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**Request from: New Hampshire Public Utilities Commission** 

## **Request I:**

If the majority of the energy supply in New Hampshire is supplied through Community Aggregation, will customers on either the incumbent utility's default service or third-party supply be subsidizing Community Aggregation?

## **Response:**

The art of utility ratemaking involves balancing rates to costs on an accurate basis, and inherently includes a certain level of subsidization to ensure equitable access and affordability for all energy consumers. To address the question of whether customers on utility default service or third-party supply service would be subsidizing those customers of Community Power Aggregation (CPA); no, there should not be subsidization as long as the costs of electricity supply for utility default service, CPA default service, and CEPS service, including over and under collection from prior periods, are recovered exclusively from those respective customer bases. Currently, this is not possible due to how the utilities account for (or don't expressly account for) load reduction by net metered excess generation exports in ISO-NE load settlement. Given that load settlement currently does not reflect the benefits of net metered excess generation exports, it is unlikely that CPAs and CEPS can support Net Metering (NM) programs for most NM customers.

In the scenario where most load is served by CPAs and load settlement has not been updated to more accurately account for customer-generators' net metering excess generation exports on an hourly basis to their respective supplier, it is expected that net metering customers

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would still not be a customer class that would be served by CPAs in most cases. In this scenario, NM customers would remain on utility default service and those customers would be subsidizing CPAs and CEPS as they are today. Currently, all generation supply related system cost reductions attributable to load reduction (avoided costs) by net metered excess generation exports are socialized across all load-serving entities in proportion to the amount of load that they serve, even if those load-serving entities do not have net metering programs. Hence, if the majority of New Hampshire load was served by CPAs, then those CPAs would receive the majority of the benefits flowing from the utilities' current load settlement practices — even though the load reduction benefits were caused by the vast majority of net metered customer-generators who remain on utility default service.

CPCNH's testimony<sup>1</sup> in this docket explains how undue cost and benefit shifting (subsidies) related to net metered generation can be minimized, both between NM customers and non-NM customers, and between utility default service, CPA default service, and CEPS service, going forward including:

1) Use actual hourly interval data for NM exports to the grid and estimated NM customergenerator load profiles for those that that do not have interval meters for load settlement for each CPA, CEPS and utility default service supplier load asset-ID based on who is serving the customer-generator. *See Testimony at 10, lines 1-7 and pp. 14-19*.

<sup>&</sup>lt;sup>1</sup> DE 22-060 "Direct Testimony of Clifton C. Below" for CPCNH, 12/6/23, at Tab 63 ("Testimony").

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- 2) As part of load settlement reform, provide an accounting to credit load reduction value of NM exports for avoided capacity load obligation at the annual hour of system peak where capacity load obligations are incurred. *See Testimony at 10, lines 8-14, and at p. 22, line 19 to p. 23 line 20.*
- 3) For NM 3.0 generation >100 kW, provide a credit for avoided transmission costs due to load reduction at monthly hour of coincident peak demand using actual interval data, where available, or a reasonable load/production profile where not available. Recover the cost for such credits that are ≤ the avoided costs through the Transmission Cost Adjustment Mechanism (TCAM) or another generally non-bypassable rate. *See Testimony at p. 10, lines 8-14 and p.19, line 2 to p. 22, line 18.*

These three changes to net metering and others detailed in our testimony would mitigate and minimize undue or unjust and unreasonable cost shifting and cross-subsidizations.

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## Request K.

For Community Aggregation customers participating in net metering, please describe the dollar flow from the incumbent distribution utility to a net metering customer over a month when i) that customer consumes more than it produces; and ii) when the customer produces more than what it consumes. Please provide specific examples to illustrate the differences.

## **Response:**

At present, CPAs are unable to serve most customers who net meter under NEM 2.0 because the utilities are not able to timely provide the data necessary for CPAs (or CEPS) to properly credit net metering customers for their excess generation exports to the grid and because the full value of those exports to the grid is not attributed to the CPA (or CEPS) in utility load settlement with ISO-NE. As a result, CPAs and CEPS that offer NM programs would pay twice for net metered exports – once to the customer-generator for their excess generation exports and again to purchase that same amount of power through ISO-NE to serve other customers. The result of this would artificially raise CPAs'/CEPS' cost of supply as well as the rates charged to all customers. Indeed, this is contrary to the purpose of New Hampshire's net metering law, which the legislature found "should be pursued in a competitive environment." <sup>2</sup>

<sup>&</sup>lt;sup>2</sup> Chapter 261:1, NH Laws of 1998, the legislation that created net metering and expressly provided that "[e]lectricity suppliers may voluntarily determine the terms, conditions, and prices under which they will agree to provide generation supply to and purchase net generation output from eligible customer-generators," amended the "Declaration of Purpose" of the chapter to include the following text shown in bold italics, which persists in the current text of RSA 362-A:1:

<sup>&</sup>quot;It is found to be in the public interest to provide for small scale and diversified sources of supplemental electrical power to lessen the state's dependence upon other sources which may, from time to time, be uncertain. It is also found to be in the public interest to encourage and support diversified electrical production that uses indigenous and

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To answer question K. we will need to assume that load settlement and utility data transfer shortcomings are modernized, allowing entities other than the distribution utilities to offer and support net metering programs. Additionally, we make the following assumptions:

- Assume that this hypothetical customer-generator is in Eversource's service territory, taking
  distribution service (other than Supply, which is served by CPA default service) under
  Eversource's Residential Standard Service (Rate R), using the published rates in effect from
  February-July 2024.
- The customer net meters (under NEM 2.0) a PV system of less than 100 kW of capacity, and the CPAs net metering program credits exports at the supply rate and Eversource credits the customer at 100% of its transmission rate and 25% of its distribution rate.
- The customer consumes 500 kWh/month.
- In Scenario 1, where the customer consumes more than it produces, the PV system generates 300 kWh, 60% of which (i.e., 180 kWh) is consumed instantaneously onsite and 40% of which (i.e., 120 kWh) is exported to the grid.

renewable fuels and has beneficial impacts on the environment and public health. It is also found that these goals should be pursued in a competitive environment pursuant to the restructuring policy principles set forth in RSA 374-F:3. It is further found that net energy metering for eligible customer-generators may be one way to provide a reasonable opportunity for small customers to choose interconnected self generation, encourage private investment in renewable energy resources, stimulate in-state commercialization of innovative and beneficial new technology, enhance the future diversification of the state's energy resource mix, and reduce interconnection and administrative costs."

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- In Scenario 2, where the customer produces more than it consumes, the PV system generates 800 kWh, 30% of which (i.e., 240 kWh) is consumed instantaneously onsite and 70% of which (i.e., 560 kWh) is exported to the grid.
- Regardless of scenario, the customer-generator pays Eversource a fixed (non-volumetric and non-bypassable) \$13.81 monthly charge.

In Scenario 1, where the customer consumes more than it produces, the customer pays the utility a total of \$43.22 for non-energy supply charges. This total payment includes a charge of \$34.58 for the 320 kWh of imports, a credit of \$5.17 for the 120 kWh of exports, and the fixed monthly customer charge of \$13.81. These dollar figures do not include the energy supply component, which in this example flows to/from the CPA rather than the utility. In addition, there is no exchange of payment for the 180 kWh of instantaneous consumption; those 180 kWh can be *valued* at the full retail rate but do not involve an actual credit or payment.

In Scenario 2, where the customer produces more than it consumes, the customer pays the utility a total of \$17.80 for non-energy supply charges. This total payment includes a charge of \$28.09 for the 260 kWh of imports, a credit of \$24.10 for the 560 kWh of exports, and the fixed monthly customer charge of \$13.81. These dollar figures do not include the energy supply component, which in this example flows to/from the CPA rather than the utility. In addition, there is no exchange of payment for the 240 kWh of instantaneous consumption; those kWh can be *valued* at the full retail rate but do not involve an actual credit or payment.

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If the customer-generator was again net metering a PV system of less than 100 kW but was on a commercial rate (e.g., Eversource Rate G), then the calculations would become more complex, due to the tiered structure of transmission and distribution rates and the presence of demand charges. Given the complexity involved – which also increases the number of assumptions that must be made – we have not gone through this exercise for commercial customer-generators. However, to the extent overall distribution or transmission charges are in the form of demand (kW) charges instead of, or in addition to, energy (kWh) charges, the distribution or transmission credit would be proportionately reduced (to something well under 25% of the overall distribution charges or 100% of transmission charges).

Finally, if a customer-generator were net metering a PV system of greater than 100 kW, then the dollar flow between the customer and the utility would be no different than if the PV system did not exist, given that exports from customer-generators >100 kW are compensated only at the supply rate, which in this case would involve only the CPA and not the utility.