Comments on the Joint Petition Regarding Rate Relief for DCFC Facilities for Electric Vehicles

July 23, 2018

Acadia Center appreciates this opportunity to submit written comments regarding the Joint Petition for Immediate and Long-Term Rate Relief to Encourage Statewide Deployment of Direct Current Fast Charging Facilities for Electric Vehicles that was filed on April 13, 2018 in Case No. 18-E-0138. Acadia Center is a nonprofit, research and advocacy organization committed to advancing the clean energy future. Acadia Center is at the forefront of efforts to build clean, low carbon and consumer friendly economies. Acadia Center’s approach is characterized by reliable information, comprehensive advocacy and problem solving through innovation and collaboration.

Northeast states are ideally positioned to become national leaders in vehicle electrification. At 10% of the nation’s new car sales, the New England states and New York have significant capacity to impact the vehicle market. These states have emissions reduction goals that can only be met by reducing fossil fuel use in vehicles and buildings through electrification. Many states have nascent programs to promote electrification, but more action is needed. State regulations must be reformed to integrate new electric end use technologies as a resource capable of optimizing the electric system, and the states need revenue mechanisms to fund appropriate infrastructure. Retrenchment at the federal level is occurring rapidly, requiring states to defend key policies (such as California’s Zero Emission Vehicles (ZEV) program, which New England states and New York have adopted). Progress in the region will set an important precedent for additional states to follow, and growing electric vehicle (EV) markets will reduce costs and advance these technologies.

As highlighted in Acadia Center’s EnergyVision 2030 report, consumers will more readily accept EV technology if charging stations are widely available and accessible. The report recommends that, to overcome EV range anxiety, states should invest in charging infrastructure and minimize barriers to building new charging stations. State leaders should increase the convenience and visibility of EVs by investing in fast charging stations along designated corridors, public charging at state and municipal buildings, and charging facilities in workplaces. Importantly, EnergyVision 2030 recommends that state policymakers consider reducing or eliminating electricity demand charges for EV station hosts as a way of removing a key barrier to building EV infrastructure.

Direct current fast charging (DCFC) stations provide, as the name suggests, a fast and convenient way to recharge an electric vehicle – refueling about 80% of an EV battery’s capacity in thirty minutes or less. This is superior performance compared to the technology used in the Level I and Level II AC chargers. With this fast-charging capability, DCFC stations are especially useful for serving EV refueling needs along major driving routes in New York. DCFC stations are crucial to address a major barrier to EV adoption by consumers – range anxiety, which is a concern that the EV owner will not have access to a charging station when the vehicle’s charge is fully consumed and will thus be stranded with an inoperable vehicle. EV owners understandably want the option of fast refueling on long-distance travel.

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1 See http://2030.acadiacent.org/full-reports/ (this information is available in the transportation companion brief).
Currently in New York, there are very few publicly available DCFC stations.\(^1\) A primary reason for this is that demand charges are currently a major impediment to making more such stations available. As highlighted in the petition, when utilization rates are very low, demand charges can account for between 80-90 percent of a charging station’s monthly electric bill.\(^2\) If conventional rate pricing is applied to DCFC stations, a high ratio of kW demand charges to kWh of energy used results in an extremely high effective per kWh rate to provide charging to EV owners. This poses a substantial problem for any reasonable business model for DC fast chargers and has likely discouraged many potential providers from installing and offering DCFC services.

A pilot program in Connecticut that converted demand charges for several DCFC stations in the state and replaced them with an equivalent kWh charge for all kilowatt hours used by the customer during each billing period has demonstrated that removing this barrier has yielded positive results. A comparison of monthly bills from two stations participating in the program showed monthly bill reductions of 73% and 81% respectfully compared to bills with demand charges included.\(^3\)

Currently, demand charges as applied to DCFC charging stations are not cost-based given their extremely low load factors. Given their relatively low usage, these stations' load profile is intermittent and random when compared to other customers and are not aligned with system peak. In contrast, customers with high load factors that are coincident with system peak are much more likely to contribute to the need for transmission upgrades. Thus, standard delivery rates for these customers with DCFC charging stations, which include demand charges as well as per kWh volumetric charges, do not accurately capture the costs imposed on the transmission and distribution system. Thus, these cost allocations should be changed, both in the short-term to properly account for these costs and, in the long-term, as EV utilization increases.

For this reason, Acadia Center supports the petition’s request to allow customers deploying DCFC charging stations to receive service on non-demand-metered tariffs in the short term and supports an examination by the Public Service Commission of an appropriate cost-based DCFC rate design.

Respectfully submitted,

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\(^2\) Joint Petition for Immediate and Long-Term Rate Relief to Encourage Statewide Deployment of Direct Current Fast Charging Facilities for Electric Vehicles (April 13, 2018) at 10.
\(^3\) See http://www.dpu.state.ct.us/dockhistpost2000.pdf/8e60e37454110ee852576190052b64d/46c5b435f08db28525829c00736078/sFILE/Atr%201-3%20Electric%20Vehicle%20Filing%20Filing.pdf.

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