

Public Service Company of New Hampshire d/b/a Eversource Energy
Docket No. DE 23-091

Date Request Received: August 14, 2024
Record Request No. RR-001

Date of Response: August 19, 2024
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Request from: New Hampshire Public Utilities Commission

Witness: ANDERSON, SCOTT; CHEN, YI-AN; Robinson, Bryant K

Request:

With reference to the Company's "Net Metering Expense" (as shown in Exhibit 7, Bates 32, Line 2), please provide the following information for a recent historical period of 6-12 months:

- (a) The number of small customer-generators (i.e., net-metered facilities with 100 kW or less AC capacity);
- (b) The number of large customer-generators (i.e., net-metered facilities with greater than 100 kW AC capacity);
- (c) The aggregate dollar amount credited or paid to small customer-generators during the period;
- (d) The aggregate dollar amount credited or paid to large customer-generators during the period; and
- (e) The total dollar amount credited or paid to all net-metered customer-generators during the period.

Response:

Please see below for "Net Metering Expense" information for the recent 12-month period July 2023 to June 2024:

- a) There were 16,563 small customer-generators (i.e., net-metered facilities with 100 kW or less AC capacity).
- b) There were 162 large customer-generators (i.e., net-metered facilities with greater than 100 kW AC capacity).
- c) A total of \$15.8 million was credited or paid to small customer-generators during the 12-month period, based on data extracted from the Company's C2 billing system*.
- d) A total of \$19.7 million was credited or paid to large customer-generators during the 12-month period, based on data extracted from the Company's Large Power Billing (LPB) system*.

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- e) The aggregate total of \$35.5 million was credited or paid to all net-metered customer-generators during the 12-month period.

**The C2 system generally captures small customer projects and LPB generally captures large projects. However, this is not 100% accurate, as small and large customer projects are not necessarily assigned to one billing system or another. It just so happens that most, if not all, of the projects designated as large projects under the net metering tariff are captured in the LPB system. But there may be projects that fall into the large category that are billed in the C2 system. This was the best information the company could provide in the amount of time that was given to answer the question. Net metered projects are not designated in the system as small and large, or "residential" and "commercial", so the data requested is not readily available using those categorizations.*

Reply to Settling Parties Response to Commission Request for Costs of New Metering Program for Eversource

Generally the Coalition does not disagree with the Settling Parties indicative value comparison between the ~ \$36 million cost of Eversource’s net metering program for the 12 months ending June 2024, we do take exception to a couple of points: 1) the appropriate high end value captured by Solar PV Systems (line 5 and 7 on p. 2 of Settling Parties Attachment A; and 2) the assumption that all of the costs were for load reducing customer-generators.

On the first point the high end value of \$0.19kWh drawn from Exh. 9 Table B.3 (Bates p. 7) is specifically for west facing PV, both residential and commercial. Exh. 8 at 71 notes that: “West-facing PV systems provide 5-10% greater avoided cost value overall, although currently in New Hampshire south-facing systems are most commonly installed because of production incentives embedded in the current NEM Tariff structure.” This was further validated during the 8/20/24 hearing (Tr. at 69:6 to 70:6), so it not reasonable that the average value of mostly south facing PV would be that of west facing PV. The next highest value in Table B.3 is \$0.18 for south facing residential and commercial PV, which would seem be a more representative value of PV installed in NH overall. Thus the table in Settling Parties Att. A, p.2 would change with the red annotations:

Indicative Value of Solar PV Generation in Eversource Service Territory			
<u>Line</u>			
1	Eversource NH installed solar capacity (Cumulative MW)	179	ISO-NE Final 2024 Photovoltaic (PV) Forecast, page 49
2	Annual Capacity Factor (NH)	14.2%	ISO-NE Final 2024 Photovoltaic (PV) Forecast, page 16
3	Annual estimated generation (kWh)	222,661,680	Line 1 x 1,000 x 8,760 x Line 2
4	Value Captured by Solar PV Systems -Low (\$/kWh)	\$0.15	Exhibit 9, New Hampshire Value of Distributed Energy Resources - Addendum, Table B.3
5	Value Captured by Solar PV Systems -High (\$/kWh)	\$0.19 \$0.18	Exhibit 9, New Hampshire Value of Distributed Energy Resources - Addendum, Table B.3
6	Annual estimated value of PV generation - Low	\$33,399,252	Line 3 x Line 4
7	Annual estimated value of PV generation - High	\$42,305,719 \$40,079,102	Line 3 x Line 5

The next adjustment should be to account for the compensated CGs that do not function as load reducers because they are registered with ISO-NE as Generators (market participants). First we examine the detailed breakdown of avoided costs for the summary values presented in Table B.3. These can be found at Exh. 9, p. 18 Table 5 for Commercial South-Facing Solar PV

Array Installed in 2024; p. 30 Table 17 for Large Group Host Commercial Solar PV; as well as p. 35, Table 22 for “Micro Hydro” systems, as many of the dual market participants are hydro. These are presented side by side below. The highlighted cells are those avoided cost values that are only produced by “load reducer”, i.e. non ISO-NE market participants. At the bottom are the sum of those values, divided by “Total No Environmental” for the % of the avoided cost value only produced by load reducers. This categorization is based on a careful read of the explanations by Dunsky in Exh. 8, pp. 8-11.

Commercial S. Facing Solar

Large Group Host

Hydro

	2024		2024		2024
Energy	0.065	Energy	0.070	Energy	0.076
Transmission Charges	0.042	Transmission Charges	0.028	Transmission Charges	0.042
Distribution Capacity	0.022	Distribution Capacity	0.015	Distribution Capacity	0.008
Capacity	0.018	Capacity	0.012	Capacity	0.004
Distribution Line Losses	0.003	Distribution Line Losses	0.000	Distribution Line Losses	0.000
RPS	0.002	RPS	0.000	RPS	0.000
Transmission Line Losses	0.003	Transmission Line Losses	0.002	Transmission Line Losses	0.002
Risk Premium	0.011	Risk Premium	0.010	Risk Premium	0.010
Ancillary Services	0.003	Ancillary Services	0.003	Ancillary Services	0.003
DRIP	0.008	DRIP	0.007	DRIP	0.007
Distribution OPEX	0.005	Distribution OPEX	0.004	Distribution OPEX	0.002
Utility Admin	-0.001	Utility Admin	-0.001	Utility Admin	0.000
Environmental Externality	0.057	Environmental Externality	0.059	Environmental Externality	0.060
Total – No Environmental	0.182	Total – Excluding Environmental	0.152	Total – Excluding Environmental	0.154
Total – Including Environmental	0.239	Total – Including Environmental	0.211	Total – Including Environmental	0.214

Avoided Cost Values not produced by ISO-NE Market Participants

Total for Commercial S. Facing Solar = $\$0.147/0.182 = 80.8\%$

Total for Large Group Host PV = $\$0.125/\$0.152 = 83.3\%$

Total for Micro Hydro = $\$0.137/\$0.154 = 88.9\%$

The next task is to estimate the annual production for ISO-NE market participants. In Exh. 13, p. 70 Eversource identified that they have 38 hydroelectric, 10 PV, and 1 Gas generator participating in net metering that are ISO-NE market participants. Also in Exh. 13 at p. 55, line 6, columns R and U are

Eversource’s report of the 2022 annual kWh exported to the grid by 10 large PV systems and 10 large hydroelectric CGs, respectively. If we assume that the 1 gas (presumably landfill gas) CG has production equal to two of the large hydroelectric plants we can multiply the produce value for 10 large hydros by 3 and add that to the 10 large PV systems to get an approximate value for annual production for all net metered ISO-NE market participants. We can also multiply that production by the avoided cost values not produced to get an indicative value of avoided costs not realized by ISO-NE market participants:

10 large PV	5,807,540 kWh	X 1 =	5,807,540 kWh	X \$0.147 =	\$853,708
10 large hydros	16,886,125 kWh	X 3 =	50,658,375 kWh	X \$0.125 =	\$6,332,297
				Total =	\$7,186,006

The offsetting market revenue produced by such ISO-NE market participants was reported in DE 23-091, Exh. 7, Att. YC/SRA-15, Bates p. 87, line 3 for July 2023 – January 2024 and Bates page 85 for February 2024 through June 2024 and totals \$3,956,000, reducing the foregone avoided costs to about \$3 million.