Date Filed: November 16, 2026

**Witness:** **Juan-Pablo Velez**
**Request from:** **Connecticut Industrial Energy Consumers**

**Question CIEC-9:**

Please refer to Velez Direct Testimony at page 7, lines 9-12; page 20, lines 9-12; page 22, lines 6-14; and page 59, footnote 63.

a. In footnote 63, Mr. Velez states that "a kWh consumed during a winter peak hour imposes far higher upstream distribution costs than a kWh consumed on a mild spring afternoon." Please identify the winter peak hours to which this statement refers and explain how Rate HP's winter distribution rate reflects them.

b. Has Mr. Velez analyzed the level of heat pump adoption at which the Company's distribution system, or individual substations or feeders, would become winter peaking? If so, provide the analysis. If not, explain why not.

c. Please describe the specific process and timing Mr. Velez recommends for recalibrating Rate HP, and state whether he would support a requirement that Rate HP be recalibrated, or automatically expire, if winter loads begin to drive distribution capacity investment.

**Response:**

a. The words "winter peak hour" in footnote 63 are a drafting error; they should read "summer peak hour."[1] There are no winter peak hours on the Company's system today: no hour from November through March carries enough marginal distribution or transmission capacity cost to meet my testimony's definition of a peak hour.[2] Rate HP's winter distribution rate reflects this. Because added winter usage causes almost no marginal distribution cost, the winter rate is set low enough that it adds little to a heat pump customer's bill.[3]

b. No, because the data needed for that analysis has not been made available to me.

First, there is no single level of adoption at which the Company's system becomes winter peaking. Each feeder and substation transformer has its own peak, and each would become winter peaking at a different level of heat pump adoption, depending on how many heat pump customers it serves and how much spare capacity it has. Today, the Company itself states that its system remains summer peaking.[4]

Second, finding when individual feeders and transformers would become winter peaking requires their capacity ratings and their historical and hourly loads. CLF and Sierra Club asked the Company for exactly

[1] Direct Testimony of Juan-Pablo Velez on behalf of Conservation Law Foundation and Sierra Club ("Velez Direct"), at 59 n.63 (Oct. 21, 2026).

[2] *Id.* at 16 n.9 (peak-hour definition), 17:1–3, 19:9–20:1.

[3] *Id.* at 85:2–7.

[4] CL&P Response to CLF-SC-020, at 1 (Sep. 18, 2026) ("The Company currently does not use a heat pump forecast to inform its substation capacity projects as the system remains summer peaking.").

this information in CLF-SC-012 through CLF-SC-019.[5] The Company designated it Critical Energy Infrastructure Information and will produce it only to parties that have signed a nondisclosure agreement with the Company.[6] CLF and Sierra Club have not yet reached mutually acceptable terms for that agreement with CL&P, so I have not received the data and have not been able to perform the analysis.

c. I recommend that Rate HP be recalibrated in each base rate case.[7] In each one, the Company would update its marginal cost study, basing the probability-of-peak analysis on actual substation and feeder loads, including heat pump load. It would then repeat the calculation in my testimony: set Rate HP's winter rates so that the average new heat pump customer pays their pre-heat-pump T&D bill plus the marginal cost of their added load.[8] Rate 1's rates would be reset at the same time, based on the customers who remain on Rate 1, so Rate 1's charges would account for existing heat pump customers who moved to Rate HP since the last rate case (CIEC-2(c)). Between rate cases, the Company would report heat pump customers' revenue as described in CIEC-8(d) and recover any shortfall from residential customers (CIEC-2(d)).

I would support a requirement that Rate HP be recalibrated. I would *not* support automatic expiry, because Rate HP is not justified only while the grid system remains summer peaking: it is justified for as long as Rate 1 charges heat pump customers more than the costs they cause.

A system that becomes winter peaking raises the costs that heat pump loads cause, but that alone does not make Rate 1's charges match them; what matters is how large those costs are. As feeders and substations become constrained in winter, winter loads would begin to drive distribution capacity investment. Recalibration would then move peak hours and marginal cost into winter, and Rate HP's winter rate would rise to match. Automatic expiry, by contrast, would end the rate as soon as the first feeders turned winter peaking, while heat pump customers as a group would still be paying far more than the costs they cause.

Today, Rate 1 charges the average converting household $1,051 a year more in T&D charges, about 102 times the $10 in added marginal cost it causes.[9] Even if the Company's entire system became winter peaking, and every hour of marginal capacity cost fell on the hours when heat pump homes use the most electricity, that added cost would rise to about $332 a year, and the household would still overpay under Rate 1 by about $718.[10]

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[5] Docket No. 26-05-10, CLF and Sierra Club's First Set of Interrogatories to CL&P (Corrected), CLF-SC-12 to CLF-SC-19, at 8–14 (Sep. 4, 2026).

[6] CL&P Response to CLF-SC-012, at 1–2 ("highly confidential Critical Energy Infrastructure Information"; "the Company plans to supplement this response with production for all parties having executed an non-disclosure agreement with the Company, once an executed NDA is obtained from CLF-SC"); *see also* CL&P Responses to CLF-SC-013(a), at 2; CLF-SC-015, at 2; CLF-SC-016, at 1–2; CLF-SC-017(a), at 2; and CLF-SC-019, at 2 (same); CL&P Response to CLF-SC-014(a), at 2 (referring to the response to CLF-SC-012).

[7] *Id.* at 7:9–12.

[8] *Id.* at 85:2–7.

[9] *Id.* at 23:3–5.

[10] Illustrative calculation. I took the Company's hourly marginal distribution and bulk transmission capacity costs used in my testimony, sorted them from highest to lowest, and assigned them to the November–March hours ranked by the average converting home's electricity use after installing a heat pump, then multiplied each by the home's added load in that hour. This assumes every hour of marginal cost coincides with the hours when heat pump homes use the most electricity, so it overstates the cost: applying the same method to April through October gives $76.65 a year, compared with the $10.30 from the testimony's

hour-by-hour analysis. CIEC-9 Attachment 1, CIEC-9c_winter_peak_marginal_cost.xlsx, sheet hourly: one row per hour in columns A–J, and the results as formulas in columns M–N. The README sheet explains each column.