Date Filed: October 21, 2026

Witness: Edward A. Davis, Kimberly R. Parsons, Matthew Nelson and Michael Goldman
Request from: CLF and Sierra Club

Question:

Refer to Exhibit CLP-IAP-1, at 70, which states that the Optional Residential Space Heating Rate (ORSHR) "is grounded in cost causation principles." Please define "cost causation principles" and explain how the ORSHR is "grounded" in each principle.

Response:

The reference to "cost causation principles" refers to the concept that rates should bear a causal relationship to the costs the Company incurs to serve the customers taking service under those rates. The ORSHR is consistent with that concept because the rate was established above the marginal cost of serving ORSHR load. Thus, on average, the rate is expected to recover more than the marginal costs of distribution service associated with serving those customers, so ORSHR customers pay for the costs their load causes and contribute beyond that amount.

Date Filed: October 21, 2026

Witness: Edward A. Davis, Kimberly R. Parsons, Matthew Nelson and Michael Goldman
Request from: CLF and Sierra Club

Question:

Refer to Exhibit CLP-IAP-1, at 70, which states that "the discount reflects the terms on which heating load can be served rather than a subsidy collected from other customers." Please explain what you mean by this.

Response:

Please refer to the Company's response to CLF-SC-024[i] for a discussion on marginal cost. The point that was being made in the referenced sentence is that the ORSHR would be above the marginal cost to serve those customers, so on average, the rate is set high enough that customers on the ORSHR pay for the costs their load causes and contribute beyond that level. In that way, the rate is designed so that there is no subsidy collected from non-ORSHR customers in order to provide the ORSHR.

Prior Referenced Response:

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[i] CLF-SC-024 Question:

Refer to Exhibit CLP-IAP-1, at 70, which states that the Optional Residential Space Heating Rate (ORSHR) "is grounded in cost causation principles." Please define "cost causation principles" and explain how the ORSHR is "grounded" in each principle.

CLF-SC-024 Response:

The reference to "cost causation principles" refers to the concept that rates should bear a causal relationship to the costs the Company incurs to serve the customers taking service under those rates. The ORSHR is consistent with that concept because the rate was established above the marginal cost of serving ORSHR load. Thus, on average, the rate is expected to recover more than the marginal costs of distribution service associated with serving those customers, so ORSHR customers pay for the costs their load causes and contribute beyond that amount.

Date Filed: October 21, 2026

Witness: Edward A. Davis, Kimberly R. Parsons and Amparo Nieto
Request from: CLF and Sierra Club

Question:

Refer to Exhibit CLP-IAP-1, at 69, which states: "the Company has designed the rate to be priced above the marginal cost to serve those customers [who install heat pumps]." Please provide the marginal costs to serve customers who install heat pumps, broken down by component (including transmission and distribution costs). Provide any workbooks used to produce these figures, with all formulas unlocked.

Response:

The Marginal cost of transmission was not computed for this rate design. The marginal cost of distribution associated with serving the customer include:

- Marginal customer costs ($28.98/customer/ month)
- Marginal local facility capacity costs ($3.06/kW/month), where kW reflects the average maximum demand for the residential class, also calculated as $24.51/customer/month).
- Marginal distribution substation and feeder capacity (year-round is 0.242 cents/kWh, including the GET yields 0.258 cents/kWh).

These figures are included in the MCOS model that was filed with the rate case: "Exhibit CLP–MCOS-2 Confidential", see summary in worksheet T.1 MC Comparison to Rates, which summarizes the marginal unit cost for each component.

Date Filed: October 21, 2026

Witness: Edward A. Davis, Kimberly R. Parsons and Amparo Nieto
Request from: CLF and Sierra Club

Question:

How does the Company define the marginal cost to serve customers who install heat pumps? In your response, explain: (a) whether the Company is using the absolute marginal cost to serve customers who install heat pumps, the incremental marginal cost to serve these customers, or something else; and (b) the Company's rationales for its selected approach.

Response:

Serving the customer who installs heat pumps means ensuring that the facilities used to serve the load have sufficient capacity, both at the local and upstream level. The Company also needs to continue providing customer-related services, as any other customer. Therefore, the marginal costs associated with serving the customer include:

- Marginal customer costs
- Marginal / incremental local facility capacity costs
- Marginal distribution substation and feeder capacity

These marginal unit costs are obtained from the MCOS study, provided in Exhibit CLP–MCOS-2 Confidential, at worksheet T.1 MC Comparison to Rates, which summarizes the marginal unit cost for each component.

a. The Company designed a heat pump rate considering the full load of the customer, since this rate does not separately meter the heat pump load. Therefore, the rate makes sure that the customer is paying no less than marginal cost associated with full service.
b. The rationale in designing the winter energy charge for the block 2 usage was to ensure that the customer will pay through that charge:

   i. the marginal year-round per-kWh cost associated with distribution substation
   ii. a mark-up above marginal unit cost, to contribute to recovery of existing costs, just like Rate 1 recovers revenue above marginal cost in the per-kWh charge towards sunk costs)
   iii. the marginal local facilities costs, which would ideally be recovered as a monthly fixed charge, but the Company is proposing at this time to continue recovering this cost in the kWh charge.

In setting the mark-up over the marginal cost for the winter block 2 charge, the Company applied a reconciliation factor that yields has a lower figure than the year-round energy charge, recognizing the much lower contribution of winter load to annual coincident system peak.

Ultimately, the Company uses the marginal Customer Cost to calculate the proposed fixed charge; the marginal Facilities Cost is recovered in the energy charge. The Company computes what component of the proposed Distribution energy corresponds to the monthly facilities charge, i.e., this is 3.89 cents/kWh (calculated dividing annual marginal local facilities cost by customer's annual energy usage). This means the proposed rate charge (9.4 cents/kWh), would recover the marginal facilities costs and the residual (5.537 cents/kWh) is higher than the "floor" level, which is the system-wide average marginal distribution unit cost (0.258 cents/kWh). The delta between the marginal cost and the ultimately proposed winter block 2 rate reflects the mark up or reconciliation factor.

Date Filed: October 21, 2026

Witness: Edward A. Davis, Kimberly R. Parsons, Matthew Nelson and Michael Goldman
Request from: CLF and Sierra Club

Question:

Refer to Exhibit CLP-IAP-1, at 70, which states: "The load-shape analysis that determines exactly how heat pump usage lines up against the system peak, and the allocation of the discount across the components of the bill, sit with the rate-design panel." Provide the load-shape analysis and any underlying workbooks used to produce the analysis, with all formulas unlocked.

Response:

The rate design for proposed Rate 6 is based on monthly and annual billed kWh for residential Rate 1 (regular use) customers, and relies on the differences between the load profiles and characteristics of the Company's Residential Rate 1 (regular use) and its current Residential Rate 5 (space heating). The Company does not have interval metering for every customer in these classes but has relied on load research which provides average load profiles for customers in each class. The load shape for Rate 1 customers and a proxy load shape for Rate 6—which is based on Rate 5 and illustrates, at the class level, the projected load if a Rate 1 customer were to convert and add electric space heating to its existing service—is presented graphically in Exhibit CLP-RATES-6, at page 3. The load research analysis associated with these profiles is provided in CIEC-017, Attachment 1.

Date Filed: October 21, 2026

Witness: Edward A. Davis, Kimberly R. Parsons, Matthew Nelson and Michael Goldman
Request from: CLF and Sierra Club

Question:

Refer to Exhibit CLP-IAP-1, at 70, which states: "When customers want to electrify, the rate structure should make that choice affordable, on terms that are fair to both the customers who convert and to those who do not." Provide the definition of "fair" in this context and explain how the Optional Residential Space Heating Rate promotes such fairness for customers who convert to heat pumps and those who do not.

Response:

The use of the word "fair" in the development of the ORSHR indicates that customers who qualify for the rate and customers who do not qualify for the rate each pay rates that reflect at least the cost of serving such customers, so that neither group bears costs caused by the other.

For customers who qualify for the rate, "fair" is used to convey economics that are below standard retail rates for some portion of their usage, which encourages transition from delivered fuels to electric heat pumps. This is also "fair" because it does not cause a burden to the system since the cost of serving winter-weighted heating load is less and the distribution system can largely accommodate it with capacity already in place.

For customers not qualifying for the ORSHR, "fair" is meant to convey the fact that they will not be subsidizing ORSHR customers because the ORSHR is set above marginal costs, meaning that the costs incurred to serve ORSHR customers are being paid for by those customers. In fact, customers who are not qualifying for the ORSHR may see lower rate impacts than they would have in the absence of the rate because the additional load encouraged by the ORSHR will contribute toward costs already incurred on the system.

Date Filed: October 21, 2026

Witness: Edward A. Davis, Kimberly R. Parsons, Matthew Nelson and Michael Goldman
Request from: CLF and Sierra Club

Question:

Refer to Exhibit CLP-IAP-1, at 69, which states: "customers that have not yet been able to transition to heat pumps will actually benefit from this rate because new incremental load from heat pumps will contribute to other fixed cost requirements." Does this create a cross-subsidy from customers who have transitioned to heat pumps to those who have not? Please explain why or why not.

Response:

No, this does not create a cross subsidy. A cross-subsidy exists when one group of customers pays less than the cost of serving it and another group makes up the difference. The intent of the rate is that it helps both those customers that adopt heat pumps in response to the ORSHR and those that do not qualify for the ORSHR. Customers that adopt heat pumps after the rate's effective date will pay a rate that is below the standard residential rate and above the Company's marginal cost of serving their heating load, so they pay for the costs they add to the system. These customers are likely to see overall household energy burden reductions when transitioning from delivered fuels. Customers who do not qualify for the ORSHR will continue to pay a standard rate, but may also see lower rate impacts than they would have in the absence of the ORSHR because the additional load encouraged by the ORSHR will contribute toward costs already incurred on the system. This is not a cross-subsidization from ORSHR customers to standard rate customers. It is the result of spreading costs already incurred over more load, and ORSHR customers share in that benefit on the portion of their bills at standard rates.

There is no cross-subsidization from customers on the standard rate to ORSHR customers because ORSHR is priced above the marginal cost to serve those customers, so the customers receiving the rate pay for themselves. In other words, each unit of heating load served under it contributes toward costs beyond what it adds to the system. Neither group is subsidizing the other.

Date Filed: October 21, 2026

Witness: Edward A. Davis, Kimberly R. Parsons, Matthew Nelson and Michael Goldman
Request from: CLF and Sierra Club

Question:

Explain whether the Optional Residential Space Heating Rate includes a seasonal discount on transmission charges for residential customers who enroll in Rate 6. If there is no such adjustment, explain why not.

Response:

The Company' proposal does not include a transmission charge discount. The basis of the discount in its proposal is incremental load associated with winter period space heating, and the marginal cost of Distribution service for serving such load. Transmission charges for service (i.e., under the Company's tariff) to such customers are time-of-day based and predicated on the financial cost (i.e., expense) of allocated class costs of transmission service provided (i.e., billed) to the distribution company, which are determined on a monthly peak demand basis, at rates determined on a 12-month average peak demand.

Date Filed: October 21, 2026

Witness: Edward A. Davis, Kimberly R. Parsons, Matthew Nelson, Michael Goldman and Amparo Nieto
Request from: CLF and Sierra Club

Question:

Refer to Exhibit CLP-IAP-1, at 68, which states: "The rate reflects a seasonal discount but is still set above the marginal cost to serve those customers, the expected result is that there will be more incremental load to spread the Company's fixed costs over." Does the Company agree that transmission rates for customers who have transitioned to heat pumps could be designed to "reflect a seasonal discount but is still set above the marginal cost to serve those customers," with the expected result that there would be more incremental load to spread the transmission grid's fixed costs over?

Response:

The cost of transmission service to such proposed new class would be determined on the basis of the class's monthly coincident peak demand and corresponding, average annual peak demand rates charged to the Company for transmission service (i.e., these are expenses for what is charged under the ISO-NE OATT and allocated to CL&P), as allocated to each retail rate class. The Company applies an average annual transmission rate per kWh, for all hours under Residential Rate 1 and Rate 5, and on a time-differentiated (time-of-day) per kWh basis under Residential Rate 7. Under an established Rate 6, the cost of transmission service would be similarly allocated to the class for setting the transmission rate design revenue requirements target of that class. A discount in the design of the transmission cost and rate component for the winter rate block can be used if no less than the transmission service cost (i.e., the RNS plus LNS and associated transmission service rates). At a class level there may be a lower overall average rate for transmission service depending on allocation of transmission costs (i.e., expense) and the total kWh of Rate 6, for a given period, depending upon actual demand and allocations. For Rate 6 transmission rates, however, a discount to a portion of the kWh, for the second block for winter period usage, would require an increase to the first block and non-winter second block rates, to achieve a design equivalent to meet total transmission revenue requirements for the class.

Date Filed: October 21, 2026

Witness: Amparo Nieto
Request from: CLF and Sierra Club

Question:

Refer to Exhibit CLP-MCOS-1 at 12, which describes a probability of peak analysis used in the marginal cost of service study. Provide the probability of peak analysis and any underlying workbooks used to produce the analysis, with all formulas unlocked. Please provide for each hour of the year (1) the likelihood that each hour of each day type may reach or exceed the annual peak load for each hour of the year; (2) the cost and load data used to allocate the annual marginal substation costs to hours and months at an hourly resolution; and (3) the hourly marginal costs allocated to each hour of the year.

Response:

Please refer to the Company's response to OCC-733[i] for the probability of peak analysis.

Prior Referenced Response:

[i] OCC-733 Question

(MCOSS) Refer to Exh. CLP-MCOS-1, at 17-18. In a live, unlocked Excel format with all links and formulas intact, please provide the Company's probability of peak analysis and all underlying workpapers and data.

OCC-733 Response:

The Company's probability of peak analysis was performed with Python and therefore a workpaper is not available for computation of the probability of peak (PoP) analysis. However, the input data used in the Python code is included in OCC-733, Attachment 1.

Additionally, an explanation of the main steps followed in calculating the PoP in Python is provided below.

1. The sum of historical hourly Substation Loads from January 2022, to December 2025 across all the distribution substations provided by the Company were grouped by hour type, where each hour defined by month, hour beginning, and weekday vs. weekend/holiday.

2. For each historical year, each hourly load was divided by the average hourly load in that same year. This allows filtering out year-to-year customer growth impacts on load for comparable analyses across years. A delimiter based on the average of the four historical year ratios (for 2022-2025) of the maximum hourly load in the year to the same year's average hourly load was calculated. This ratio is used later in the analysis to determine a simulated hour's weight in the PoP calculation.

3. For each hour by day type and month, a Kernel Density Estimation was used to create representative distributions of future gross hourly distribution substation loads, which back into the PV impacts. In particular, the model simulated hourly load distributions 500 times using a truncated version of Gaussian Kernel density estimation (KDE). KDE with a gaussian kernel is a non-parametric method that forms a small probability density function (PDF). The final distribution for a given hour is obtained from adding the sum of these point-based PDFs.

4. To factor in the expected impact of BTM PV generation on near-term load profiles, the analysis considers the cumulative forecasted additions of BTM PV capacity in Eversource's CT service area (based on ISO-NE projections through the mid-point of the period 2026 through 2031). Capacity factors from NREL's National Solar Radiation Database (NSRD) are then applied to annual BTM PV capacity forecasts to yield hourly PV generation projections. The hourly PV data for each hour type is then subtracted from the simulated hourly gross loads to yield hourly distribution net loads.

5. For a given hour and day type, any hour in the simulation with a load > delimeter calculated in step 2 is given a weight of 1 for PoP; other hours are given a weight of zero. The percent of hours of a given type with loads at or above the delimiter across the simulations provides a vector of hourly probabilities for each month. These hourly probabilities are divided by the sum of the probabilities across all hours such that they add up to 1. The resulting PoPs are stated by hour, day type and month.

Date Filed: October 21, 2026

Witness: Edward A. Davis, Kimberly R. Parsons, Matthew Nelson and Michael Goldman
Request from: CLF and Sierra Club

Question:

Refer to Exhibit CLP-IAP-1 at 70, which states that the Optional Residential Space Heating Rate "removes a large obstacle to adoption, which is the fear that heating with electricity costs more than the fuel it replaces," and the Company's response to CLF-002, which states: "The Company deliberately excluded natural gas heating conversions from Rate 6 eligibility because Rate 6 is an affordability measure

Response:

When designing the ORSHR, a primary consideration was affordability. The Company focused the ORSHR on customers converting from delivered fuels to electric heat pumps because such customers are likely to see a reduction in overall household energy costs, increasing overall energy affordability. Conversely, as stated in CLF-002[i], the Company believes it is likely that customers converting from natural gas to electric heat pumps would experience higher overall energy expenses and burdens, resulting in an opposite affordability impact that could negatively impact those customers. The Company's decision to exclude natural gas customers from eligibility for the ORSHR promotes affordability for such customers by not encouraging a switch that may result in increased financial burden.

The statement at page 70 of Exhibit CLP-IAP-1 describes the customers for whom the rate was designed, those converting from delivered fuels; the exclusion does not change the economics of conversion for natural gas heating customers and was not intended to.

The Company understands that despite the economics, some customers may wish to convert from natural gas to heat pumps. In those cases, natural gas customers are eligible to take advantage of the Company's energy efficiency programs and receive rebates for installing heat pumps. Current Residential Optimization rebates may be up to $1,500 per ton for customers replacing natural gas with heat pumps. Additionally, customers may also be eligible for contractor or distributor incentives for heat pumps through the New England Heat Pump Accelerator and 1.99% financing through the Smart-E Loan provided by the Connecticut Green Bank for a limited time.

To the extent that natural gas customers are also electric customers, however, the adoption of heat pumps by other customers is anticipated to put downward pressure on electric rates because the

additional load encouraged by the ORSHR will contribute toward costs already incurred on the system. In that way, natural gas heating customers may indirectly benefit from the ORSHR.

Prior Referenced Response:

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[i] CLF-002 Question:

(SPACE HEATING RATE) Please refer to Exhibit CLP-RATES-1, at 32, lines 7-8: "Rate 6 will be available to any residential customer that currently heats with a delivered fuel heating system and demonstrates that it has installed air-source heat pump(s) or any new home build after July 1, 2027, that can demonstrate that they have installed air- source heat pump(s) for home space heating."

a. Please provide the definition of a "delivered fuel heating system" the Company would use to determine customer eligibility for Rate 6.
b. Is a heating system using natural gas considered a "delivered fuel heating system"? If not, why not?
c. Please provide copies of all notes, memorandum, reports, e-mails and text messages which discuss, reference, or conclude: 1) whether to include or exclude natural gas heating systems within the definition of a "delivered fuel heating system"; and/or 2) whether to provide eligibility for the new Rate 6 rate to Rate 1 customers who replace a natural gas heating system with an electric heat pump.
d. Why are new or existing geothermal heat pump customers not eligible for the proposed rate?
e. If a customer becomes eligible for and takes service under Rate 6, and subsequently either sells the dwelling or rents it, will the new owner or tenant remain eligible for Rate 6? If not, why not?
f. If a customer in a single dwelling unit becomes eligible for and takes service under rate 6 and subsequently converts the property to multiple dwelling units, will the customers in the new multiple dwelling units remain eligible for Rate 6? If not, why not?

CLF-002 Response:

a. A "delivered fuel heating system" is intended to refer to a heating system that runs on a fuel source like heating oil or propane, which is brought to the property by a truck and pumped into an on-site storage tank, rather than flowing through a permanent underground utility line. A heating system using natural gas is not considered a delivered fuel heating system because it does not meet this definition.

b. The Company deliberately excluded natural gas heating conversions from Rate 6 eligibility because Rate 6 is an affordability measure not a general electrification incentive. The rate is targeted at conversions that reduce the customer's total household energy costs. For customers heating with oil or propane, the highest-cost and most price-volatile heating fuels in Connecticut, conversion to an air-source heat pump generally lowers total annual heating expense, and Rate 6 further supports that outcome.

   For customers heating with natural gas, conversion to a heat pump typically increases the household's total energy bill at current prices. The Company is cognizant of the real affordability challenges for customers in Connecticut and therefore designed the rate to avoid encouraging conversions that would likely result in higher customer household energy. While natural gas conversions may produce emissions benefits, Rate 6 is designed to deliver bill savings, and eligibility was scoped accordingly.

c. The Company does not have reports on its decision to limit Rate 6 to delivered fuel conversions but refers to the pre-filed testimony set forth in Exhibit CLP-IAP-1, which focused on Investment & Affordability Policy, demonstrating the Company's strong emphasis in submitting proposals designed to address affordability.

d. Geothermal customers were not included in the eligibility for Rate 6 because Rate 6 is designed around the operating profile of air-source heat pumps, which experience declining efficiency and materially higher electricity consumption during the coldest portions of the heating season. This is the seasonal bill escalation the rate is designed to mitigate. Ground source systems maintain substantially higher and more stable cold-weather efficiency, so the winter bill impact Rate 6 addresses is far less pronounced for those customers. As DEEP describes, a geothermal system is more efficient than air-source heat pumps and far more efficient than systems relying on combustion of fossil fuels, and because it has relatively modest maintenance requirements, its operating cost typically is quite low, enabling homeowners and businesses to reduce their monthly expenses (see https://portal.ct.gov/deep/energy/renewable-energy/geothermal).

   Ground source installations also carry substantially higher upfront costs, however, meaning a volumetric rate discount may not provide a significant enough incentive for adoption. Air-source heat pump technology represents the overwhelming majority of Connecticut residential heat pump installations; focusing eligibility on air-source heat pumps simplifies verification and administration. It should also be noted that there are energy efficiency incentives through Energize CT for ground source heat pumps, with the current incentive levels for ground source heat pumps being higher than air source heat pumps, in recognition of the initial upfront capital hurdle for ground source heat pumps.

e. If a customer becomes eligible for and takes service under Rate 6, and subsequently either sells the dwelling or rents it, the new owner or tenant will remain eligible for Rate 6 because the rate will be attached to the meter. Additionally, the rate will continue to encourage the customer to use their heat pumps for space heating. This promotes affordability for the customer, encourages overall stable winter load for the grid, and supports climate goals.

f. If a customer in a single dwelling unit becomes eligible for and takes service under Rate 6 and subsequently converts the property to multiple dwelling units, the new service configuration will need to be evaluated before determining whether the new dwelling unit(s) will remain eligible for Rate 6.

Date Filed: October 21, 2026

Witness: Edward A. Davis and Kimberly R. Parsons
Request from: CLF and Sierra Club

Question:

Refer to the Company's response to CLF-003, which states: "at the system level, the rate adds incremental load priced above the marginal cost of serving it, so each incremental kilowatt-hour contributes to recovery of the Company's cost of providing service. Spreading fixed costs over a larger sales base places downward pressure on average rates for all customers over time. This provides an economic benefit for all residential customers, not just Rate 6 participants." Isn't this even more the case for these customers under Rate 1?

Response:

Rate 6 is predicated on Rate 1, which constitutes approximately 90% of the residential customer base. Furthermore, Rate 7 is included in the cost allocation and overall revenue requirement along with Rate 1. Collectively residential customers, whether served under Rate 1 or also Rate 7 and Rate 5 would benefit, with the most direct benefits derived from the incremental load of customers who switch from Rate 1 to Rate 6.