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For a thriving New England

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February 20, 2020

Hand-Delivered
Debra A. Howland, Executive Director
N.H. Public Utilities Commission
21 South Fruit Street, Suite 10
Concord, NH 03301

Re: Docket No. IR 20-004 (Investigation into Rate Design Standards for Electric Vehicle Charging Stations and Electric Vehicle Time of Day Rates)

Dear Ms. Howland:

Conservation Law Foundation ("CLF") appreciates the opportunity to participate in the above-referenced docket, relative to rate design standards for electric vehicle ("EV") charging stations and EV time-of-day rates. CLF is a non-profit, member-supported environmental advocacy organization working in New Hampshire and across New England to protect our environment for the benefit of all people, to build healthy communities, and to sustain a vibrant economy. CLF is working throughout New England to advance policies and decision-making that encourage the increasing deployment and use of EVs as an alternative to fossil-fueled vehicles – a shift that is essential to reducing the significant and growing greenhouse gas contributions of the transportation sector. We look forward to participating in the February 28, 2020 public stakeholder technical session and, in the meantime, provide the following brief comments.

Rate Design Standards for EV Charging Stations Should Provide Demand Charge Relief

Traditional demand charges are known to deter investment in DC fast chargers. Particularly while utilization is low, demand charges incurred can be far greater than the revenue the charging stations can generate. Around the country, innovative alternative mechanisms are being piloted and pursued by utilities, reflecting the widespread nature of the problem and demonstrating that there are ways to serve the public interest while accommodating utility needs.[1] To facilitate EV deployment, a robust fast charging network will be necessary; this will likely entail some form of demand charge relief.

[1] *See, e.g.,* The Sierra Club & Plug In America, *AchiEVe: Model Policies to Accelerate Electric Vehicle Adoption, Version 3.0* (July 2019) at 16 (providing examples of how utilities have proposed to address the demand charge disincentive).

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Rate Design Standards Should Include EV Time-Varying Rates with Critical Peak Pricing

The attributes of electric vehicles allow them to serve an important role in a modern electricity grid. EVs have flexible loads, meaning that they do not draw on the electricity grid at the same time that they are utilized.[2] They are essentially motorized electricity storage units. Thus, power demand can be shifted—to better match supply (for instance, to times when renewable resources are otherwise being curtailed), or to take advantage of less congested and less costly off-peak hours. This flexibility facilitates load management and presents significant, untapped potential for grid optimization.[3] These increased system efficiencies and benefits, as well as the improved margins attributable to higher utility revenues, can be shared with all ratepayers, putting downward pressure on rates.[4]

Load management will be critical for mitigating the increased demand attributable to widespread electrification but also for enabling vehicle batteries to serve as distributed energy resources that can enhance operational flexibility of the grid.[5] Shifting load to less congested hours and locations and smoothing demand curves can lower costs for all customers[6] and can be beneficial for ratepayers, utilities, and the environment alike.

Rate design is a well-established and widely recommended approach for managing load. Whereas traditional rates do not convey price signals in a way that reflects contemporaneous grid conditions, well-designed, time-varying rates lead to electricity use that is aligned with grid

[2] *See, e.g.,* Farnsworth, D., Shipley, J., Lazar, J., and Seidman, N. (2018, June) *Beneficial electrification: Ensuring electrification in the public interest*. Montpelier, VT: Regulatory Assistance Project, at 29-33.
[3] *See, e.g.,* Farnsworth, D., Shipley, J., Sliger, J., and Lazar, J. (2019, January). *Beneficial electrification of transportation*. Montpelier, VT: Regulatory Assistance Project, at 36-43; *see also* G. Fitzgerald. & C. Nelder, Rocky Mountain Institute, *From Gas to Grid: Building Charging Infrastructure to Power Electric Vehicle Demand* (2017) at 23-24.
[4] *See, e.g.,* J. Frost, M. White & A. Allison, Synapse Energy Economics, Inc., *Electric Vehicles are Driving Electric Rates Down* (June 2019 Update), at 3-4.
[5] *See supra*, n. 3.
[6] *See supra,* n. 3*; see also* Farnsworth, D., Shipley, J., Lazar, J., and Seidman, N. (2018, June) *Beneficial electrification: Ensuring electrification in the public interest*. Montpelier, VT: Regulatory Assistance Project, at 31.

needs (and therefore can result in reduced costs for all ratepayers).[7, 8] CLF supports an EV time varying rate design with critical peak pricing.

Because it will capture efficiencies in addressing key policy and rate design questions, CLF supports the establishment of time-varying rates for EV charging for residential and commercial customers in the context of a statewide docket for all utilities specifically addressing EV charging rates, as opposed to during individual rate cases.

Other Resources for Staff's Consideration

CLF notes that important questions about utilities and their role in EV charging infrastructure and EV rate approaches are currently being addressed in the Maine Public Utilities Commission's Docket No. 2019-00217, addressing several pilot programs supporting beneficial electrification in the transportation sector.

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[7] *See, e.g.,* Farnsworth, D., Shipley, J., Lazar, J., and Seidman, N. (2018, June) *Beneficial electrification: Ensuring electrification in the public interest.* Montpelier, VT: Regulatory Assistance Project, at 41-44, 50 ("For consumers to benefit from the value produced by their flexible electrification load, the system or societal value of their actions must be communicated through the electricity prices they pay or avoid."); *see also* J. Frost, M. White & A. Allison, Synapse Energy Economics, Inc., *Electric Vehicles are Driving Electric Rates Down* (June 2019 Update), at 2 ("In California, EV customers on TOU rates consistently consume a far lower percentage of their electricity during on-peak hours compared to standard residential customers.").

[8] In addition to encouraging off-peak electricity use, rate design is a tool for encouraging electrification because it presents consumers with fuel-saving opportunities. *See, e.g.,* Zethmayr, J.; Kolata, D. Charge for Less: An Analysis of Hourly Electricity Pricing for Electric Vehicles. *World Electr. Veh. J.* (2019) (paper using actual locational marginal prices to compare what rational EV drivers would pay to charge their vehicle on Illinois utility Commonwealth Edison's hourly pricing program with costs associated with the utility's flat-rate energy price, concluding that hourly pricing would have saved EV owners significantly over a flat-rate tariff in the years studied.).

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Again, CLF appreciates the opportunity to participate in this investigatory docket, including the opportunity to submit these brief comments.

Respectfully submitted,

Tom Irwin
V.P. and CLF New Hampshire Director

cc: IR 20-004 Service List (*via* electronic mail)