



May 9, 2023

Daniel C. Goldner, Chairman
New Hampshire Public Utilities Commission
21 South Fruit Street, Suite 10
Concord, NH 03301

Re: Conservation Law Foundation’s Reply Comments in Docket No. IR 22-076

Dear Chairman Goldner,

Thank you for the opportunity to submit reply comments in Docket No. IR 22-076, the Commission’s Investigation of Whether Current Tariffs and Programs are Sufficient to Support Demand Response and Electric Vehicle (“EV”) Charging Programs. Conservation Law Foundation (“CLF”) supports the Commission’s decision to conduct a three-month investigation into the issues raised in this docket, which includes several rounds of comment opportunities for participants, prior to the Commission initiating an adjudicative phase. CLF also supports the Commission’s decision to maintain a single proceeding to consider the issues raised in the original order of notice, as such issues are interrelated. The initial comments demonstrate that there is relative consensus in several areas under consideration in this investigatory docket, which could form the basis of the scope of the subsequent adjudicative phase. CLF incorporates by reference its initial comments in this docket in these reply comments.

1. The Commission Should Scale the Utilities’ Existing Demand Response Programs.

In addition to CLF, several other participants argue in their initial comments that there is significant scope for the Commission to approve an expansion of existing demand response programs. Eversource generally supports an expansion of existing demand response programming and explains that with increasing heating and transportation electrification, the need to manage demand on the transmission and distribution systems “will become less of a progressive policy concept and more of an imperative.”¹ Eversource’s demand response programs employ a simple incentive-based design, with no associated rate mechanism.²

Eversource observes that although 81,000 residential devices and 800 large commercial and industrial sites are enrolled in Eversource’s demand response programs across its three state

¹ Eversource Initial Comments, at 1-2 (Mar. 21, 2023, Docket No. IR 22-076).

² *Id.* at 3, 6.

service territories, only 1,100 of these enrollments are attributable to New Hampshire.³ According to Eversource, while 20 percent of Eversource’s total customer base is in New Hampshire, only 8 percent of the kW reduction resulting from demand response programs across its three state service territory states came from New Hampshire customers enrolled in demand response programs.⁴ Moreover, the company has waitlists in New Hampshire for both residential and C&I customers who want to enroll in existing demand response programs.⁵ Eversource concludes that because it has far fewer demand response participants in New Hampshire in both absolute and relative terms, “there is excellent potential for expansion and growth.”⁶

With respect to Unitil, the company similarly explains that by actively reducing loads during peak hours through active demand response programs, utilities in New Hampshire “can positively influence the price of capacity in the ISO-NE forward capacity market and provide immediate benefits to all customers in the form of suppressing wholesale power prices during times of high demand.”⁷ Unitil observes that as the demand for electricity grows due to large-scale electrification in the transportation and building sectors, active demand response programs “can help avoid negative and costly grid impacts resulting in avoided capacity, transmission, and distribution costs that are incorporated into electric rates on a long-term basis.”⁸ Unitil concludes that through existing active demand response pilot programs, the New Hampshire utilities “have developed the framework to scale their New Hampshire [active demand response] programs to meet the challenge to the electric system that will arise from additional electrification loads.”⁹

Both Eversource and Unitil recognize that active demand response programs can avoid costly upgrades to the grid and achieve significant ratepayer benefits. Further, the two utilities find that their experience with active demand response pilots in New Hampshire has readied the state for an expansion of the pilots into scaled programs. Eversource’s experience with operating demand response programs at scale in Connecticut and Massachusetts, as well as its waitlists for participation in demand response pilots in New Hampshire, also indicate the utility is well positioned to increase demand response offerings within New Hampshire. Accordingly, scaling the New Hampshire utilities’ existing demand response offerings should be a focus of the subsequent adjudicative phase of this docket.

Additionally, in CLF’s initial comments, it advocated for the development of winter demand response programs.¹⁰ The New Hampshire utilities’ existing demand response pilots only focus on reducing summer demand, and the utilities’ support for scaling these pilots into full programs presumably also focuses on reducing summer demand. However, given that ISO-

³ *Id.* at 3.

⁴ *Id.* at 6.

⁵ *Id.* at 7.

⁶ *Id.* at 6.

⁷ Unitil Initial Comments, at 1-2 (Mar. 28, 2023, Docket No. IR 22-076).

⁸ *Id.* at 5.

⁹ *Id.*

¹⁰ CLF Initial Comments, at 4-5 (Mar. 21, 2023, Docket No. IR 22-076).

NE forecasts that by the 2030s, the regional grid will begin experiencing its highest system load in winter,¹¹ the Commission should also consider winter demand response programs in the follow-up adjudicative phase to this docket.

2. The Commission Should Explore and Ultimately Approve an EV Managed Charging Program.

In CLF’s initial comments, it advocates for EV managed charging programs. Several other participants in this docket support the establishment of EV managed charging programs in their initial comments. Eversource notes that EV managed charging has the potential to optimize charging behavior and integrate efficient integration of the new load caused by EV charging onto the distribution system. According to Eversource, “utility intervention through load management programs like managed charging have been the most efficient and cost-effective solution for encouraging beneficial charging behavior that can achieve charging policy objectives such as reducing peak demand.”¹² Indeed, Eversource proposed an EV managed charging initiative in Docket No. DE 20-170.¹³ Similarly, Unitil maintains that “[l]oad management and managed charging technologies and programs are essential to ensuring that transportation electrification does not lead to unnecessary and costly power system impacts and rate pressure.”¹⁴

Likewise, Weave Grid asserts that the Commission should further explore EV load management strategies and that such programs can be a cost-effective method of incentivizing grid-beneficial charging behavior. It notes that well-designed managed charging programs can provide the same price signals to EV drivers to encourage grid-beneficial charging behavior as EV rates, albeit through program incentives rather than traditional rate structures. It concludes that managed charging can provide a significant reduction in distribution upgrade costs as EV adoption accelerates, as well as flexibility to address distribution level constraints.¹⁵ Vehicle Grid Integration Council also notes that managed charging will benefit EV drivers and fleet operators. Specifically, it explains that “[s]mart management of EV charging will help minimize investments in utility infrastructure to support economy-wide electrification, which reduces the overall cost burden on all electric utility customers, and avoids significant delays associated with upgrading distribution system infrastructure.”¹⁶

These comments reflect a relative consensus on the need for EV managed charging programs. EV managed charging programs can reduce or eliminate distribution system upgrades, as well as commensurate rate increases, that might be necessitated by increased load resulting

¹¹ 2050 Transmission Study, ISO, NE, at Slide 24 (April 28, 2022), https://www.iso-ne.com/static-assets/documents/2022/05/a13_2050_transmission_study_sensitivity_results_and_solution_development_plans.pdf.

¹² Eversource Initial Comments, at 11-12 (Mar. 21, 2023, Docket No. IR 22-076).

¹³ Eversource Proposal for EV Managed Charging Initiative, Attachment MRG-1 (June 15, 2021, Docket No. DE 20-170).

¹⁴ Unitil Initial Comments, at 10 (Mar. 28, 2023, Docket No. IR 22-076).

¹⁵ Weave Grid Initial Comments, at 6-7 (Mar. 21, 2023, Docket No. IR 22-076).

¹⁶ Vehicle Grid Integration Council, at 1-2 (Mar. 21, 2023, Docket No. IR 22-076).

from EV charging. Accordingly, the Commission should consider, and ultimately approve, EV managed charging programs in the subsequent adjudicative phase of this docket.¹⁷ However, because it is generally infeasible for public charging stations and public charging station users to curtail charging demand during times of peak load,¹⁸ the Commission should limit its consideration of managed charging programs to residential and fleet EV customers.

3. The Commission Should Further Consider Utility Make-Ready Programs.

In its initial comments, CLF argued that infrastructure costs associated with connecting EV charging stations to the grid are a significant barrier to investment in EV charging stations, that EV charging stations development will benefit New Hampshire's economy and ratepayers and, therefore, there is justification for using ratepayer funding for EV charging infrastructure.¹⁹ A number of participants in this docket echo these comments. Unitil explains that "[o]ne of the biggest barriers to EV adoption is the lack of charging infrastructure" and that "[m]ake-ready investments in the electric distribution system are necessary to overcome this barrier."²⁰ Likewise, Eversource states that there is policy support and latitude for make-ready programs that go beyond the \$2.1 million Eversource make-ready program that was approved by the Commission in Docket No. DE 21-078.²¹ Eversource notes that "[u]tility investments in EV charging infrastructure can address the limited availability of public charging stations, the upfront cost of charging infrastructure, and a lack of consumer awareness about EVs."²² Eversource also observes that "[t]hrough such investments, utilities can accelerate charging infrastructure deployment enabling greater EV adoption and easing or removing range anxiety to provide for travelers to and through New Hampshire," which is "particularly important to maintain the travel and tourism revenue that residents and businesses throughout New Hampshire rely upon."²³

In docket No. DE 21-078, the Commission approved (subject to a later prudence determination in a rate case) a modest \$2.1 million Eversource make-ready program. There is general consensus in this docket that ratepayer funding should be used to offset some of the significant costs of the infrastructure investments needed to connect EV charging stations to the grid. Although the Commission has been reluctant to permit ratepayer funding to pay for EV infrastructure costs due to cost shifting concerns, because of the high barriers to investment in EV charging stations resulting from EV make-ready costs and the fact that New Hampshire's

¹⁷ In Docket No. DE 20-170, Eversource proposed an EV managed charging program, which the Commission rejected on the grounds that "Eversource's alternative load management approach should be left to the competitive market." Order No. 26,604, at 26 (Apr. 7, 2022, Docket No. DE 20-170). Given that the electric utilities have access to metering and load data, it is unclear how a load management program could be left to the competitive market or whether New Hampshire law provides a framework for such an approach.

¹⁸ Eversource Initial Comments, at 12 (Mar. 21, 2023, Docket No. IR 22-076).

¹⁹ CLF Initial Comments, at 6 (Mar. 21, 2023, Docket No. IR 22-076).

²⁰ Unitil Initial Comments, at 9 (Mar. 28, 2023, Docket No. IR 22-076).

²¹ Eversource Initial Comments, at 9 (Mar. 21, 2023, Docket No. IR 22-076).

²² *Id.* at 10.

²³ *Id.*

tourism based economy will lose out to surrounding states without a robust EV charging network, the Commission should further consider utility EV make-ready programs in the subsequent adjudicative docket.²⁴

4. The Commission Should Explore Vehicle to Grid Programs.

Like CLF, several parties advocate in their initial comments for the Commission to establish Vehicle to Grid (“V2G”) programs. The Vehicle Grid Integration Council asserts that V2G feeds power back to the grid to provide peak shaving and other grid services and, thus, transportation electrification investments made through EV charging programs should incentivize V2G capabilities where and when it makes sense.²⁵ Fermata Energy endorses considering V2G in demand response design and as part of make-ready programs.²⁶ Unitil also notes that V2G charging can support demand response.²⁷

V2G programs have the potential to bolster the Commission’s goal in this investigation of reducing (or managing) peak load through demand response programs and ensuring that EV charging does not contribute to peak load. Accordingly, the Commission should encourage the utilities to submit a V2G program proposal in conjunction with any EV charging and demand response program proposals that are filed. However, because of the Commission’s and the utilities’ lack of experience with V2G programs, it may be appropriate for the Commission to limit initial V2G programs to pilot scale.

5. The Commission Should Overcome Its Resistance to Approving Novel Programs.

Several times over the past year, the Commission has instructed the utilities to develop programs that hold substantial potential for limiting increases to peak load from EV charging, only to reject such proposals based on cost considerations. For example, recently in Docket No. DE 20-170, the Commission rejected a pilot that Eversource designed to determine the technical and practical feasibility of utilizing metering embedded in EV supply equipment (“EVSE”) and EVs on the grounds that the cost of the pilot was too high when balanced against the limited data likely to be produced the pilot.²⁸ In Docket No. DE 21-030, the Commission similarly rejected an alternative metering feasibility pilot proposed by Unitil.²⁹

²⁴ Similarly, because utility demand charges act as significant barriers to investment in EV charging infrastructure, (Testimony of Christopher R. Villarreal on Behalf of CLF and CENH (Feb. 25, 2022, Docket No. DE 21-078), the Commission should continue to consider ways to reduce demand charges for public charging stations through the adoption of demand charge alternatives, as the Commission did in Docket Nos. DE 20-170 and DE 21-078.

²⁵ Vehicle Grid Integration Council Initial Comments, at 2 (Mar. 21, 2023, Docket No. IR 22-076).

²⁶ Fermata Energy Initial Comments, at 2-4 (Mar. 21, 2023, Docket No. IR 22-076).

²⁷ Unitil Initial Comments, at 6 (Mar. 28, 2023, Docket No. IR 22-076).

²⁸ Order No. 26,797, at 9 (Mar. 31, 2023, Docket No. DE 20-170).

²⁹ Order No. 26,623, at 27-29 (May 3, 2022, Docket No. DE 21-030).

Although the Commission is appropriately concerned about unnecessary cost shifting among different classes of ratepayers, New Hampshire will never become “the most innovative state within the electricity market” if the Commission is unwilling to approve novel pilots and programs that can explore issues relating to demand response and EV charging.³⁰ The Commission has approved novel pilots in the past involving demand response and, particularly, the Liberty battery storage pilot in Docket No. DE 17-189. To avoid the parties wasting time and effort in developing pilots and/or programs that are ultimately rejected, when establishing the subsequent adjudicative docket, the Commission should outline parameters on the types of programs and pilots it is willing to accept, either based on absolute cost, cost-effectiveness, or other metrics. This would provide the parties guidelines for the development of proposals and exhibit a clear intention that the Commission intends to approve the use of ratepayer funds on programs and/or pilots that begin to answer key questions relating to demand response and EV charging.

In addition to the programs already discussed herein and in its initial comments, CLF encourages the Commission to reconsider the utilities’ development of alternative metering feasibility pilots. Several participants in this docket support the use of embedded/alternative metering. Weave Grid notes that in several states, state utility commissions have approved programs that allow the use of embedded meters to offer successful EV rates and programs that would be prohibitively expensive to administer but for the use of EVSE and EV metering capabilities.³¹ Weave Grid contends that these efforts in other states could be instructive to the Commission and could guide its decisions relating to the use of embedded metering to facilitate future EV rates and EV load management programs.³² Unutil also asserts that “[a]s the accuracy of integrated metering within EV chargers improves and common standards for securely sharing data are adopted, [it] is open to considering using EV charger data as opposed to requiring a separate meter.”³³

The use of embedded/alternative metering has the potential to enable a larger expansion of EV load management and time of use rates than would otherwise occur given the current low rate of advanced metering infrastructure deployment in the state. Therefore, the Commission should develop clear parameters for embedded/metering feasibility pilots that it is willing to approve and instruct the utilities to develop revised alternative metering pilots based on these new criteria.

6. Conclusion

CLF appreciates the opportunity to offer these comments and the Commission’s decision to schedule several comment opportunities during the investigatory phase of this docket. CLF looks forward to continuing to participate in this docket.

³⁰ Commissioner Simpson Statement, Hearing Transcript at 93 (Feb. 7, 2023, Docket No. DE 17-189).

³¹ Weave Grid Initial Comments, at 5 (Mar. 21, 2023, Docket No. IR 22-076).

³² *Id.* at 6.

³³ Unutil Initial Comments, at 11 (Mar. 28, 2023, Docket No. IR 22-076).



Sincerely,

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