Date Filed: September 22, 2026

Witness: David L. Gladey, Lavelle Freeman, John P. Dipaola-Tromba, Jennifer A. Schilling, Elli Ntakou and Gerhard Walker
Request from: Office of Consumer Counsel

Question:

Refer to Exhibit CLP-TSP-3 at 107-108, "Grid Modernization, Distributed Energy Resource Management System (DERMS)".

a. Please describe the DERMS capital and O&M spending spent to date and requested as part of the Targeted System Performance Plan.
b. Please confirm whether the Company is requesting funding for DERMS from the "Sustained Plan" and/or "Advancing the Grid" plan. If separate funding is requested within each plan, please provide a breakdown of the costs between the Sustained and Advancing the Grid plan.
c. Please describe the key milestones, status and estimated timelines for the Company to deploy a grid DERMS including the following:
    i. Please describe the status of procuring a grid DERMS system and/or aggregator/edge DERMS.
    ii. Please describe the status of completing the ADMS – DERMS Integration.
    iii. Please describe the extent to which the Company has established an architecture and technical operational requirements to standardize and implement a DERMS – DER Gateway.
    iv. Please describe whether the Company has developed a formal architecture for how grid DERMS will interact and integrate with an Aggregator or edge DERMS. Specifically, please indicate whether the Company intends to use a single or multiple aggregator/edge DERMS to dispatch aggregations and virtual power plants.
    v. Please describe the communications architecture the Company intends to use to communicate directly with third-party DERs and aggregator/edge-DERMS including the communication network and protocol.
    vi. Please describe whether the Company has a deployment plan for where and when DERMS will be deployed across its system and what use cases will be prioritized.

Response:

a. There has been no capital or O&M spent on DERMS investments to date.

The Company has initiated some enabling DERMS investments including ADMS power flow, aggregator DERMS (funded through the Company's energy efficiency program and utilized by the ConnectedSolutions program), as well as upgrades to the SCADA system. These investments support and are necessary precursors to the planned DERMS deployment.

The Company proposes spending $10.7 million in capital expenditures on its DERMS with no incremental O&M expenditures associated with this program.

b. The Company confirms that the proposed DERMS investments are fully included in the Sustained Plan. The same DERMS investments are included in the Targeted System Plan, and the Advancing the Grid Plan. The Advancing the Grid Plan includes incremental investments in a DERMS Demonstration. See the response to OCC-584[i] for a description of the DERMS Demonstration investment included in the Advancing the Grid proposal.

c. i. The Company has selected GE Vernova as its software provider for enterprise SCADA, ADMS, and DERMS in all its service territories, leveraging the benefits of an integrated real-time operating and control ecosystem. In CT, the Company has implemented the GE Vernova solution for SCADA and is in the process of implementing the integrated GE Vernova ADMS. The Company has not executed an agreement with GE Vernova to procure its DERMS solution for deployment in CT. As a part of its ConnectedSolutions program, the Company has executed agreements with several third-party aggregator DERMS to dispatch behind the meter DER and flexible load in support of ISO-NE system peak load reduction. The Company has not entered into agreements with any third-party aggregator DERMS for integration with a GE Vernova grid DERMS and/or provision of local grid services in CT.

ii. The Company plans to integrate its ADMS and DERMS solutions from GE Vernova which are designed to operate as an integrated solution. The ADMS-DERMS integration is currently in the planning stage.

iii. The Company intends to leverage a standardized DERMS architecture based on solutions previously deployed in other service territories. The Company is currently evaluating and developing the technical and operational requirements for the DERMS-DER gateway, including communication protocols.

iv. The Company is currently in the planning stage for designing the formal architecture governing the interaction between the grid DERMS and an aggregator/edge DERMS. The Company intends to leverage a standardized DERMS architecture based on solutions previously deployed in its Massachusetts service territory and is evaluating the use of multiple aggregator/edge DERMS providers. As the Company is in the planning phase, it has not yet finalized its aggregator/edge DERMS partners.

v. The Company is currently evaluating the communication architecture that will support direct communication with third-party DERs and aggregator/edge DERMS platforms. The communication network and associated protocols have not yet been finalized. As part of this effort, the Company is evaluating the use of IEEE 2030.5 for communication with both front-of-the-meter and behind-the-meter DERs.

vi. The Company estimates it would take approximately 18-months to implement a grid DERMS solution, including integration with third-party aggregator DERMS providers. Assuming a project start in mid-2027, the Company would have a fully functioning DERMS solution at the beginning of 2029. The initial use cases are expected to include flexible interconnection and local capacity relief at substations. The Company is still developing its deployment plan including the locations and sequencing of DERMS deployment across its distribution system in Connecticut.

Prior Referenced Response:

---

[i] OCC-584 Question:

Refer to Exhibit CLP-TSP-1 at 68, "DERMS Demonstration – Demonstrate the value proposition of advanced DERMS capabilities, including (1) use of DER to increase system efficiency and reduce line losses; (2) integration of multiple types of DER in a microgrid application for critical load; and (3) investigation of lower cost approaches to communication and control of stand-alone solar and storage facilities integrated into the Company's centralized DERMS system."

a. Has the Company deployed DERMS and implemented any DERMS use cases to date?
b. Please describe how this DERMS demonstration will be coordinated with the implementation of the Grid Services Compensation Fund and Dynamic Flexible Interconnection.

OCC-584 Response:

a. Other than the use of its aggregator DERMS utilized for an ISO-New England system peak load reduction use case through the ConnectedSolutions program, the Company has not deployed DERMS or implemented DERMS use cases in its Connecticut service territory. In its western Massachusetts service territory, the Company deployed the first phase of a grid DERMS at the end of 2025 and is currently completing the second phase of the grid DERMS project with a target in-service date at the end of 2026. The Company is currently implementing foundational upgrades to its SCADA eECS and DMS systems in Eastern Massachusetts and is expecting to start a grid DERMS project there in early 2027. With respect to use cases, in western Massachusetts, the Company is currently utilizing its grid DERMS for weather-based operational forecasting,

providing real time system operators with hour- and day-ahead visibility into the impact of DER on power flows, including the impact of solar generation on equipment loading. In eastern Massachusetts, the Company conducted its first locational demand response program in Summer 2026, utilizing its aggregator DERMS to reduce load during peak events at three substations in the Boston area with identified risk of overload. The Boston substation peak load reduction program was implemented in coordination with the Company's Massachusetts Grid Services Compensation Fund, increasing incentives for participating customers served by the targeted substations. (Referred to as the "ConnectedSolutions+" program.)

The Company also actively utilizes its 34-MWh stand-alone battery in Provincetown Massachusetts in a complex microgrid configuration able to supply up to 11,000 customers solely with the battery upon loss of traditional grid supply. This microgrid is currently operated with a dedicated microgrid control scheme. In the longer term, the Company plans to integrate operation of the Provincetown battery with a grid DERMS capability to coordinate dispatch of the Eversource battery with customer DER to cost-effectively increase the duration of the microgrid. Also in process is a project at the Company's Roosevelt solar facility to utilize DERMS to support voltage management use cases. The scope of the Roosevelt project incorporates investigation into lower-cost options for DER communication and control through a centralized grid DERMS. The Company is also planning to implement a ConnectedSolutions+ program in targeted locations in southeastern MA, an area with high solar penetration, for a managed EV charging use case to reduce the risk of reverse flow overloads by charging EV batteries during periods of high solar output.

b. The DERMS demonstration program is designed to implement multiple DERMS-dependent use cases in a targeted location to demonstrate the multiple benefits of different approaches, both independently and in coordination. The intent is to show the full potential of DERMS technology to inform efforts to deploy at scale across Connecticut. The Grid Services Compensation Fund is an important enabler of the DERMS demonstration, enabling the Company to increase incentives for DER customers supporting one or more use cases. For example, the Company would use the Grid Services Compensation Fund to provide incentives in exchange for a customer allowing use of an advanced inverter for a voltage management use case. Currently, the Company has no mechanism to compensate customers for this or any locally-targeted capacity or voltage use cases.

The DERMS demonstration could also incorporate the use of dynamic flexible interconnections. Using DERMS technology, a dynamic flexible interconnection allows larger-scale DER facilities an increased operating envelope (i.e., greater charge and discharge levels) based on real-time operating conditions. For example, a fixed operating envelope may restrict battery discharge to 25 percent of nameplate in Spring and Fall seasons when load is relatively low and solar output is high. A dynamic flexible interconnection could relax this restriction and allow more discharge based on real-time grid conditions (i.e., cloudy warm days when solar output is lower and load is higher.) The DERMS demonstration could incorporate the concept of dynamic flexible interconnection to show the incremental value of an expanded operating envelope for capacity and/or voltage related DERMS use cases