July 23, 2018

Kathleen H. Burgess, Secretary
New York Public Service Commission
3 Empire State Plaza
Albany, NY 12223-1350

RE: Comments of Greenlots in Limited Support of Joint Petition for Immediate and Long-Term Relief to Encourage Statewide Deployment of Direct Current Fast Charging Facilities for Electric Vehicles

Dear Ms. Burgess,

Greenlots submits these comments to the New York Public Service Commission (“the Commission”) in limited support of the Joint Petition for Immediate and Long-Term Relief to Encourage Deployment of Direct Current Fast Charging Facilities (DCFC) for Electric Vehicles (“the Petition”), filed by New York Power Authority, New York State Department of Environmental Conservation, New York State Department of Transportation, and New York State Thruway Authority (“the Petitioners”) on April 13, 2018 and noticed in the New York State Register on May 23, 2018.

Greenlots is a leading provider of grid-focused electric vehicle charging software and services. The Greenlots network supports a significant percentage of the DC fast charging infrastructure in North America, and is increasingly supporting deployment and execution of programs in the fleet, workplace, retail, and residential Level 2 spaces. Greenlots’ smart charging solutions are built around an open standards-based focus on future-proofing while helping site hosts, utilities, and grid operators manage dynamic electric vehicle (EV) charging loads.

As many stakeholders and utility regulatory bodies across the country are recognizing, at low utilization, demand charges can represent an often unintended but impactful barrier to deploying charging infrastructure and by consequence, achieving transportation electrification goals. In particular, this is due to their negative financial impact on the economics of third parties investing in, owning, and operating DCFC infrastructure. Accordingly, Greenlots agrees with Petitioners that further investigation of existing rate structures with an eye on DCFC deployment goals is an appropriate component of supporting EV adoption and the state’s ambitious goals for greenhouse gas reduction and zero emission vehicle deployment.

The availability of and consumer confidence in public charging infrastructure are widely recognized to be critical to encourage EV adoption. DCFC infrastructure in particular is a primary solution to overcoming consumer “range anxiety” and the ability to facilitate flexible away from home charging. It often is also the primary charging infrastructure relied upon by EV owners without access to home charging, such as those living in multi-unit dwellings, and is increasingly important in supporting metropolitan transportation electrification, including of shared ride fleets. At the same time, DCFCs are also significantly more expensive to develop, own and operate than slower, lower-
powered alternatives, making the private market business case for owning and operating this essential infrastructure extremely challenging.

Unfortunately, traditional rate structures for commercial accounts that include demand charges tend to exacerbate charging’s often already poor economics. Because the demand charge component of an electric bill is generally set by the peak demand over a period of time (sometimes as long as 12-months), this charge can be independent of the actual utilization or load factor of the particular DCFC installation. As a result, this then exacerbates the classic “chicken and egg” challenge of EV adoption and the existence of necessary EV charging infrastructure to support it, compounding the already poor economics of DCFCs with low utilization.

To address this unintended barrier to EV adoption, and to support state and regional EV initiatives, including EVolve NY, the Multi-State ZEV Action Plan, the Transportation and Climate Initiative, Clean Fleets NY, in addition to local initiatives such as New York City’s DCFC hub investment announcement1 and other city commitments, we encourage the Commission to consider the Joint Petition and the solutions proposed to address the instant challenge. While Greenlots does not tend to support the removal or retiring of demand rates for DC fast charging, a strong analysis of the current situation in New York is necessary and appropriate.

While transportation electrification holds strong promise of benefits to the system and all ratepayers, such benefits are most likely if charging is managed in relation to grid conditions. Unmanaged charging could prove to create more costs than benefits to ratepayers — especially if it coincides with difficult grid conditions. This concern increases as DCFC power levels increase. As such, demand charges serve an important purpose in relation to EV charging. By and large, demand rates are also more attractive to DCFC infrastructure owners than volumetric rates at a certain level of utilization. It is therefore important that owners have the option of choosing or returning to their current demand rate if another rate treatment is taken forward by the Commission.

An example of a compromise outcome that may be appropriate that Greenlots would likely support would be to offer time-limited temporary demand charge relief to public sector (state, county, or city government) entities owning charging infrastructure. Such relief should be made contingent upon such entities and their respective utilities agreeing upon appropriate and potentially evolving technology-facilitated smart/managed charging plans that could then mitigate the system costs seen by all ratepayers.

As a technology company with leading smart charging capabilities, Greenlots has been frustrated by the bulk of the discussion thus far around demand charges, which has largely failed to adequately acknowledge available technology options to minimize or mitigate costs. However, in part this has been a consequence of Greenlots’ own lack of public engagement in the demand charge discussion. While acknowledging that Greenlots does integrate storage with charging to provide more flexibility,

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smart charging technology alone – without integrated storage – can significantly reduce costs associated with demand charges.

It should also be noted that the DCFC market faces a variety of other challenges and costs that make the economics significantly more challenging than lower-power charging, so addressing demand charges should not be seen as a panacea to creating a sustainable business model for DCFC. Similarly, it should not be a substitute for exploring other solutions to the challenge, including technological solutions and direct utility investment in DCFC infrastructure.

The Joint Petition is consistent with NYSERDA’s “Electric Rate Tariff Options for Minimizing DCFC Demand Charges” report\(^2\), which took a hard look at this issue, examining alternative rate structures used for DCFC in other states including HI, CA, OR, WA, and CT, concluding that DCFCs may be sufficiently unique to justify different rate treatment in New York. Similarly, a recent Rocky Mountain Institute report\(^3\) found that “DCFC chargers should be on tariffs with reduced, delayed, or no demand charges until the market matures and utilization rates are high enough that demand charges constitute a normal portion of monthly bills (e.g., 30%, not 90%)”\(^4\) and that “our analysis shows that while utilization rates are low, reducing or eliminating demand charges for the commercial public DCFC market is consistent with good rate-design principles and helps to achieve the societal objective of widespread vehicle electrification.”\(^5\)

Greenlots recognizes that there are no easy answers to the instant challenge. Near term options may not be sustainable over the long term and whatever decisions made may need to be re-evaluated in the not too distant future. Regulatory approval of utility ownership of charging infrastructure is certainly an important path forward, but does not solve Petitioners’ challenge.

For these reasons Greenlots encourages the Commission to explore such potential near-term options for mitigating current costs associated with low utilization demand charges for successful ownership and management of DCFC infrastructure by public entities represented by Joint Petitioners.

Respectfully submitted,

\[Signature\]

Thomas Ashley  
VP, Policy

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\(^2\) Available at: https://www.nyserda.ny.gov/-/media/Files/Publications/Research/Transportation/Electricity-Rate-Tariff-Options.pdf  
\(^3\) “From Gas to Grid: Building Charging Infrastructure to Power Electric Vehicle Demand” 2017. Available at: https://www.rmi.org/insights/reports/from_gas_to_grid  
\(^4\) I.d. P. 42.  
\(^5\) I.d. P. 45.