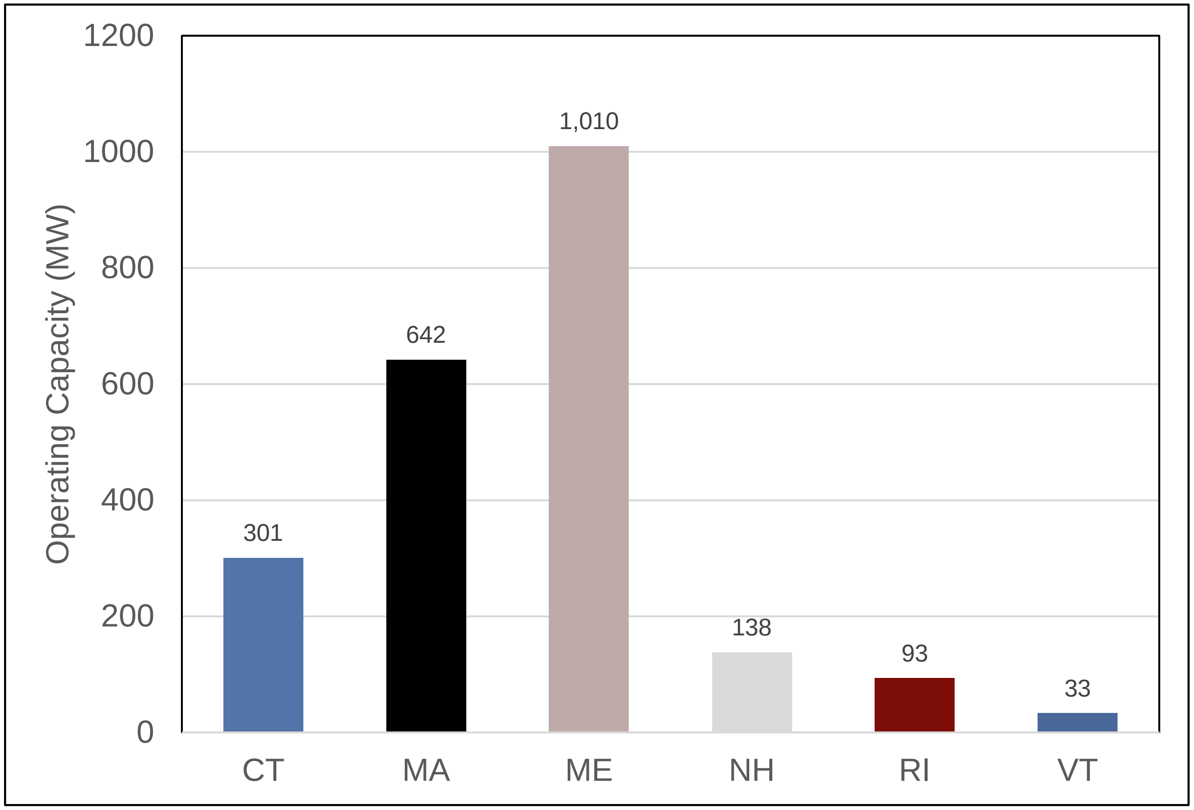
Qualifying Facilities in New England

- Pre-2000 QF Operating Capacity
  - **QF eligible generation Capacity which may not be using PURPA rates**
- Post-2000 QF Operating Capacity
  - **QF eligible generation Capacity which may not be using PURPA rates**

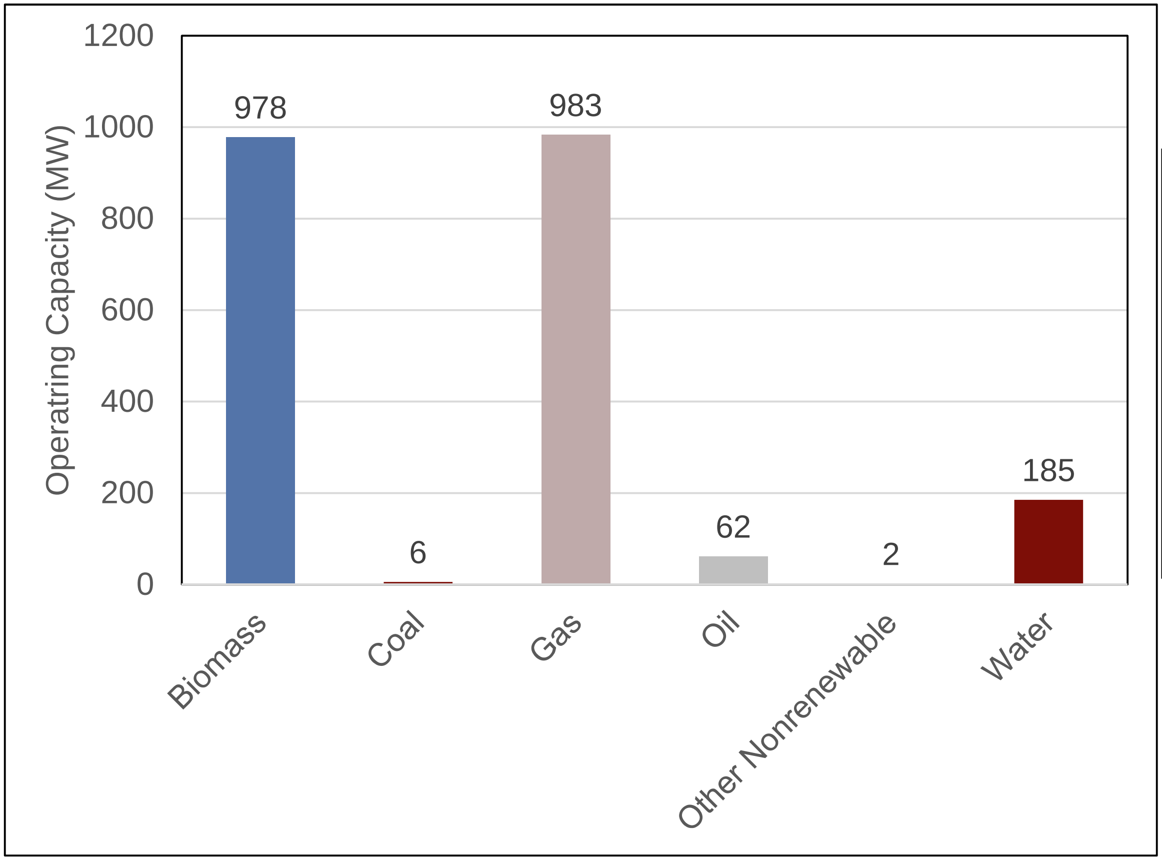
Pre-2000 QF Operating Capacity in New England



State	Total QF Operating Capacity (MW)
CT	301
MA	642
ME	1,010
NH	138
RI	93
VT	33
Grand Total	**2,216**

Source: Data retrieved using SNL

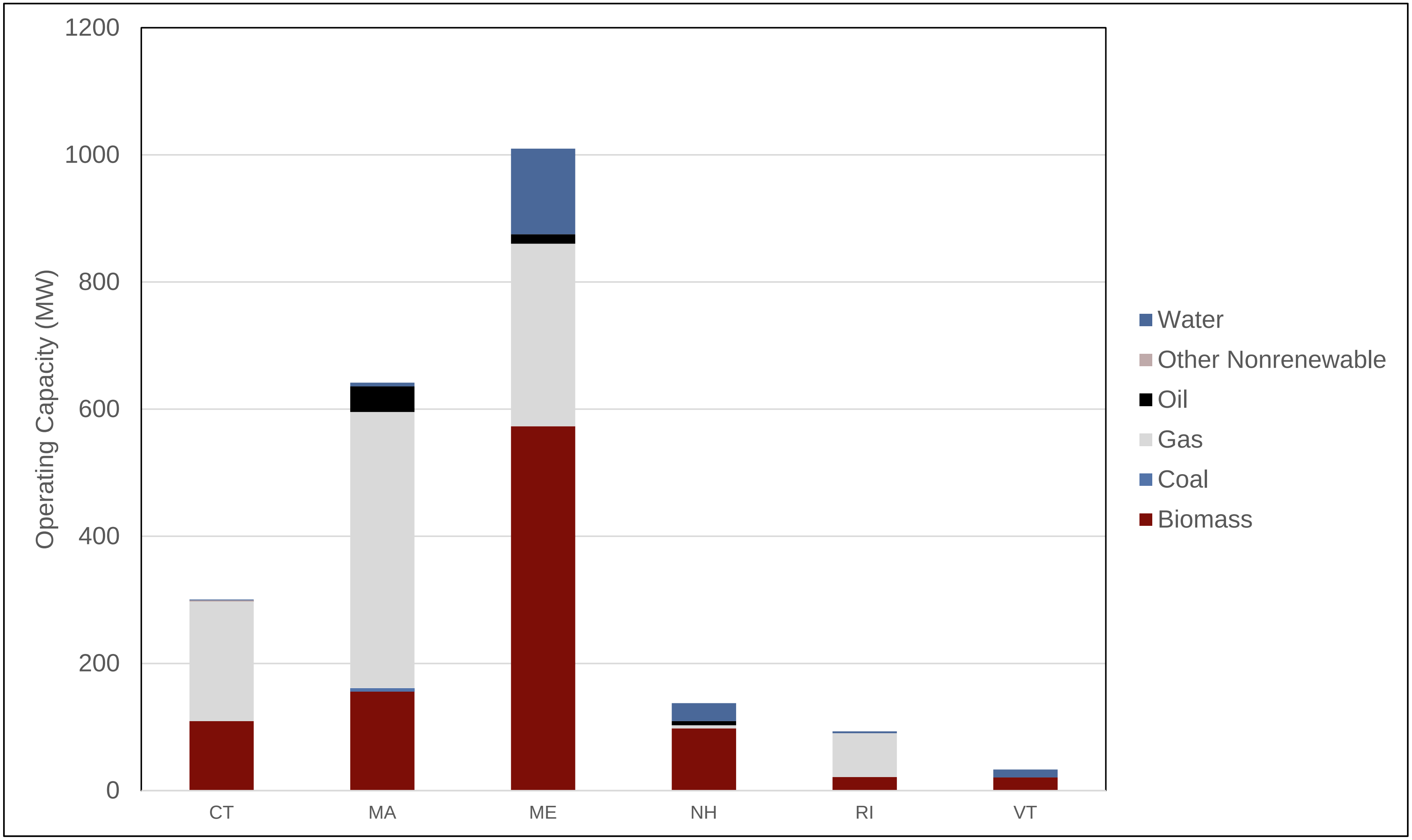
Pre-2000 QF Operating Capacity by Fuel in New England



Fuel Type	Total QF Operating Capacity (MW)
Biomass	978
Coal	6
Gas	983
Oil	62
Other Nonrenewable	2
Water	185
Grand Total	**2,216**

Source: Data retrieved using SNL

Pre-2000 QF Operating Capacity by State and Fuel



Source: Data retrieved using SNL

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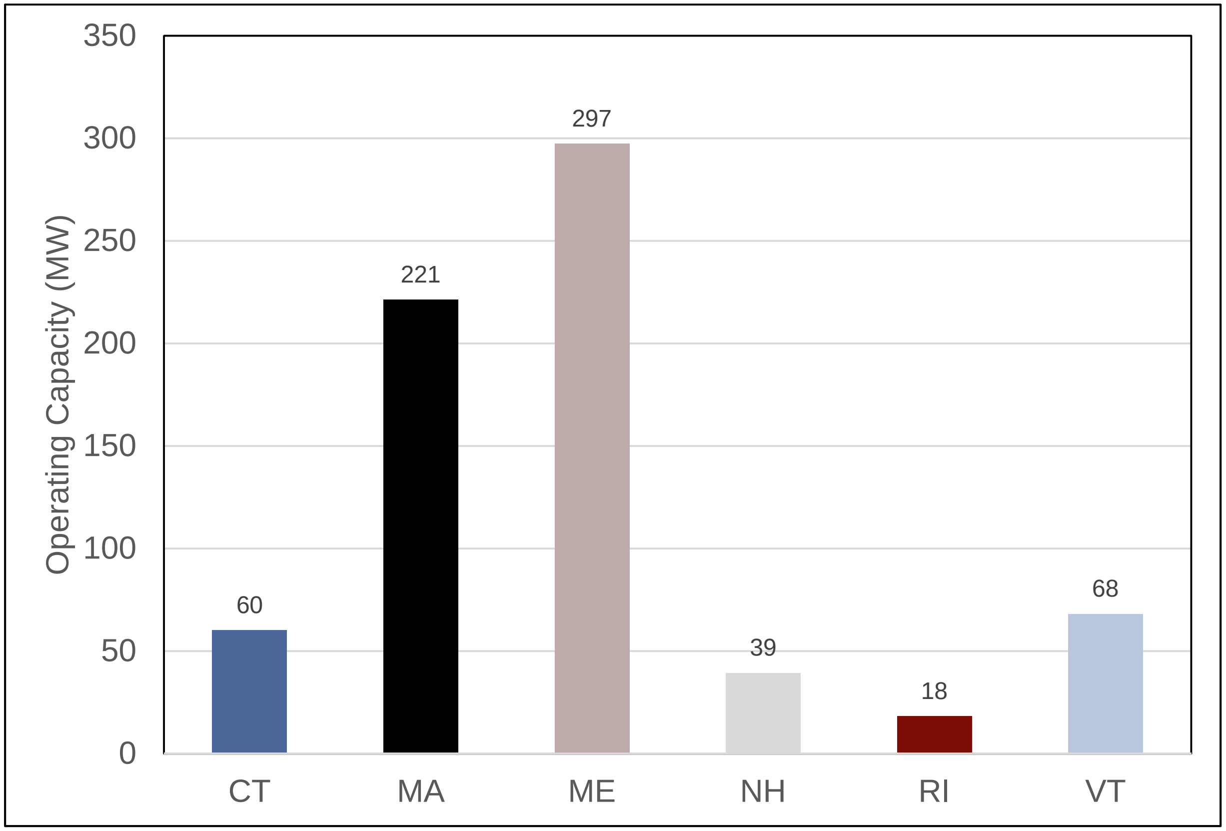
Post-2000 QF Operating Capacity in New England



State	Total QF Operating Capacity (MW)
CT	60
MA	221
ME	297
NH	39
RI	18
VT	68
Grand Total	**705**

Source: Data retrieved using SNL

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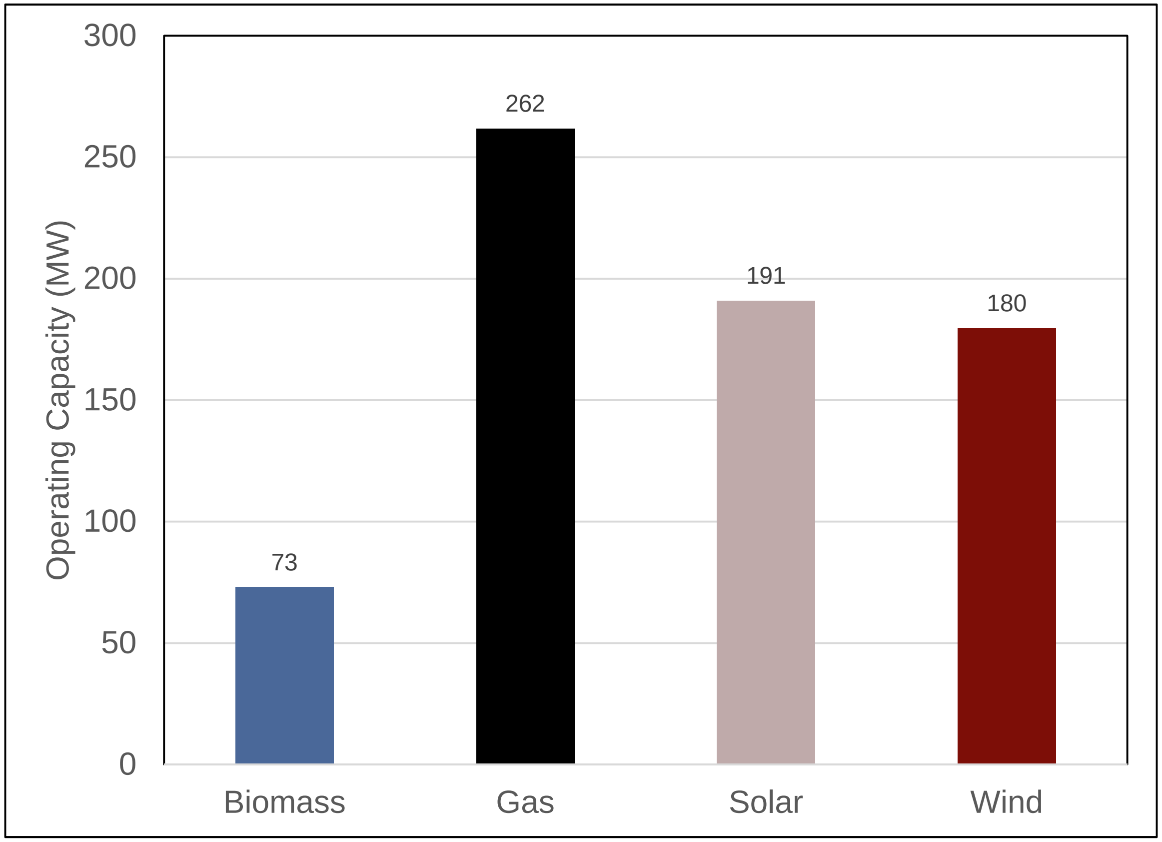
Post-2000 QF Operating Capacity by Fuel in New England



Fuel Type	Total QF Operating Capacity (MW)
Biomass	73
Gas	262
Solar	191
Wind	180
Grand Total	**705**

Source: Data retrieved using SNL

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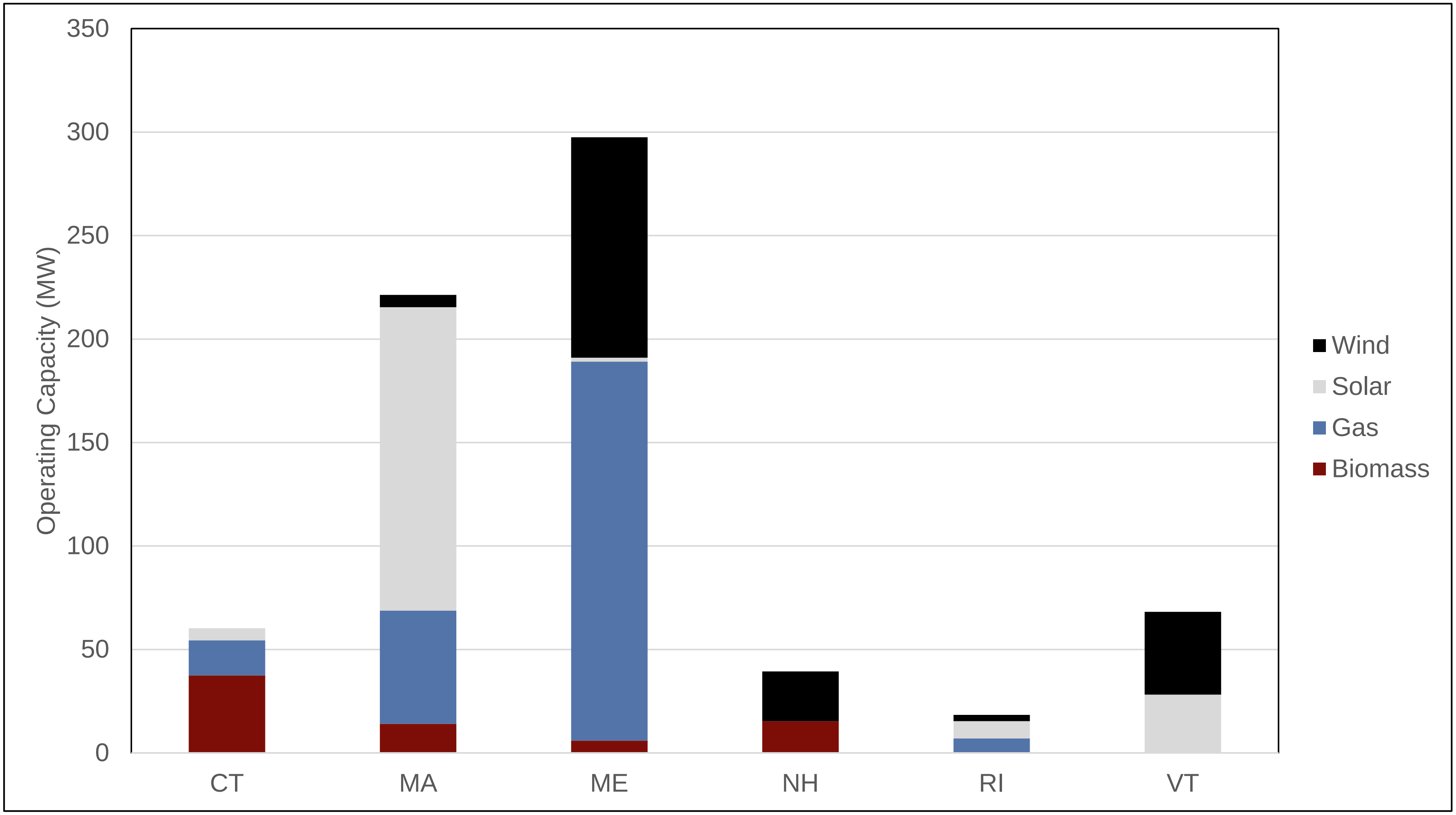
Post-2000 QF Operating Capacity by State and Fuel



Source: Data retrieved using SNL

N.H.P.U.C. No. 19 - ELECTRICITY

LIBERTY UTILITIES (GRANITE STATE ELECTRIC) CORP. D/B/A

LIBERTY UTILITIES

SUPERSEDING N.H.P.U.C. No. 18

TARIFF

for

RETAIL DELIVERY SERVICE

Applicable

in

Twenty-three towns in New Hampshire

served in whole or in part.

(For detailed description, see Service Area)

Dated: April 1, 2014
Effective: April 1, 2014

Issued by____________________
Richard Leehr
Title: President

Authorized by Order No. 25,638 Issued March 17, 2014 in Docket No. DE 13-063

ENERGY TRANSACTIONS WITH QUALIFYING FACILITIES

AVAILABILITY

The Company will purchase electric energy from any small power producer, cogenerator, or limited electric energy producer (collectively referred to as a qualifying facility, or QF) in its service territory (i) under the Limited Electrical Energy Producers Act (LEEPA, NH RSA Chapter 362-A) or (ii) under Section 210 of the Public Utility Regulatory Policies Act of 1978 (PURPA, 16 U.S.C. 824a-3) that meet the criteria specified by the Federal Energy Regulatory Commission (FERC) in 18 C.F.R. §§292.203 (a) and (b) . Such purchases will be in excess of the facility's requirements.

TERMS AND CONDITIONS

Any QF that plans to sell its electric output to the Company from a facility sized up to 100 kVA or 100 kW must comply with the Company's interconnection requirements as set forth in Granite State Interconnection Standards Provisions For Inverters Sized Up To 100 kVA as found on Page 76 of this Tariff.

For all other QFs, the Company must be notified in writing at least 120 days prior to interconnecting the QF with the Company's facilities. Such notification shall, at a minimum, include the following information:

a. The name, address and contact information of the applicant and location of the QF.
b. A brief description of the QF, including a statement indicating whether such facility is a small power production facility or a cogeneration facility.
c. The primary energy source used or to be used by the QF.
d. The power production capacity of the QF and the maximum net energy to be delivered to the utility's facilities at any clock hour.
e. The owners of the QF including the percentage of ownership by any electric utility or by any public utility holding company, or by any entity owned by either.
f. The expected date of installation and the anticipated on-line date.
g. The anticipated method of delivering power to the Company.
h. A description of any power conditioning equipment to be located between the QF and the Company's system.
i. A description of the type of generator used in the installation of the QF (synchronous, induction, photovoltaic, etc.).

Such notification shall be sent to:

Director of Engineering
Distribution Engineering Department
Liberty Energy Utilities (New Hampshire) Corp.
11 Northeastern Blvd
Salem NH 03079
Fax: 603-896-6175

The Company will respond to the notification within 30 days and either request additional information regarding the QF or provide site specific interconnection requirements. The Company and the QF shall execute the standard purchase power agreement setting forth the terms of the sale, a form of which is attached in Schedule A of this tariff.

PURCHASE OPTIONS

QFs with a peak generating capacity of 1,000 kWs and under may choose to utilize Net Energy Metering as specified in NH RSA 362-A:9 and in PUC 900 Net Metering For Customer-Owned Renewable Energy Generation Resources of 1,000 Kilowatt or Less.

QFs not utilizing Net Energy Metering shall have their electric energy output metered and purchased by the Company and then resold into the Real-Time Energy Market administered by ISO New England Inc. ("ISO-NE"). Such purchase will be equal to the payments received by the Company from ISO-NE less all charges imposed by ISO-NE for such sales.

The Company shall not purchase for resale any capacity or other reserve-related products associated with the QF. The Company will not purchase or own any of the generation attributes associated with the QF.

PAYMENT

For QFs not utilizing Net Energy Metering, within 30 days after the end of a month, the Company will provide the QF with a calculation showing the quantity of electric energy sold into the New England electric wholesale market, the payments received by the Company, and any charges imposed by ISO-NE on the Company for such sales. If the QF agrees with the Company's calculation, the QF will then issue an invoice to the Company for payment of such net electric energy sales. The Company reserves the right to require the QF to pay any administrative or service fees as may be assessed by the Company.

METERING

QFs selling to the Company shall install metering as specified by the Company that either (i) satisfy ISO-NE requirements or (ii) Net Energy Metering requirements, as both may change from time to time. QFs shall be charged a standard monthly service fee for metering service as approved by the appropriate regulatory agency.

INDEMNIFICATION

The QF shall defend, indemnify and hold the Company harmless from and against all claims for damage to the equipment of the QF, or Company, as the case may be, or damage or injury to any person or property arising out of the QF's use of generating equipment in parallel with the Company's own system; provided that nothing in this paragraph shall relieve the Company from liability for damages or injury caused by its own willful default or willful neglect.

SCHEDULE A

GRANITE STATE ELECTRIC COMPANY
QUALIFYING FACILITY POWER PURCHASE AGREEMENT

The Agreement is between_______________ , a Qualifying Facility ("QF") and GRANITE STATE ELECTRIC COMPANY (the "Company") for electric energy purchases by the Company from the QF's facility located at ________, New Hampshire.

AGREEMENT TO PURCHASE

Effective as of ___________, the Company agrees to purchase electricity from the QF and QF agrees to sell electricity to the Company under the terms and conditions of the Company's tariff for Energy Transactions with Qualifying Facilities ("QF Tariff") as currently in effect or amended by the Company in the Company's sole discretion and as approved by the New Hampshire Public Utilities Commission. The QF agrees to comply with the terms and conditions of the QF Tariff and associated policies of the Company that are on file with the New Hampshire Public Utilities Commission as currently in effect or as modified, amended, or revised by the Company, and to pay any metering and interconnection costs required under such tariff and policies.

PAYMENTS FOR ENERGY

The Company will pay the QF at rates equal to the payments received by the Company for electric energy sales from the QF's facility in the Real-Time Energy Market administered by ISO New England Inc. ("ISO-NE") net of all charges imposed by the ISO-NE for such sales, as provided for in the QF Tariff. The Company reserves the right to require the QF to pay any administrative or service fees as may be assessed by the Company.

NOTICE

The Company or QF may terminate this Agreement on thirty (30) days written notice which includes a statement of reasons for such termination.

AGREED AND ACCEPTED

________________________ Date:

________________________ Date:
Granite State Electric Company

NHPUC No. 3 - ELECTRICITY DELIVERY

Unitil Energy Systems, Inc.

SUPPLEMENT NO. 2

TARIFF FOR

ELECTRIC DELIVERY SERVICE

IN THE STATE OF NEW HAMPSHIRE

(Authorized by NHPUC Order No. 25,124 in Docket No. DE 10-055 dated June 29, 2010)

Issued: June 29, 2010
Effective: July 1, 2010

Issued by: Mark H. Collin
Treasurer

RATES APPLICABLE TO QUALIFYING FACILITIES
SCHEDULE QF

AVAILABILITY

The Company will purchase electricity from and provide certain service to any small power producer, cogenerator, or limited electrical energy producers (collectively referred to as a "Qualifying Facility" or, "QF") in its service territory as required by the New Hampshire Limited Electrical Energy Producer Act, N.H. RSA 362-A (LEEPA), or the Federal Public Utility Regulatory Policies Act Section 210 (PURPA).

PURCHASE RATES

Rates for Qualifying Facilities 1 MW or Greater

Qualifying Facilities that have a design capacity of 1 MW or greater shall have their output metered and purchased at rates equal to the payments received by the Company from the ISO-NE, net of all charges imposed by the ISO-NE for such output, for the hours in which the Qualifying Facility generated electricity in excess of its requirements.

Rates for Qualifying Facilities Less Than 1 MW

Qualifying Facilities with a design capacity less than 1 MW, shall have their output metered and purchased at rates equal to the arithmetic average of the Short-Run Energy rate in the calendar month, net of all charges imposed by the ISO-NE for such output, for the KWH which the Qualifying Facility generated electricity in excess of its requirements. The Short-Run Energy rate is the hourly market-clearing price for energy as determined by the ISO-NE and its successors.

Net Metering - Rates for Qualifying Facilities 25 kW or Less

Projects 25 kilowatts and under using solar, wind and/or hydro generation shall have the option of being served under Net Energy Metering as specified by NH RSA 362-A:9 and NHPUC Rules Chapter Puc 900, Net Metering For Customer-Owned Renewable Energy Generation Resources of 25 Kilowatts or Less.

RATES APPLICABLE TO QUALIFYING FACILITIES
SCHEDULE QF (continued)

Rates for Capacity and Reserves-Related Products

The Company shall make payments to a Qualifying Facility for capacity and/or reserves-related products if the sale is recognized by ISO-NE as a capacity and/or reserves-related product sale. The Company shall pay rates equal to the payments received for the sale of any capacity and/or reserves-related products associated with such Qualifying Facility output to the ISO-NE, net of all charges imposed by the ISO-NE.

Line Losses

Energy for purchases shall be adjusted to reflect the costs or savings in line losses that result from purchases from the Qualifying Facility. Because the appropriate line loss factor and adjustment may be unique to each interconnection, the Company will adjust the line loss factor on a case by case basis.

PAYMENT

Payment by Company for Power Supplied

A Qualifying Facility selling power to the Company may choose to receive a check from the Company as payment for power supplied or may have payment credited towards its bill from the Company.

Payment by Customer for Interconnection Costs

These payment provisions shall apply to new Qualifying Facilities who are taking service under this schedule. The Qualifying Facility shall pay all incremental interconnection costs that are a direct result of connecting the Customer's power production equipment to the Company's distribution system, including the cost of engineering studies that will be used to provide a more accurate assessment of interconnection costs. The Company's procedures for interconnection studies and cost estimates are set forth in Section V of Unitil Interconnection Requirements for Customer Owned Generation. The incremental cost of interconnection, including the cost of engineering studies, shall be paid in advance of any work undertaken by the Company.

The incremental cost of interconnection includes the costs of installation, equipment, operations and maintenance expense, property taxes, insurance, and all incremental modifications

RATES APPLICABLE TO QUALIFYING FACILITIES
SCHEDULE QF (continued)

to the distribution and transmission system to the extent such incremental modifications are for the sole benefit of the customer-generator and are necessary to incorporate the Customer's generation into the Company's distribution system. Costs of system improvements and equipment installed to provide retail service to the Customer consistent with the Company's Terms and Conditions for Distribution Service shall be excluded from the incremental cost of interconnection.

INTERCONNECTION STANDARDS

The Company's interconnection standards for Qualifying Facilities located within its service territory are set forth in Unitil Interconnection Requirements for Customer Owned Generation. These standards for interconnection shall apply to all new Qualifying Facilities taking service under this Schedule. Wholesale transactions shall follow the interconnection requirements or standards set forth by by the ISO-NE and the Federal Energy Regulatory Commission (FERC).

RATE FOR OTHER ELECTRICAL SERVICES

The Company shall, upon request by a Qualifying Facility, supply to a Qualifying Facility supplementary, back-up, maintenance, and interruptible power under the rate schedules applicable to all customers for such service, regardless of whether they generate their own power. Where it is possible for a Qualifying Facility to receive this service under the applicability clauses of more than one rate schedule, the Qualifying Facility may choose the rate schedule under which it will be served.

INDEMNIFICATION

The Qualifying Facility shall defend, indemnify and hold the Company harmless from and against all claims for damage to the Qualifying Facility's equipment or damage or injury to any person or property arising out of the Qualifying Facility's use of generating equipment in parallel with the Company's own system; provided that nothing in this paragraph shall relieve the Company from liability for damages or injury caused by its own willful default or willful neglect.

TARIFF PROVISIONS

The Company's complete Tariff where not inconsistent with any specific provisions hereof, is part of this Schedule.

RATES AND TERMS FOR PURCHASES FROM QUALIFYING FACILITIES

Rates per kilowatt-hour of Energy delivered to be paid by the Cooperative under its short-term rate policy for purchases of energy and capacity from Qualifying Facilities ("QF's") under PURPA.

For QF's directly connected with NHEC's facilities and QF deliveries to the NEPOOL Pool Transmission Facilities ("PTF") for sale to NHEC, the energy rate for each month shall be the monthly average clearing price (arithmetic average of the month's hourly energy clearing prices) for the NEPOOL Real-Time Energy Market as finally determined by ISO-New England.

1. Short-term purchases shall be subject to written agreement between NHEC and the Qualifying Facility. NHEC requires a minimum 10-business days notice for initiation of purchases.
2. Rates per kilowatt-hour delivered shall be for Energy plus all NEPOOL market products to the extent provided in conjunction with such Energy.
3. Short-term purchases shall be for all-hours for single or multiple full calendar month periods.
4. The QF shall be responsible for transmission service and transmission losses to the NEPOOL PTF.

STATE OF NEW HAMPSHIRE

PUBLIC UTILITIES COMMISSION

May 27, 2015 - 1:04 p.m.
Concord, New Hampshire

RE: **IR 14-338**
ELECTRIC UTILITIES:
Review of Default Service Procurement Processes for Electric Distribution Utilities.

PRESENT: Chairman Martin P. Honigberg, Presiding
Commissioner Robert R. Scott

Sandy Deno, Clerk

APPEARANCES: **Reptg. Public Service of New Hampshire d/b/a Eversource Energy:**
Matthew J. Fossum, Esq.

Reptg. Liberty Utilities (Granite State Electric) Corp.:
Sarah B. Knowlton, Esq.

Reptg. Unitil Energy Systems:
Gary Epler, Esq.

Reptg. NextEra Energy Power Marketing:
Susan S. Geiger, Esq. (Orr & Reno)

Reptg. Briar Hydro Associates:
Andrew Locke
Richard Normand

Court Reporter: Steven E. Patnaude, LCR No. 52

APPEARANCES: **(C o n t i n u e d)**

Reptg. Constellation Energy/Exelon:
Daniel Allegretti

Patricia Martin, *pro se*

Reptg. the Office of Energy & Planning:
Meredith Hatfield, Esq., Director
Molly Connors

Reptg. Residential Ratepayers:
Susan Chamberlin, Esq., Consumer Advocate
Pradip Chattopadhyay
Office of Consumer Advocate

Reptg. PUC Staff:
Suzanne G. Amidon, Esq.
Leszek Stachow, Asst. Director/Electric Div.
Amanda Noonan, Director/Consumer Affairs Div.
Grant Siwinski, Electric Division

MR. ALLEGRETTI: Thank you, Mr. Chairman. We're not supportive of the Briar Hydro proposal. And, I want to try again giving you the perspective of a wholesale supplier of default service. We see this issue come up all the time in connection with net metering programs. And, there is a tendency to confound two fundamentally different products in the marketplace. One is wholesale energy and the other is retail electric service. When we bid to provide a default service, we are offering to provide what is fundamentally retail electric service down to the customer meter. And, this includes a lot of things. It includes energy, ancillary services, line losses, but it also includes a bid component, which is managing the variable load risk. Electricity is a completely unique product, in that it has to be manufactured and delivered in the same instant that it is consumed, without anyone telling you in advance how much they're going to buy. That's a very tricky thing to provide. And, it requires a large amount of portfolio management. We have to put together a portfolio of hedges, manage weather risk, bid the load into the day-ahead market, we have to look at outage risks, we have to look at gas prices. We do all of this from our trading floor with a lot of people and a lot of effort. And, the cost of providing all of that service is bundled down into a single number, a cents per kilowatt-hour. That is the number we bid in a default service solicitation. It includes all of these components, all of this service that comes around the basic concept of energy.

By contrast, there is a wholesale price of energy. If you happen to have some, you'd like to sell it, there's a wholesale spot price, there's a day-ahead price and a real-time price. And, we've been implementing PURPA in this state and across the region in reliance on this, this wholesale market, with either the day-ahead or the spot price representing the avoided cost. Because that's really the value of wholesale energy, that comes without being scheduled well in advance, without coming in a known schedule.

If we were to try and manage with variable load risk on a portfolio of constantly changing demand, and we add to that an unknown variability in the supply coming out of a facility like Briar Hydro, it actually creates more of a variable load risk, this variable risk. It makes it more expensive and difficult to manage that portfolio.

So, the idea that the value of the energy coming out of Briar Hydro is comparable to the retail electric price of default service is simply confounding the two different products. And, we don't believe that the proposal would result in lower costs to the consumers. We think it would actually have the opposite effects. That in states struggling with net metering programs have discovered, the math ends up not adding up. And, the EDCs end up having to sell the energy back into the wholesale market, and then recover the difference through reconciliation charges to customers.

So, there is a subsidy here. If you want to subsidize hydroelectric generation, that's a matter of state policy. There are more efficient ways to do it than creating more variable load risk for default service. So, we would strongly argue against adopting the Briar Hydro proposal.

CHAIRMAN HONIGBERG: Does anyone on the other side of the room want to comment on anything that was just said by either Mr. Allegretti or Mr. Locke? Looks like the answer to be "yes". Mr. Warshaw.

MR. WARSHAW: I do concur with Mr. Allegretti's comments. And, you know, Briar Hydro has to, you know, has to define "well, who is their competition?" They're not a retail provider, they're a wholesale generator. The other competition in that arena is other

Q-PSNH-18. Do any of the GSHA's QFs provide any ancillary services? If yes, please identify each resource, which services they provide, and how much did they provide in each year from 2012 through 2014.

Original Objection: GSHA objects based upon relevance and materiality. Whether a QF provides any ancillary service has absolutely no bearing on the determination of the correct avoided cost definition in this docket. GSHA also objects because it does not require, maintain or collect the specific member information requested in this data request.

Supplemental response: Mr. Norman is unaware of QFs providing ancillary services.