Public Service Company of New Hampshire d/b/a Eversource Energy
Docket No. DE 22-060

Date Request Received: November 25, 2024 **Date of Response: January 21, 2025**
Data Request No. PUC 1-002 **Page 1 of 2**

Request from: New Hampshire Public Utilities Commission

Request:

In a live Excel file, while affording necessary privacy protection for the public version, please provide a list of all customer-generators currently enrolled in your company's net-metering program. The list should include the following data:

a. The billing address and name of the customer on the billing statement.
b. Whether the customer-generator is a residence or a business.
c. The date the customer-generator enrolled in your company's net-metering program.
d. The peak generating capacity of the customer-generator.
e. Whether the customer-generator is categorized as small or large.
f. The number of plots of land on which the customer-generator maintains its facilities.
g. For all customer-generators receiving any net-metering credits for the full year between July 1, 2023 and June 30, 2024, provide that customer- generator's total consumption per month in kWh for each of the twelve months.
h. For all customer-generators receiving any net-metering credits for the full year between July 1, 2023 and June 30, 2024, provide that customer- generator's total production per month in kWh for each of the twelve months.
i. For all customer-generators receiving any net-metering credits for the full year between July 1, 2023 and June 30, 2024, provide the net-metering credits or debits, in dollars and kWh, attributed to that customer per month for each of the twelve months.

Response:

Eversource retrieved the data requested in the question from its two billing systems and the Powerclerk software used for distributed generation applications. However, a couple things must be noted. First, the billing systems were unable to combine all twelve months of customer data for each customer, so each month for each customer appears as a separate line entry. Eversource has 17,267 net metered customers, so there are approximately 76,000 lines of data, 12 for each customer. It should also be noted that not all customers have been net metering for the full time period requested in the question. Instead of omitting those customers altogether, the Company provided those months for which it had data.

a. Please see Attachment PUC 1-002 for Eversource's data, provided confidentially to the Commission only.

b. The Company does not enter a designation of business or residence into its billing systems. However, a reasonable assumption can be made that if a customer is on residential Rate R, the customer-generator is a residence, and if on any other rate (i.e. Rate G, GV, or LG) the customer is a business. There may be exceptions where this assumption is not accurate, but to be responsive to the question Eversource applied this assumption when providing this data in Tab 1 (C2) column E, Tab 2 (LPB all commercial) of Attachment PUC 1-002
c. The Company has a program enrollment date, which Eversource has provided in Tab 1(C2) column AC, Tab 2 (LBP) column W in Attachment PUC 1-002
d. Please see Tab 1 (C2) AA Tab 2 (LPB) U of Attachment PUC 1-002.
e. Eversource's billing systems do not tag customer-generators by whether they are designated as small or large pursuant to Puc 202.26. However, in general customer-generators in Eversource's C2 billing system are small, and those in the Large Power Billing system are large customer-generators. To be responsive to the question, Eversource applied this assumption to provide the data in Tab 1 (C2) All Small, Tab 2 (LPB) All Large of Attachment PUC 1-002, which states either "C2" or "LPB". This assumption will be mostly, but likely not 100%, accurate, as there will be exceptions to this assumption.
f. Eversource does not have this information, nor is this information readily available.
g. Eversource does not have information for behind the meter consumption that the customer-generator takes from its own generation. Therefore, the information provided in Tab 1 (C2) W Tab 2 (LPB) Column C (used) of Attachment PUC 1-002 is for total front-of-the-meter consumption.
h. Eversource does not have information for production that is consumed by the customer-generator behind the meter. Therefore, the information provided in Tab 1 (C2) column V Tab 2 (LPB) Column D of Attachment PUC 1-002 is only for the production that is exported to the distribution system.
i. Please see Tab 1 (C2) Column U Tab 2 (LPB) column F of Attachment PUC 1-002.

Eversource provides Attachment PUC 1-002 confidentially, as the Attachment is comprised of personally identifiable information of Eversource customers, and which Eversource is legally obligated to protect from dissemination pursuant to RSA 363:37 and 363:38. Redacting the PII cannot be done in excel and would be exceedingly onerous to do in a .pdf.

Request from: New Hampshire Public Utilities Commission

Request:

If the netting is changed to hourly netting for small customer-generators for the energy component, please explain what changes the utilities will need to make to the metering infrastructure and estimate the cost to implement each change. Also explain what changes will be required if the netting for small customer-generators for the energy component is changed to five-minutenetting.

Response:

The question asks what changes would need to be made to enable the functionality in the question, but there are no changes that could be made to existing Eversource billing systems to support hourly netting energy of the component of small customer-generator bill that the existing systems could sustain, the reasons for which are explained in more detail below. Additionally, to properly determine with any specificity what exactly would be required to implement hourly or five-minute netting of the energy component of small customer-generator bills, a more in-depth, comprehensive discussion must be conducted as to the functional and policy objectives being sought and any related concerns stemming from those objectives (e.g. costs, unintended consequences, utility operational impacts, etc.). Such determinations would directly inform what ultimately might be required, particularly with respect to available or needed capabilities and functionality necessary for implementation. Such a change would not happen in a vacuum: there would be ripple effects which should be considered as well. Once all pragmatic and policy considerations are accounted for, detailed implementation specifications could be developed, and at that point the Company could create a granular description of the requirements to achieve hourly or five-minute netting of the energy component on the customer-generator bill. However, to be responsive to the question Eversource can describe at a high-level the major components needed to have the ability to offer and sustain hourly or five-minute netting of the energy component of small customer-generator bills.

Currently, Eversource small customer-generators (total peak generating capacity less than or equal to 100 kW) use scalar bidirectional co-generation ("COGEN") meters and are billed through Eversource's Customer Information billing system (C2), which is the billing system used to bill all residential and small general service rate customers (small business, or Rate G customers). These scalar meters capture monthly volumetric usage for the energy component. Monthly customer kWh purchased from Eversource are subtracted from monthly customer kWh sales (exports) to get the net monthly kWh that appear on the customer-generator bill. Hourly usage data is

currently not available for these small customer-generators, and the C2 system cannot accommodate the incorporation of changes to thousands of customers to account for hourly or five-minute interval netting on customer bills, as the system is not compatible with interval meters.[1] C2 would also be unable to accommodate the exponential increase of calculations that would have to be presented on the bill if the energy component were to be netted at a more frequent interval.[2]

To an even greater degree it would be costly and extremely high risk to install interval meters and change the older legacy New Hampshire Large Power Billing ("LPB") system (that currently captures 30-minute interval reads) to bill and maintain hourly or five-minute energy components for the few small customer-generators in that system and would likely result in a total failure of the system. The Company cannot take this risk as it would result in the loss of approximately 2,200 of Eversource's largest customer accounts.

Because Eversource does not currently have interval metering for small customer-generators, and the existing Eversource billing systems are not compatible with hourly or five-minute netting, Eversource would need to deploy Advanced Metering Infrastructure ("AMI") meters, which requires meter usage data validation and storage of historical usage data by a Meter Data Management System ("MDMS"), which would also need to be procured and implemented, as well as a compatible billing system capable of processing, billing, and maintaining hourly or five-minute netting energy component rates starting from the point of recording the meter data all the way through to presentment of charges and credits on the customer bill. The estimated investment for Eversource to implement AMI, an MDMS, and the requisite compatible billing system that supports either hourly or five-minute netting for small customer-generators' energy components is in the range of several hundred million dollars.[3] An investment of this scope and complexity and would require the issuance of multiple Requests For Proposals (RFPs). Multiple

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[1] There is a minor exception where Interval Meters (30-minutes) are used as survey meters on a very limited number of TOU-Time-Of-Use accounts. However, it is not feasible to set up interval meters in C2 at any scale as the survey meter process is entirely manual, which does not allow scaling for larger numbers of customers, particularly for net metering where the billing calculations are more complex.

[2] Manual billing process is also disfavored as the customer experience is significantly impaired due to a higher chance of errors, and lack of data access and visibility into the customer bill and account which hinders customer service.

[3] See Attachment PUC 1-011 for the final report of the Eversource AMI feasibility study, conducted pursuant to the settlement agreement in Docket No. DE 19-057. It should be noted that the near $600 million estimate is already likely stale, as supply chain material prices have increased significantly since the completion of the study.

RFP processes – from development, issuance, bid period, collection and review of bids, and finally awarding the bid – would likely take around a year to complete, possibly more.

But there are considerations beyond cost that should be accounted for at the outset of any discussion of hourly and five-minute netting of the energy component for small customer-generator bills. Eversource does not currently have hourly volumetric rate designs in its service territory: all volumetric elements are billed monthly.[4] A shift to hourly netting would be a dramatic one with impactful ramifications for both Eversource and its customers.

For example, there are bill presentment and bill print complications with hourly netting, as the calculation that appears on the customer bill for the energy component would increase from the current one calculation per month to 720 calculations as well as each listing hourly charge rate and credit rate for the energy component that would have to appear on each monthly customer bill, consistent with the billing requirements of Puc 1203.06. If the interval were five minutes, the calculations would increase to 8,640. This would result in a much more voluminous and complicated bill that would cost significantly more to print and mail and would likely cause considerably more customer confusion and an inability of customers to recreate the calculations of their bills, which is also a requirement of Puc 1203.06. If Eversource were to proceed with hourly or five-minute netting, detailed comprehensive specifications on how to bill an hourly volumetric net metering energy component for small customer-generators would be needed.

Examples of what such specifications would need to outline are:

- rate design of hourly/five-minute net metering rates – if netting is going to be done on a more frequent interval, a rate needs to be assigned to each interval. If that rate is going to vary by interval, that would require an examination of the cost to serve small customer-generators and a design of an hourly or five-minute varying time-of-use rate. Currently the maximum number of time periods that Eversource offers is two: on-peak and off-peak. An interval-based rate design would be a significant undertaking.
- how the billing and MDMS systems would handle automated updates and storage of hourly net metering data and rates
- how the billing system would manage on-going and historical maintenance of hourly net metering rates for billing corrections, cancel/rebilling, and other customer service requirements
- how to account for extensive bill presentment required to reflect hourly or five-minute net metering rates on the monthly cycle bill

[4] Even Eversource's time-varying rates are billed monthly, just by peak and off-peak period.