CLEAN ENERGY NH
Your Voice in All Energy Matters

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October 30, 2023

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

Re: Docket No. IR 22-076, Investigation of Whether Current Tariffs and Programs are Sufficient to Support Demand Response and Electric Vehicle Charging Programs
Clean Energy NH Final Comments

Dear Chair Goldner,

Thank you for the opportunity to submit final comments in Docket No. IR 22-076, Investigation of Whether Current Tariffs and Programs are Sufficient to Support Demand Response and Electric Vehicle (EV) Charging Programs. Clean Energy NH (CENH) appreciates the Public Utilities Commission's (PUC) exploration of interrelated complex issues, and we look forward to the findings of the docket informing the possible adjudicative dockets and legislative discussions to follow.

CENH largely agrees with the summary and recommended next steps in the report prepared by staff at this stage in the process. However, the format of this investigatory proceeding did not provide sufficient opportunity to deeply work through the topics to identify areas of clear agreement and to reach consensus regarding more challenging topics. As such the progress made over the past year was not as great as CENH hoped at the outset. During future investigations, CENH recommends that the PUC hold in person work sessions with professional facilitators to engage participants in an in-depth dialogue to identify solutions rather than positions.

Overall, the report recommendations and summary of positions demonstrate that the parties to the docket collectively demonstrate the understanding that EVs are an opportunity and a challenge for the state's economy and energy system. The recommendations and positions also demonstrate that a portfolio of integrated options will be required to fully unlock the value of EVs, as well as mitigate their potential impacts to the state and regional electric grid. To that end, strategic and coordinated deployment of time-of-use (TOU) rates, managed charging, and vehicle-to-grid (V2G) technology will be required to minimize the potential demand impacts of EV adoption as well as fully take advantage of the potential grid services. However, early on, demand charge alternatives and make-ready programs will be needed to reduce market barriers to public EV charging development equitably and uniformly.

Rather than comment on the entire report contents, CENH notes a significant omission regarding demand response and emphasizes key points relative to EVs.

Regarding demand response, CENH observes an important oversight in the comments to the proceeding. Senate Bill 91 (2021) repealed and re-enacted RSA 374-H. The new language in RSA 374-H:2 Customer Energy Storage Systems, requires the commission to adopt rules clarifying policy for the installation, interconnection, and use of energy storage systems by customers of utilities. Such a rulemaking proceeding has not been opened. As battery storage is falling in costs, innovating in chemistries, and increasing in applications, rules are needed to clarify the expectations for both utilities and installers/projector developers. Such clarity will allow New Hampshire homeowners, businesses, local governments, and energy service providers to pursue more projects. The entire New Hampshire energy system in general will benefit from the wide spread deployment of storage due to its capacity to reduce peak demand, integrate intermittent renewable energy supply, and provide ancillary services.

For EVs, CENH notes two key points:

1. Earlier action, even if imperfect, is necessary to minimize ratepayer impacts, maximize innovation, and maintain New Hampshire's economic competitiveness; and

2. Recent agreements concerning auto manufacturers and charging network managers do not invalidate the need to address market barriers now in New Hampshire.

Concerning early action, CENH would first point to "flaws" in its own comments, filed over five months ago. Previously, CENH noted that EVs are *presently a small fraction of the passenger vehicle fleet*, and that EVs have only just surpassed five percent of new vehicle sales nationally. CENH further noted that EV sales were forecast to be more than 25 percent of new vehicle sales by 2026, and more than 50 percent of new vehicle sales by 2030.[1] CENH had also previously reported that New Hampshire was projected to see at least a ten-fold increase in EVs registered in the state over the next decade,[2] and that this adoption trend was expected to be more dramatic in the region surrounding New Hampshire. CENH noted that ISO-New England (ISO-NE), the regional grid operator, had forecast that there would be a greater than 50-fold increase in EVs on the road between 2022 and 2031, growing from 35 thousand EVs to nearly 1.9 million.[3] This is a significant amount of growth. That data presentation was premature.

CENH's reporting to the PUC was based on CENH's analysis ISO-NE's *draft* 2023 transportation electrification forecast. The *final* 2023 ISO-NE forecast, released on April 28, 2023, revised the total EVs on the road in 2031 from 1.9 million to 2.2 million.[4] However, it is

[1] BNEF. *"More Than Half of US Car Sales Will Be Electric by 2030."* BloombergNEF, https://www.bloomberg.com/news/articles/2022-09-20/more-than-half-of-us-car-sales-will-be-electric-by-2030.

[2] ISO-NE (2022). *"2022 Final Transportation Electrification Forecast",* ISO-NE Load Forecast Committee, https://www.iso-ne.com/static-assets/documents/2022/02/evf2022_forecast.pdf.

[3] ISO-NE (2022). *"2023 Draft Transportation Electrification Forecast",* ISO-NE Load Forecast Committee, https://isonewengland.com/static-assets/documents/2022/12/transfx2023_adopt.pdf.

[4] ISO-NE (2023). *"2023 Final Transportation Electrification Forecast",* ISO-NE Load Forecast Committee, https://www.iso-ne.com/static-assets/documents/2023/04/transfx2023_final.pdf.

worth noting that this revision occurred within the 2023 forecast year and accounted for changes resulting from the Inflation Reduction Act. Just a year earlier, ISO-NE's 2022 final EV forecast had projected that 1.5 million EVs would be on the road for 2031. This upward revision of the forecast is consistent with ISO-NE forecasts over the past decade for both energy efficiency and solar PV adoption; ISO-NE annual forecasts for the energy transition tend to be conservative.

With that forecast in mind, New Hampshire needs to be prepared for both a significant increase in EV adoption by NH-based residents and businesses, as well as travelers and tourists that wish to visit the state. Preparing for the growth in EVs over the next ten years must shift from the planning and studying to piloting and implementation. The critical point is that the transition to EVs is underway and will pick up steam and advanced preparation is needed.

CENH's second point concerns the recent announcements by GM and Ford that they will partner with Tesla, adopting Tesla's North American charging plug standard. This partnership will allow GM and Ford vehicles to access Tesla's supercharger network.[5] While this may increase the number of chargers that are open to EV vehicles nationally, it does little to meet the needs for public EV charging stations, now or in the future.

While such partnerships may ultimately influence which type of charging plugs the auto manufacturers install during vehicle production, it does not affect the current business case for public EV charging. The current business case is weak, but public EV charging stations must be built BEFORE sufficient EVs are on the road to reach financially sustainable utilization rates.

In the near and mid-term, as the PUC has heard repeatedly, the utilization rates of public EV charging stations will remain too low for developers and site hosts to cover the full costs of EV charging equipment, site work, front-of-the-meter utility upgrades, electric bills, and maintenance. The business case is weak in the southern tier of the state now, where EVs are more numerous. The business case will remain fraught for far longer in rural parts of the state or those that are dependent on seasonal tourism. The utilization rates are too low to recover those costs, much less turn a profit.

However, most EV charging by NH residents will take place at home, allowing *some* residents to purchase EVs without concern over the adequacy of the public EV charging network. The fact that the majority of the EVs in the Northeast will be located in southern New England, and a similar number located in the eastern Canadian provinces, presents a significant economic challenge. It is drivers from these states that drive the NH tourism economy. As Ski New Hampshire noted in their comments on May 9, 2023, travel and tourism is the second largest sector in the New Hampshire economy.

Unfortunately, the states of Vermont and Maine are already well ahead of New Hampshire in the rollout of public EV charging. The partnership between Tesla and two auto manufacturers does little to change that. Each of these two states already have travel and tourism industries that match New Hampshire's. Failure to address the market barriers that limit private investment in

[5] GM Embraces Tesla's EV Charging System, Wall Street Cheers, Reuters, https://www.reuters.com/technology/gm-ceo-discuss-future-ev-charging-with-musk-twitter-2023-06-08/.

the public EV charging network means that New Hampshire risks ceding its current, significant, market share of travel and tourism to the surrounding states, possibly permanently.

To keep its competitive edge over the next decade, New Hampshire must avail itself of a variety of strategies to develop public charging in the early days and then roll them back as the EVs reach the road in much higher numbers and utilization rates increase.

Please contact either myself, Chris Skoglund (chris@cleanenergynh.org, (603) 573-9926 ext 702) or our Executive Director, Sam Evans-Brown (sam@cleanenergynh.org, (603) 573-9926 ext 700) with questions.

Sincerely,

/s/ Chris Skoglund

Chris Skoglund
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