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Witness: Lavelle A. Freeman, Gerhard Walker and Juan F. Martinez
Request from: Office of Consumer Counsel

Question:

In Exhibit CLP-TSP-3, Page 87, Eversource indicates that it uses top-down forecasting for electric vehicle, solar, and energy efficiency adoption for its 10-year distribution planning horizon, and bottom-up forecasting for electric vehicle, solar, and energy efficiency adoption for its long-term demand assessment.

a. Please identify what specific legislation or state policy objectives, if any, informed your forecast for the distribution planning horizon and what specific legislation or state policy objectives, if any, informed your forecast for the long-term demand assessment.
b. Please explain your rationale for using a top-down forecast for the distribution planning assessment, and a bottom-up forecast for the long-term demand assessment.
c. Please identify what data is included in the "Socio – Economic Modelling based on Customer Reference Classes" referenced for the bottom-up forecast for the long-term demand assessment.
d. Please provide the following from your top-down forecast:
    i. Annual forecasted electric vehicle adoption from 2027-2036, by region
    ii. Forecasted impact on peak from electric vehicle adoption from 2027-2036, by region
    iii. Forecasted impact on peak from energy efficiency from 2027-2036, by region
    iv. Forecasted impact on peak from solar adoption from 2027-2037, by region

Response:

The two referenced processes for the 10-year forecast and the Long-Term Demand Assessment (LTDA) are fundamentally different as they serve a different purpose – the 10-year forecast's objective is to provide the Company with an outlook on system needs that are firm enough that the Company can make capital decisions based on this forecast. The LTDA does not trigger capital projects and can include a wide array of scenarios and assumptions around policies, technologies, adoptions, and programs which might be implemented and serves as a tool to evaluate such approaches. It also helps the Company understand how to ensure that a proposed project triggered within the 10-year horizon is developed in a manner that supports the Company's ability to accommodate a long-term need. As a result, the nature of the inputs to both forecast processes vary.

a. While there are legislatively mandated goals to generally reduce statewide emissions, the only adoption-specific goal used to inform the Company's forecast is the GC3 projected pathway of converting 20% of light-duty vehicles to EVs by 2030 as discussed in the 2020 EV Roadmap for Connecticut. There were no state goals imposed by Connecticut for solar or heat pump adoption. Here the Company utilizes inputs from the New England ISO as well as installation and queue data for the system-wide forecast. The system-wide adoption is then allocated locally. For example, ground-mounted solar is allocated using propensity models for all of the parcels in the state to sustain large scale solar development.

b. The graphic referenced in Exhibit CLP-TSP-3, Page 87 shows the Company using both bottom up and top-down methodologies in both approaches with the top-down component typically determining statewide adoption or targets and the bottom-up allocating those values geographically.

c. When developing LTDA scenarios, the Company can allocate components such as electric vehicles to substation regions by customers serviced using customer reference classes. This allows the Company to "cluster" all customers into one of a handful of reference classes, each reference class having different adoption targets in % by a certain year. As a result, any statewide numbers would then be allocated to stations depending on the reference class make up of their customer base. The reference classes can be created utilizing socio-economic factors such as income, home ownership, or other factors.

d. Please refer to OCC-589, Attachment 1, for the requested data, where regions include eastern, central, and western Connecticut. These values are all incremental to the base year (2025).