July 23, 2018

VIA ELECTRONIC FILING

Hon. Kathleen H. Burgess
Secretary to the Commission
New York State Public Service Commission
Empire State Plaza, Agency Building 3
Albany, New York 12223-1350

Re:  Case No. 18-E-0138; Joint Petition for Immediate and Long-Term Rate Relief to Encourage Statewide Deployment of Direct Current Fast Charging Facilities for Electric Vehicles

Dear Secretary Burgess:

Advanced Energy Economy Institute (AEE Institute) is pleased to submit these Comments with near full support for 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. In summary, AEE Institute strongly supports allowing customers deploying DCFC chargers under separate "EV-only" electricity service, to receive service on non-demand-metered tariffs in the near-term, and strongly supports an examination of appropriate long-term DCFC rate design.

AEE Institute has long supported policies and processes that advance the deployment of the best available technologies for meeting the energy needs of today and tomorrow. In the transportation sector, we believe that electric vehicles (EVs) offer substantial value to the citizens of New York, including broad-based cost savings for ratepayers, enhanced consumer choice amongst transportation options, better economic competitiveness as human transportation transforms, improved national security from reduced dependence on imports of conventional fuels, and improved air quality. At the same time, EVs provide drivers with substantial performance improvements over conventional vehicles. The improvements range from the financial – lower fuel and maintenance costs mean that the total cost of ownership for an electric vehicle is lower than that of a comparable conventional vehicle – to the driving experience – EVs offer instant torque allowing the vehicles to accelerate faster.

New York has long recognized the benefits that EVs can provide to New Yorkers and society at large, and over time has pursued a series of initiatives that call for and are designed to encourage substantial deployment of EVs in the state. Two efforts stand out in terms of establishing the scale of the state’s EV ambitions. New York adopted California’s vehicle emission standards in the early 1990s, which include zero emission vehicle (ZEV) sales quotas that by the end of the year 2025 will require approximately 800,000 light-duty EVs operating in the state. The commitment extends beyond the light-duty sector as

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well – in 2018, NYC Transit committed to converting all of its 5,700 buses to electric models by 2040.\(^5\) Meanwhile, the 2015 State Energy Plan set a goal of reducing the state’s greenhouse gas (GHG) emissions 40 percent by 2030 relative to 1990 levels, and over time, Executive Orders have expanded this to an 80 percent reduction in GHG emissions by 2050, relative to 1990.\(^6\) Given that the transportation sector is the largest emitter in the state – responsible for roughly a third of New York’s GHG emissions - and is one of the few sectors with rising emissions in the state,\(^7\) the 2017 progress report on the 2015 State Energy Plan noted that, “[t]he state’s climate goals cannot be achieved without a rapid transition to vehicles powered by electricity”.\(^8\)

Since many of New York's ambitious EV goals have been in place for some time, the question is how the state is progressing towards them. There is some good news in that 2017 EV sales of a little over 10,000 units was 67 percent higher than 2016.\(^9\) Nevertheless, in aggregate, it is quite clear that the state is not on track to meet its targets. At the end of 2017, the state had sold a little over 30,000 EVs,\(^10\) which is a long way from the target of 800,000 light-duty vehicles by 2025.

In New York, a large part of the challenge in accelerating the market to a pace that will hit the state’s targets is the need for better and more widespread EV charging infrastructure, yet current metrics indicate that New York is struggling with charging infrastructure. The state ranks 30\(^{th}\) amongst U.S. states in charging stations per capita\(^11\) and was rated poorly by the International Council of Clean Transportation on availability of urban charging stations.\(^12\) Consumer surveys make it quite clear that a shortage of charging infrastructure significantly impacts consumer decision-making when it comes to evaluating a potential EV purchase. A recent report corroborates other research, finding that among individuals who are aware of EVs, 85% cited a lack of charging infrastructure as a reason they are not buying the vehicles.\(^13\) Governor Cuomo reflected the significance of the charging infrastructure challenge in New York when he established a charging infrastructure target (10,000 EV chargers by 2021) for the first time in his 2018 State of the State address.\(^14\)

The expansion of direct current fast chargers (DCFC) is a critical element of addressing the charging infrastructure challenge and “range anxiety” – the concern about whether a vehicle will be able to travel far enough to reach its destination or the next charging point – that consumers typically cite when they express concern about charging infrastructure availability. The vast reduction in charging time when using a DCFC makes those stations necessary for many applications, including long-distance road trips, high-volume driving conditions (e.g., fleet operations), retail situations where a consumer may wish to charge their vehicle quickly while running errands, and situations where individuals are unable to charge at home (e.g., multifamily dwellings such as the array of apartment complexes in New York City).

When it comes to expanding DCFC deployment, demand charges are a particularly important challenge. Demand charges are based on the highest level of electricity usage on a per-kW basis for a certain time period during each billing cycle. They are intended to align revenue collection with utility costs, because the electricity system is designed, built, and maintained to meet peak demands at the customer, local, and

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11 AEE analysis based on data provided by Alternative Fuels Data Center and US Census Bureau.
wholesale system levels. Demand charges are supposed to provide a price signal to incentivize customers to adjust their usage to account for their impacts on the grid. However, depending on their design and magnitude, demand charges can significantly undermine the economics of EVs and charging station ownership. The impacts are felt principally by charging station owners and operators who are subject to demand charges based on the size of their load. This is because the demand charges – which can account for over 90% of a public charging station’s electricity costs – raise costs significantly for companies trying to establish EV charging businesses and thus stifling infrastructure investment. The impact is especially pronounced at the current, early stages of EV adoption when EVSE utilization rates (i.e., the time spent charging as a percentage of total time in a day) are quite low for public applications. As such demand charges are spread across relatively fewer kWh, which increases significantly the average cost of charging.

While there are tools like smart charging and energy storage available to help mitigate some of these costs, at this stage of the market’s development, it is important to reduce the burden of demand charges on DCFC-dedicated retail accounts in the near-term and to evaluate appropriate rate design for DCFC chargers in the long-term. Importantly, over both the short- and long-term periods, implementation should ensure appropriate cost recovery for utilities, which is justified given the wide societal benefits of transportation electrification.

With respect to what types of DCFC installations should be eligible for this demand charge relief, AEE Institute encourages the Commission, in considering the Joint Petition’s reasonableness, to distinguish between DCFC-dedicated retail accounts (“EV-only” applications) and accounts where DCFC demand is combined with the overall demand of the customer premises (“behind-the-meter” applications). Balancing general rate design principles with the needs of the nascent EV industry, it is reasonable to grant the requested relief for EV-only retail accounts, while the applicability of such relief to standard retail accounts with behind-the-meter DCFC is unclear.

By undertaking this effort, New York would join a growing number of states and utilities, from Connecticut Light & Power to Southern California Edison, which are currently trying new approaches to demand charges for EVs. Since rapid expansion of DCFC infrastructure is critical to the ability of New York to achieve its goals, we strongly encourage the Commission to take up this issue expeditiously on a separate and faster track than the above-referenced generic EV proceeding.

In summary, given the broad range of benefits provided by EVs, New York’s ambitious EV targets, the need for New York to significantly expand DCFC charging infrastructure to meet those targets, and the impediment that current demand charge structures present for DCFC deployment, we strongly support the Joint Petition’s call for the Public Service Commission to undertake a two-part strategy to address the rate challenges currently faced by DCFC-dedicated retail accounts.

Please do not hesitate to reach out to our team if you have any questions or need additional information.

Respectfully Submitted,

Matt Stanberry  
Vice President