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VIA ELECTRONIC FILING

July 23, 2018

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: Matter 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,

Attached for electronic filing in the above-referenced matter, please find comments on behalf of ChargePoint, Inc. Please let me know if you have any questions.

Respectfully,

A handwritten signature in black ink, appearing to read "Kevin Miller".

Kevin George Miller
Director, Public Policy
ChargePoint

I. Introduction and Background

ChargePoint is pleased to offer these comments to the New York Public Service Commission (“the Commission”) in support of the recommendations included in the *Joint Petition For Immediate And Long-Term Rate Relief To Encourage Statewide Deployment Of Direct Current Fast Charging Facilities For Electric Vehicles* filed by the New York Power Authority, New York State Department of Environmental Conservation, New York State Department of Transportation, and New York State Thruway Authority (“Joint Petitioners”) on April 13, 2018.

A. Background on ChargePoint

ChargePoint is the nation’s largest and most open electric vehicle (EV) charging network, with charging solutions for every charging need and all the places EV drivers go: at home, work, around town and on the road. With more than 51,000 independently owned charging spots, ChargePoint drivers have completed more than 39 million charging sessions, saving upwards of 40 million gallons of gasoline and driving more than 975 million gas-free miles. More than 2,300 of these charging spots are deployed in New York.

ChargePoint designs, develops, and deploys residential and commercial AC Level 2 (L2) and DC fast charging (DCFC) electric vehicle charging stations, software applications, data analytics, and related customer and driver services aimed at creating a robust, scalable, and grid-friendly EV charging ecosystem.

ChargePoint sells EV charging equipment and network services that enable EV charging station owners to provide charging services to their own or other EVs. In almost every case, ChargePoint does not own or operate the equipment. ChargePoint sells charging solutions to a wide variety of customers, including residential EV owners, employers, commercial and industrial businesses, cities and public agencies, ports, schools, public transit, delivery truck fleet operators, and multi-unit dwelling owners. ChargePoint offers a broad array of products and services that can serve light, medium or heavy duty electric vehicles.

The site host network services offered by ChargePoint enable customers to manage their charging infrastructure using cloud-based software tools. These tools provide the station

owner or operator with everything needed to manage and optimize utilization of their charging stations, including online management tools for data analysis, billing and payment processing, load management and access control. Stations connect to ChargePoint over a secure, cellular data network (or Wi-Fi in the case of residential) allowing station owners to manage all their charging operations from a single dashboard. Maintenance and customer service are a priority for our company. ChargePoint offers a comprehensive set of support services, including: a 24/7/365 hotline for station users, parts and labor warranty, site qualification, installation and validation services, and a helpline for site host specific questions.

B. Summary of Recommendations

Consistent with the recommendations by the Joint Petitioners, ChargePoint recommends that the Commission:

- Direct investor-owned utilities to immediately provide alternatives to traditional, demand-based electricity rates until sustainable, longer-term rates can be implemented through the Commission’s generic proceeding; and
- Continue to address the range of issues related to EV rate design, for both longer-term, Level 2 longer-term charging and sustainable, long-term rate design for faster charging, as well as related issues such as metering requirements and consideration of embedded metrology, in Matter Number 18-E-0138, *Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure*.

II. EV Charging Behavior and Rate Implications

A. EV Charging Behavior

Networked charging technologies provide EV charging site hosts, utilities, policymakers, and other stakeholders with a range of tools to effectively monitor and manage the new load associated with EVs. Examples include interval level data monitoring on a per port and per session basis, real-time load throttling/shedding, power sharing, and using the embedded electric vehicle supply equipment (“EVSE”) meter to support on-bill and off-bill incentives based on specific EV charging time-of-use.

These smart charging tools are most effectively implemented at home and at work, where the vast majority of EV charging occurs. Given the typically extended periods of time

spent at these locations, drivers are often very willing, with the right incentive, to defer charging to later times when it is more ideal and efficient for the grid. Other destinations where drivers may spend extended periods of time may also provide similar opportunities for load management, including but not limited to parking garages, airports, and recreational facilities.

However, not all charging use cases present the same flexibility as home and work charging. For example, public charging use cases are often defined by a need, not just a desire, for the EV driver to charge and are also associated with time constraints. As such, EV driver and site hosts have limited ability to adjust their charging habits according to price signals and their needs may not be met if subjected to load control events.

Direct Current (“DC”) fast charging technology is an important element of a comprehensive EV charging ecosystem and is designed to complement, and not replace, longer-term charging solutions. DC fast charging can increase EV driver range confidence with fast charging along highways that facilitate long-distance travel; support community charging in dense urban areas for drivers without dedicated overnight parking; and enable the electrification of heavier-duty fleets for municipal, state, and private entities.

DC fast charging capabilities are rapidly becoming a standard charging option on battery electric vehicles and even some plug-in hybrid electric vehicles. Battery capacities and the associated electric mile range for such vehicles also continues to rise, likely resulting in more vehicles needing a greater amount of charge in a shorter period of time.

B. EV Charging Rate Design Implications

Utilities typically use peak demand charges as part of large commercial rates to allocate costs based on the required electrical facilities and to ensure they have adequate capacity available for all customers. Demand charges to customers are typically based on the highest average 15 minutes in a monthly billing cycle. However, DC fast charging stations are currently characterized by having a low load factor, with sporadic instances of high energy use due to a limited number of vehicles in the market that will use these stations in the near term. This can subject fast charging site hosts to significant demand-based charges in conjunction with low utilization, making it impractical for site hosts to provide fast charging solutions during the

critical phase of early adoption. The next generation of DC fast chargers, such as ChargePoint's Express Plus product line capable to charging vehicles up to 500 kW, are necessary to meet the needs of the evolving EV market but will only exacerbate this issue, especially as transit buses and other medium/heavy duty vehicles also transition to electric drive.

Eventually, the anticipated large-scale adoption of electric vehicles and associated higher utilization of DC fast chargers will mitigate the impact of demand charges, but low utilization in the early years makes ongoing costs a significant barrier. Utilities around the country are proposing such alternative rate structures for faster charging, including Pacific Power, Baltimore Gas & Electric, Southern California Edison, and National Grid (Rhode Island).

III. Recommendations

ChargePoint supports the petition by the Joint Petitioners to direct investor-owned utilities to provide near-term relief to site hosts of DC fast charging stations. This relief could be in the manner proposed by the Joint Petitioners, which would provide robust relief to site hosts. The Commission could also consider efforts by specific investor-owned utilities that have already begun to address these barriers, such as Con Edison through its Business Improvement Rate that recently received approval by the Commission. While these approaches are not a permanent solution, providing an immediate customer offering to support the deployment of DC fast charging solutions will help catalyze the adoption of EVs in furtherance of State goals and provide meaningful data for utilities to develop longer term rate design solutions.

ChargePoint also recommends that the Commission and Staff continue to consider alternative rate design options that are more conducive to sustainable, long-term growth in the EV and EV charging markets. There are several options to consider that would allow utilities reasonable and prudent recovery of costs while at the same time, encouraging sites to deploy and operate DC fast chargers, e.g.:

- Demand charge could be replaced with or paired with higher volumetric pricing to provide greater certainty for charging station operators with low utilization. This rate could be scaled based on utilization or load factor as charging behavior changes over time with increased EV adoption.

New York Public Service Commission, Matter No. 18-E-0138

Comments by ChargePoint, Inc.

- A monthly bill credit representing a percentage of the nameplate demand associated with installed charging infrastructure behind a commercial customer's metered service.
- A retroactive and variable credit based on the difference of the effective blended per kWh distribution charge, including demand charges, and an agreed upon target blended rate, multiplied by the volumetric energy throughput in a given billing cycle for commercial customers with dedicated EV charging stations. (e.g. Long Island Power Authority's proposal in Matter Number 14-01299: *PSEG Long Island Utility 2.0 PLAN*)
- The bank of charging stations could be put on a separate meter in order to use a unique "EV charging" rate that is designed to reflect charging needs. Note: it is not necessary to separately meter every single charging station, since many charging stations have embedded metrology.
- A pilot rate could be developed specifically for fleet operators, particularly those that operate electric bus fleets that may charge overnight and provide time of use benefits to the grid.
- The utility could consider pricing signals to the station operator, such as time-of-use or critical peak pricing.
- Utilities should factor in the overall EV load from all vehicles in its service territory and its benefit to the grid not just that metered at the DCFC. With increased EV adoption, there will be increased load, which could lead to greater grid benefits in the future.

IV. Conclusion

For the above referenced reasons, ChargePoint recommends that the Commission:

- Direct investor-owned utilities to immediately provide alternatives to traditional, demand-based electricity rates until sustainable, longer-term rate designs specific to supporting commercial customers deploying DC fast charging solutions can be implemented through the Commission's generic proceeding; and
- Continue to address the range of issues related to EV rate design, for both longer-term, Level 2 longer-term charging and sustainable, long-term rate design for faster charging, as well as related issues such as metering requirements and consideration of embedded metrology, in Matter Number 18-E-0138, *Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure*.