



CLEAN ENERGY NH
Your Voice in All Energy Matters

Debra Howland
Executive Director
New Hampshire Public Utilities Commission
21 South Fruit Street
Concord, NH 03301

May 11, 2020

Re: IR20-004, Electric Distribution Utilities Investigation into Rate Design Standards for Electric Vehicle Charging Stations and Electric Vehicle Time of Day Rates

Clean Energy NH Comments on Staff's April 3, 2020 Recommendation

Dear Executive Director Howland,

Clean Energy NH (CENH) appreciates the opportunity to provide comments on Commission Staff's recommendations dated April 3, 2020 relating to electric vehicle (EV) rate design standards and time of day rates under IR20-004.

Many of CENH's 500+ members across New Hampshire have a vested interest in the growth and expansion of the EV market and electric vehicle supply equipment (EVSE), of which electric rates are a critical component. We are appreciative of Staff's recommendations and look forward to the next steps with the Commission to ensure NH has optimal rate designs and structures to enable and encourage transportation electrification in a manner that benefits customers and the grid.

Please contact me with any questions regarding our comments below.

Sincerely,

Madeleine Mineau
Executive Director, Clean Energy NH
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I. Rate Design Standards for Electric Vehicles

A. Prohibition of Declining Block Rates

CENH agrees with Staff's classification of declining block rates as not appropriate rate design for EV charging and supports the conclusion encouraging the Commission to issue guidance prohibiting declining block rates for any separately metered EVSE.

B. Time of Day Rates

CENH finds Time of Day rates, also known as Time of Use (TOU) rates, an ideal rate design mechanism for EVs with many benefits to the grid. By using TOU rates, EV customers are able to (1) make informed decisions about when to charge, (2) adapt their charging schedules in order to reduce their energy costs, and (3) provide grid benefits by shifting demand to off-peak hours. As Regulatory Assistance Project describes in a recent report, titled "Taking First Steps: Insights for States Preparing for Electric Transportation", "Effective rate designs can also protect non-EV customers (and EV customers who charge off-peak) from subsidizing the system costs imposed by an EV customer who charges during peak periods."

CENH recommends that customers should be given the option to adopt a whole-house TOU rate or an EV-only TOU rate. Many customers may find benefit by adopting a whole-house TOU rate if they feel they have the ability to modify their behavior to maximize off-peak energy use, while some will prefer to adopt an EV-only TOU rate. Examples from other utilities show both TOU offerings can be very effective at shifting charging to off-peak hours. RAP describes: "Pacific Gas & Electric (PG&E) customers who have enrolled in EV-only rates charge off-peak 93% of the time; on Southern California Edison's EV-only rate, 88% of charging is off-peak."

To implement EV-only TOU rates, utilities should be required to look beyond traditional utility metering to quantify usage and timing. The cost of installing a second utility electric meter can be steep, which may deter customers from adopting an EV-only TOU rate. Conversely, technology installed in many EV chargers, vehicles, or affordable external devices are capable of providing accurate and effective metering. Therefore, CENH supports Staff's recommendation that the utilities file feasibility assessments for metering devices other than a utility-provided meter to identify the most appropriate and least cost approach to metering EV-only TOU service.

CENH strongly encourages the Commission to consider the interaction of TOU rates developed for EV charging and net metering for customers who have both on-site renewable generation and an EV. The Commission should issue guidance for customers currently on a net metering tariff that outlines how these customers can continue to net meter but also charge their cars behind-the-meter and opt into a TOU rate. Order 26,029 in DE 16-576 concluded that utilities should conduct TOU pilot programs with DG



customers participating in net metering. An example approach approved by the Commission can be found in Liberty Utilities residential battery pilot program (DE17-189) which includes the opportunity for net metering customers to use the TOU rate developed for this program.

Staff's recommendations do not provide guidance for how EV customers currently using a net metering tariff could take advantage of TOU rates. As many early-adopters of EVs are also early adopters of residential solar, the Commission should provide clear guidance for this interaction. CENH urges the Commission to allow TOU net metering if a net metering customer opts into an EV or whole-house TOU rate or a TOU customer adds on-site generation eligible for net metering.

C. Quantifications of Incremental Costs

CENH finds Staff's recommendations that each utility seeking approval of an EV TOU rate provide an assessment of incremental costs associated with that offering including billing, metering, and marketing appropriate. CENH encourages the utilities to provide a robust description of these costs, including why certain approaches or methods were chosen above others and why the costs proposed are necessary to the successful implementation of the TOU rate, particularly marketing expenses.

However, CENH also finds it equally necessary for these costs to be compared to utility cost reductions later achieved through increased transportation electrification and TOU rates such as reduced peak demand costs and increased sales volume. Therefore, how costs savings will be returned to ratepayers, benefit/cost, or net incremental costs should be considered rather than simply any new costs incurred. This will provide a complete picture to evaluate future modifications or advanced TOU rates that may come before the Commission.

D. Seasonal Rates

With regard to seasonal rates, CENH cautions Staff's statement that "the type of customer that purchases an electric vehicle is likely to have a greater visibility into their own energy usage than the average customer, and therefore greater likelihood of responding to price signals." While this may be true of early adopters who invest in an EV and are careful to fully understand and manage their charging to the greatest extent possible, this prediction cannot and should not be generalized and applied to all future purchasers of EVs. As transportation electrification increases, more "average customers" will purchase EVs, but may not have the same sophisticated knowledge or desire to manage their charging, especially without adequate customer outreach, education, and communication. In this case, seasonal variation in rates may lead to customer confusion and frustration that may eventually lead to a complete disregard for managing their charging. Most EV customers will also have limited flexibility to change their charging behavior to respond to a seasonal price signal. While CENH supports efficient pricing and signals that lead to the best use of the grid, we also support clear and easy-to-



understand pricing structures for EV customers. Therefore, any preference for seasonally-differentiated rates should be based on a demonstrated analysis that the added complexity yields net benefits and be accompanied by sufficient customer outreach, education, communication, and resources.

E. Interruptible Rates

CENH agrees with Staff's recommendation that interruptible rates are not an appropriate rate structure for EVs due to their potential to cause significant disruption and confusion, especially for drivers charging at Level 3 DC fast charging stations on long-distance trips that need a predictable, reliable rate of charge to continue.

F. Load Management Techniques

In general, CENH supports Staff's recommendation regarding load management techniques. We support the idea that if such techniques are authorized, they should be offered in conjunction with TOU rates. Especially now while EV adoption is still relatively low in NH, a TOU rate that empowers customers to respond to price signals is likely to cost efficiently yield expected grid benefits.

CENH also urges the Commission to further investigate and identifying circumstances where utility-managed charging might be appropriate. TOU rates are preferable for encouraging EV drivers to shift load to maximize grid resources. While utility-managed charging as an active demand resource may be appropriate as well due to the natural connection between the utility and customer that may lend itself to an efficient relationship for managed charging, CENH expresses some reservations with the net benefit that would be produced by utility managed charging beyond what a TOU rate alone would deliver. It should also be considered that as the electric transportation industry advances, competitive open-market participants may offer direct load management options that may be more cost-effective or provide additional benefits.

G. Demand Charges

CENH thinks that Staff's recommendation regarding demand charges falls short. Staff recommends that utilities explore alternatives to non-coincident peak demand charges however, CENH requests that the Commission require that each utility propose alternatives to demand charge-based rates for EV charging that do not place undue burden on hosts of charging stations, particularly DC fast chargers. Such proposals could be considered in the same adjudicative docket as the proposed TOU EV charging rates. CENH does support Staff's recommendation that the Commission require Eversource to file for review the results of demand charge alternative analysis conducted in other states.

As detailed in a recent report by RAP: "Demand charges can effectively become a fixed charge that cannot be avoided by better managing EV charging into lower cost times of day. For businesses subject to a demand charge in their tariff, installing vehicle charging can greatly increase their monthly utility bills, discouraging them from providing charging to employees or patrons. And for potential owners and operators of electric transportation technologies - including fleet operators, trucking companies and individual



drivers - demand charge rates can lead to fuel costs that are greater than the costs of gasoline or diesel, which eliminates the potential economic benefit of electrified transportation.” This does not facilitate the transition to electrified transportation.

Across the country, other utilities are exploring and implementing alternatives to demand charges that enable the growth of electrified transportation. As described in the same RAP report: “In October 2019, the California Public Utilities Commission (CPUC) approved a modified proposal from PG&E that is designed to address some of the challenges with demand charges we describe. The new rates apply to smaller workplaces and multifamily dwellings, as well as larger installations such as those for public fast chargers. With this rate design, the company is replacing demand charges with “subscription pricing,” a monthly fee that allows customers to choose the amount of power based on their charging needs. For example, a customer will pay a certain price for a 50-kW connection. If that demand is exceeded during the month, the customer could pay an overage after a three-month grace period, but the subscription price does not change. In other words, the overage does not establish a new demand level (as would be typical of demand charges) that could automatically ratchet up a demand charge. Energy usage will be based on TOU pricing with peak, partial-peak and off-peak rates. PG&E expects this design to result in significant savings over existing C&I rates, particularly for fast charging and workplace charging. Importantly, these new rates are not “subsidized” by other customers, meaning that the rates are designed to recover the costs to serve the EV customers.”

The example above demonstrates that there are alternatives to demand charges that could benefit NH customers, including: (1) the ability for the utility to adequately cover grid costs, (2) a stable, predictable, and simple pricing mechanism for the consumer, (3) lower cost burden on the charging station site host which they do not have the ability to mitigate, and (4) no cost-shifting to non-EV customers to cover grid costs.

Staff recommend considering a DCFC two-part demand rate recently adopted in Maine. CENH does not support this recommendation as we do not think this Maine rate appropriately addresses the issues with including demand charges in public EV charging rates. Several other good options for alternatives to demand based EV charging rates are provided in our original comments in this docket and in testimony of CENH witness Kevin Miller in DE 19-057.

II. Residential and Commercial Time of Day Rates for Electric Vehicle Charging

CENH urges the Commission to accept Staff’s recommendations to open an adjudicative proceeding and require each utility to file within 120 days an EV TOU rate proposals for residential, small commercial, high draw commercial customers. CENH also supports the guidelines recommended by Staff that these TOU rates should follow under the “Consistency Among Utilities” section. However, CENH disagrees that these TOU rates necessarily be “separately metered” rather customers should have the option to adopt the TOU rate for their whole service.



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CENH looks forward to working with Commission Staff and the utilities through an adjudicative proceeding to develop and adopt efficient, simple, and effective TOU rates and demand charge alternatives that will benefit NH's grid and EV customers.

Reference:

- Regulatory Assistance Project, "Taking First Steps: Insights for States Preparing for Electric Transportation". 2020. Available online at: <https://www.raonline.org/wp-content/uploads/2020/04/rap-farnsworth-et-al-EVs-first-steps-2020-april.pdf>