

Public Utilities Commission

ISO-NE Distributed Generation Forecast Working Group

New Hampshire Update

on

*State Distributed Generation
Policy Drivers*

December 5, 2019



Topics

- Net Metering
 - Solar PV Installed Capacity Data and Trend
 - New Hampshire RPS & Net Metering Credit for Class II (Solar) Compliance
 - Alternative Net Metering Tariff Docket Update
- New Hampshire Distributed Generation Policy Drivers
 - 2019 Legislative Update
 - 2020 Legislative Service Requests

Net Metered Solar Facilities as of August 2019

Electric Distribution Utility	Total # Installs to Date*	Total Installed Capacity (MW)*
Liberty Utilities	537	6.095
New Hampshire Electric Coop.	998	8.305
Eversource Energy	6,460	68.292
Unitil Energy Systems, Inc.	879	8.663
Total Net Metered Facilities	8,874	91.712

*Based on the utility reports to DOE EIA-861M (formally EIA-826) including system expansions.
(Downloaded November 2019. Data is through August 2019)

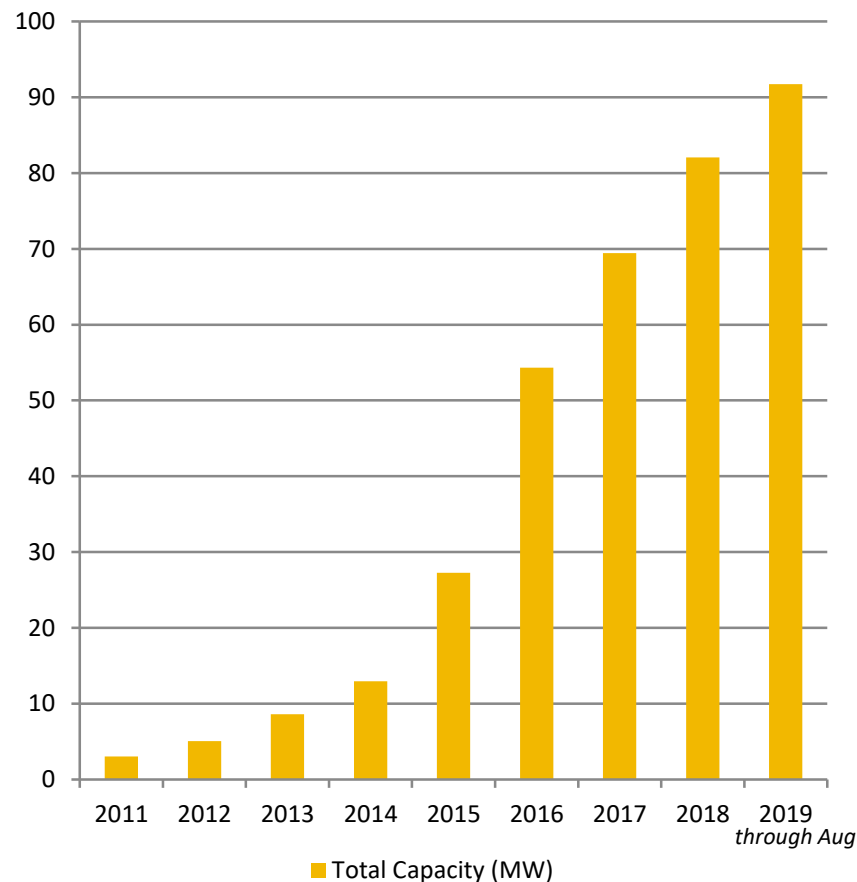
Net Metering Capacity Trend (Solar only)

Net Metered Solar PV Capacity

Installed PV Statewide:

3.020 MW (Dec. 2011)
5.060 MW (Dec. 2012)
8.621 MW (Dec. 2013)
12.976 MW (Dec. 2014)
27.247 MW (Dec. 2015)
54.309 MW (Dec. 2016)
69.421 MW (Dec. 2017)
82.064 MW (Dec. 2018)
91.712 MW (Through Aug. 2019)

Net Metered Solar PV Capacity



Net Metering – Annual Increases (Solar only)

Year	Total Capacity (MW)	Year-to-Year Increase (MW)
2011	3.02	3.02
2012	5.06	2.04
2013	8.621	3.561
2014	12.976	4.355
2015	27.247	14.271
2016	54.309	27.062
2017	69.421	15.112
2018	82.064	12.643
2019	91.712*	9.648*

*2019 Data is through August only

NEM Tariff Overview & Net Metering Docket (DE 16-576)

- Effective Date for New Alternative Net Metering Tariff is September 1, 2017
 - Existing NEM systems are grandfathered through 2040.
 - New systems (under new tariff) are also grandfathered through 2040.
 - New tariff applicable for only Eversource, Unitil and Liberty Utilities; not for New Hampshire Electric Cooperative.
 - Shift from kWh credit to monetary bill credit
 - Credit carries forward on customer bill

- Pilot programs and studies continue
 - Locational Value of Distributed Generation Study – in process
 - Value of Distributed Energy Resources Study – 2020?

State Policies and Programs

- New Hampshire's RPS (RSA 362-F)
 - Class II (Solar) RPS requirement : 0.3% in 2017, 0.5% in 2018, 0.6% in 2019, and 0.7% in 2020 and beyond
 - Rebates and Grants supported by the RPS:
 - FY18 = ~\$3.6 million
 - FY19 = ~\$5.2 million
 - FY20 = ~\$3.7 million
 - Renewable energy certificates (RECs) awarded to eligible, certified, renewable generators
- New Hampshire's Net Metering & Group Net Metering (RSA 362-A:9)

Class II NEM Credit

2015 = 0.1784%

2016 = 0.2484%

2017 = 0.4026%

2018 = 0.4673%

2019 and beyond = ? %

RPS & Net Metering 2019 Legislative Updates

2019 Legislation

Legislation Enacted - Net Metering

- **Senate Bill 165** provides for on-bill credits and establishes a \$0.03/kWh adder until July 1, 2021 (and \$0.025/kWh thereafter) for low-moderate income community solar projects. Also requires the PUC to authorize two new low-moderate income community solar projects in each utility service territory beginning in 2020.

Legislation Vetoed - Net Metering & RPS

- **HB 365**— increase the project net metering cap size from 1 up to 5MW. Bill included "load reducer" language.
- **SB 168** - increase the requirements for new solar energy under the Renewable Portfolio Standards from 0.6% in 2019 to 5.4% in 2025.

RPS & Net Metering

2020 Legislative Service Requests

2020 LSRs Filed (*as of December 3, 2019*)

- 2276: relative to incentives for energy efficiency projects and renewable energy infrastructure by C&I ratepayers
- 2309: establishing a committee to study attainment of a clean energy electric grid by 2030
- 2310: clarifying renewable portfolio standards
- 2370: relative to the installation of solar energy systems in condominium and homeowner associations
- 2388: relative to net energy metering and limits for customer generators
- 2418: allowing increased net energy metering limits for municipal hydro electric facilities
- 2618: repealing the preservation and use of renewable energy to provide fuel diversity

RPS & Net Metering

2020 Legislative Service Requests

2020 LSRs Filed (*as of December 3, 2019*)

- 2623: relative to renewable energy credits
- 2626: relative to the net metering cap for customer generators
- 2168: establishing a committee to study applications of microgrids in electricity supply
- 2066: relative to the definition of "eligible facility" as it pertains to renewable energy generation to provide diversity
- 2420: relative to group net metering
- 2587: relative to condominium unit owners installation of solar PV systems
- 2153: relative to net energy metering and establishing procedures for municipal host customer-generators

Thank you

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Net Energy Metering Tariff - Systems Less Than or Equal to 100 kW_{AC}

Bill Component	NEM 1.0 (Standard NEM)	NEM 2.0 (Alternative NEM)
Customer Charge	Must Pay	Must Pay
Demand Charge (if applicable)	Must Pay	Must Pay
Default Service (Energy)	Full Credit	Full Credit
Distribution	Full Credit	25% Credit
Transmission	Full Credit	Full Credit
System Benefits	Full Credit	No Credit
Stranded Cost	Full Credit	No Credit
Storm Recovery	Full Credit	No Credit
Credit Mechanism (end of each billing cycle)	Net kWh Carried Forward	kWh converted to monetary credit. Monetary credit carried forward as a bill credit.

Volumetric charges based on kWh

“Non-bypassable Charges”
Under NEM 2.0 Tariff, these charges are applied to **all** kWh imports.

No credit is given for exported kWh.

For ease of reference, **NEM 1.0** (Standard NEM) refers to the net metering tariff in effect prior to September 1, 2017 and **NEM 2.0** (Alternative NEM) refers to the net metering tariff in effect beginning September 1, 2017.

Net Energy Metering Tariff - Systems > 100 kW_{AC} and ≤ 1 MW_{AC}

Volumetric charges based on kWh

Bill Component	NEM 1.0 (Standard NEM)	NEM 2.0 (Alternative NEM)
Customer Charge	Must Pay	Must Pay
Demand Charges	Must Pay	Must Pay
Default Service (Energy)	Full Credit	Full Credit
Distribution	No Credit	No Credit
Transmission	No Credit	No Credit
System Benefits	No Credit	No Credit
Stranded Cost	No Credit	No Credit
Storm Recovery	No Credit	No Credit
Credit Mechanism (end of each billing cycle)	Net kWh Carried Forward	kWh converted to monetary credit. Monetary credit carried forward as a bill credit.

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