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May 11, 2020

Via Electronic Mail

Debra A. Howland, Executive
Director NH Public Utilities
Commission
21 S. Fruit Street, Suite 10
Concord, NH 03301-2429

RE: IR 20-004, ELECTRIC DISTRIBUTION UTILITIES: Investigation into Rate Design Standards for Electric Vehicle Charging Stations and Electric Vehicle Time of Day Rates; Comments on Staff Recommendations by the City of Lebanon

Dear Ms. Howland,

On behalf of the City of Lebanon I offer the following comments on Staff's Recommendations in their memo dated April 3, 2020. The City strongly supports all of Staff's well considered recommendations, with one exception and a couple of clarifications or minor shifts of emphasis.

The exception concerns this recommendation on p. 9:

> the *Commission issue guidance that any separately metered residential electric vehicle charging rate should: (1) be based directly on cost causation; (2) incorporate time varying energy supply, transmission, and distribution components; (3) be three part (e.g.- off peak, mid-peak, and peak); (4) be seasonably differentiated (e.g.- summer and winter); (5) have an average price differential between off-peak and peak of no less than 3:1; and (6) have a peak period no longer than four hours in duration.*

Generally, the City agrees with this recommendation, especially items (1) through (4). The exception concerns (5) and (6) as being potentially overly prescriptive and potentially inconsistent with the first: that time of use rates "be based directly on cost causation." While it is highly desirable to have a strong differential between off and on-peak rates, and having a mid-peak or shoulder rate in between helps, as does keeping the peak period as narrow as

possible, cost causation principles should not be sacrificed to achieve such arbitrary metrics. Staff does not provide support for these two specific metric recommendations, though the City recognizes that general theory on contemporary TOU rates does support this kind of directionality and agrees with such.

The City notes that Liberty's cost causation based TOU rates for its battery pilot in DE 17-189, which it has also proposed for a residential EV charging rate in DE 19-064, do not fully meet these two metrics. While for the summer period the differential between peak (called critical-peak in Liberty's tariff) and off-peak is quite a bit greater than 3:1, for the winter period it is just under 3:1. (The City assumes Staff meant that the 3:1 ratio is peak to off-peak and not off-peak to peak as stated in the recommendation.) Furthermore, the peak period that was accepted by all settling parties, including Staff, and approved by the Commission, turned out to be 5 hours in length, 3 pm to 8 pm, not 4 although there had been extensive modeling and efforts to consider a short critical peak period of 3 to 4 hours.

The problem with balancing these metrics arises from the different seasonal cost causation factors, while also trying to maintain simplicity and technical feasibility by having the same time periods in both winter and summer periods. In the summer the annual system peak for FCM capacity charges and monthly coincident peaks for transmission charges (as well as high distribution system load hours and real time prices) are concentrated in the mid to late afternoon, while in the winter, monthly coincident peaks for transmission charges, as well as high distribution system load periods and RTPs occur more frequently late in the afternoon through mid-evening. Hence the 3-8 pm five-hour period was a compromise between what may have been more ideal for summer, say 3-7 pm, or even 2-6 pm, and more ideal for winter of say 4-8 pm or even 5-9 pm.

Furthermore, as more load has access to appropriate price signals, such as large C&I customers with interval metering have now, there will be more effort to minimize customer specific capacity tags by shifting load off that peak hour, which will tend to broaden or flatten that top part of the curve and potentially shift the peak hour ahead or back an hour or so from when it might otherwise occur. Hence it will be important to emphasize cost causation and periodic updating of such factors over arbitrary metrics in rate design, or we risk defeating the purpose, if say, the annual system peak migrates out of the peak period.

Over time, adding dynamic rate features, such as a true critical peak period that is only called when a possible system peak is forecast or access to the underlying cost driver, such as capacity tags based on actual measured contribution to system peak, are likely to prove valuable.

Staff also calls for the Commission to direct the utilities to file EV rate proposals in an adjudicated proceeding to be opened. To the extent the Commission may consider and approve such a rate option for residential customers in DE 19-064, Liberty Utilities should be relieved of such a new filing requirement for the time being.

With regard to the role of utilities and load management techniques, the City appreciates that Staff recognizes that New Hampshire law (and its Constitution) expresses a clear preference for competitive market solutions over monopoly operated "command and control" when the activity is not inherently a monopoly function. I think part of the idea for utilities doing load management of EV charging (and otherwise) is that they have greater awareness of when high loads and possible system peaks might occur and could use that knowledge to manage load better than even TOU rates. There is nothing about such services that make them a monopoly function, except the absence of appropriate price signals and system information. Indeed, there is a great deal of market-based innovation occurring in this field.

Access to appropriate price signals and system information, such as by allowing opt-in AMI/interval metering and access to system information such as through a data platform being considered in DE 19-197, is key to unlocking the innovation and economic and technical efficiencies to be derived from market innovation. The City's position is that primacy should be given to requiring utilities to provide more appropriate price signals and access to the underlying cost causation factors, in conjunction with, or better, as a prerequisite to allowing utility load management programs with regard to EV charging or otherwise.

Finally, the City takes note of Staff's recommendation that residential customers be able to select a TOU EV charging rate separate from the rest of their load. That makes sense, but so does allowing customers the choice of using a 3-part TOU rate for the whole house, with or without EV charging.

Thank you for the opportunity to provide these comments and your consideration of same.

Yours truly,

Clifton Below

Clifton Below,
Assistant Mayor, City of Lebanon