

VIA ELECTRONIC FILING

April 1, 2021

Hon. Michelle L. Phillips
Secretary to the Commission
New York State Public Service Commission
Empire State Plaza
Agency Building 3
Albany, NY 12223-1350

RE: Comments by ChargePoint on Utility Managed Charging Program Proposals in Case No. 18-E-0138: Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure

Dear Secretary Phillips,

Attached for electronic filing in the above-referenced matter, please find comments by ChargePoint, Inc.

Respectfully,



Matthew Deal
Manager, Public Policy
ChargePoint

Comments by ChargePoint on Utility Managed Charging Program Proposals

Case No. 18-E-0138

I. Introduction

The Commission, in its July 16, 2020, “Order Establishing Electric Vehicle Infrastructure Make-Ready Program and Other Programs” (“Make Ready Order”)¹ directed each utility to file proposals for active or managed charging programs for residential customers, in consultation with Department of Public Service Staff (“Staff”). As directed in the Make Ready Order, “the managed charging programs will provide customers with an alternative to the whole home TOU rates already in place. Several utilities already offer managed charging programs, pilots and demonstration projects and these utilities may file existing programs as compliance for this directive; however, the Joint Utilities should consider expanding or filing complimentary programs if the existing program is not available service territory-wide.”²

On December 4, 2020, each utility filed managed charging proposals in compliance with the Make Ready Order. In their filings the utilities propose: 1) to extend existing programs, 2) to implement new, complimentary programs, or 3) a combination of new and existing programs.

ChargePoint supports the goals and objectives of the utility managed charging program proposals and we appreciate the opportunity to provide these initial comments.

In summary, our comments are as follows:

- Utilities should develop additional rate design and active load management programs to effectively manage EV load not limited to residential customers.
- Utility managed charging programs should be vendor and technology neutral.
- The utilities should establish minimum functional requirements that all technology options must meet in order to be qualified to participate in managed charging programs.

II. About ChargePoint

ChargePoint is a world leading electric vehicle (“EV”) charging network, providing scalable solutions for every charging scenario from home and multifamily to workplace, parking, hospitality, retail and transport fleets of all types. ChargePoint’s cloud subscription platform and software-defined charging hardware is designed to enable businesses to support drivers, add the latest software features and expand fleet needs with minimal disruption to overall business.

ChargePoint’s hardware offerings include Level 2 (“L2”) and DC fast charging (“DCFC”) products, and ChargePoint provides a range of options across those charging levels for specific use cases including light duty, medium duty, and transit fleets, multi-unit dwellings, residential (multi-family and single

¹ Case 18-E-0138, *Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure*, Order Establishing Electric Vehicle Infrastructure Make-Ready Program and Other Programs (issued July 16, 2020)(“Make Ready Order”).

² Make Ready Order, at 124.

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family), destination, workplace, and more. ChargePoint's software and cloud services enable EV charging station site hosts to manage charging onsite with features like Waitlist, access control, charging analytics, and real-time availability. With modular design to help minimize downtime and make maintenance and repair more seamless, all products are also UL-listed and CE (EU) certified, and Level 2 solutions are ENERGY STAR® certified.

ChargePoint's primary business model consists of selling smart charging solutions directly to businesses and organizations while offering tools that empower station owners to deploy EV charging designed for their individual application and use case. ChargePoint provides charging network services and data-driven, cloud-enabled capabilities that enable site hosts to better manage their charging assets and optimize services. For example, with those network capabilities, site hosts can view data on charging station utilization, frequency and duration of charging sessions, set access controls to the stations, and set pricing for charging services. These features are designed to maximize utilization and align the EV driver experience with the specific use case associated with the specific site host. Additionally, ChargePoint has designed its network to allow other parties, such as electric utilities, the ability to access charging data and conduct load management to enable efficient EV load integration onto the electric grid.

III. Comments on General Program Design

ChargePoint recognizes that the Commission's Make Ready Order directed the utilities to file proposals for passive or active managed charging programs for residential (mass market) customers. ChargePoint appreciates the efforts of the utilities in developing proposals that meet the requirements set forth in the Commission's Order. However, ChargePoint recommends that these initial managed charging filings be viewed as the floor and not the ceiling. The benefits of EV load management extend beyond the residential segment. The types and levels of grid benefits from EV charging taking place under a load management program will vary greatly by EV charging use case. We encourage the Commission and the utilities to develop additional rate design and active load management programs to effectively manage EV load throughout the EV charging ecosystem.

Further, utility managed charging programs should be designed in a manner that will put them in the best position to seamlessly align with forthcoming policies and programs for DERs stemming from FERC Order 2222. By doing so, utilities will be well positioned to efficiently and effectively integrate with NYISO FERC Order 2222 programs.

A. EV Load Management

ChargePoint strongly supports efforts to ensure that the development of New York's EV charging market takes place in a manner that benefits the grid and all ratepayers. EV drivers as well as all utility ratepayers can realize great value when EV charging is incentivized to take place at times that are most beneficial to the grid. Incentivizing charging to take place during off-peak or super off-peak periods can lead to increased utilization of utility assets and avoid the need for additional capacity and grid infrastructure. Research indicates that incentivizing this type of behavior can be part of a

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strategy for managing the increasing adoption of EVs in a way that can put a downward pressure on rates.³

ChargePoint recommends the Commission and utilities consider the full range of EV load management options at its disposal to ensure that the increased adoption of EVs leads to beneficial load growth across the grid. There are a variety of strategies beyond rate designs that utilities have implemented to achieve cost savings and system benefits from EV load. One approach is passive managed charging (also known as behavioral load control). Another involves direct management of load (also known as active managed charging), typically by a centralized system. Both can help to lower costs, support the electric system, and achieve policy goals such as reducing emissions or integrating more variable renewable energy.

Passive managed charging relies on customer behavior to affect charging patterns. For example, EV time-of-use rates provide predetermined price signals to customers to influence when they choose to charge their vehicles. Another example could involve notifying users and requesting a certain behavior with or without an incentive.

In contrast, active managed charging enables a centralized entity or the customer to take direct control of charging load. By taking direct control over charging load, a utility or aggregator can start, limit or stop the rate of charge temporarily during times of high demand without materially impacting overall EV charging. When applied over an EV fleet or other aggregated group of EVs, active load management can provide significant system benefits as well as system-wide cost savings. Networked charging stations and cloud services provide the to conduct load management in real time. Load management events can be scheduled to expire after a period of time, returning the equipment to normal maximum power output, or the event can be immediately rescinded at any time. Demand response events can be programmed to occur for individual charging ports or any desired groups of ports.

B. Utility Managed Charging Programs Should Be Technology – Neutral

The managed charging proposals submitted by the utilities provide varying level of detail regarding how the program will be implemented, but they all share a common goal – to enable EV load to be managed through alternative technologies without requiring a second utility meter. ChargePoint supports the goal of utilizing smart, networked devices for load management and rate implementation. However, ChargePoint recommends that each utility managed charging program should be vendor and technology neutral. Ensuring that the managed charging programs allow for multiple technologies and vendors, including smart EV charging stations,⁴ will support market innovation by avoiding the need to pick winners and losers in the competitive market. Protecting customers' ability to choose their preferred solution – rather than providing a "one-size, fits-all"

³ Energy and Environmental Economics. "Engaging Utilities and Regulators on Transportation Electrification." 2015.

⁴ NYSEG and RG&E Managed Charging Proposal excludes EV chargers; Orange and Rockland Utilities' proposal provides "hardware or software-based solutions," without providing any detail.

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solution – is essential to protecting the competitive marketplace in New York. When customers can choose the solution that works best for them, vendors will compete to make high-quality, innovative products that customers want. Creating ongoing competition between vendors through customer choice within utility programs is essential to ensuring that a competitive market can thrive within utility programs and sustainably continue after the conclusion of those programs.

Further, evaluating multiple vendors could expand the value proposition to ratepayers by allowing for additional functionality now and in the future. As discussed further below, networked EV service equipment (“EVSE”) are capable of active load management, such as demand response programs, in addition to responding to passive demand response signals, such as time of use rates. Incentivizing the deployment of technologies capable of demand response would avoid duplicative future costs, as utilities and the Commission design and implement additional active EV load management programs, as EV adoption increases throughout the state.

In addition, Distributed Energy Resource Management Systems (“DERMS”) can enable utilities to implement programs for technologies on the customer side of the meter. These systems help connect various technologies (e.g. smart thermostats, hot water heaters, and EVSE) from multiple vendors into a single platform and interface from which a utility can obtain a unified view of data and issue demand response events. This provides the utility the value of charging data and demand response from the largest selection of solution providers without limiting the site host’s choice to an unnecessarily restricted set of options.

i. Benefits of Smart, Networked EVSE

Smart chargers will be vital to ensuring that EV charging benefits New York’s grid by enabling electric utilities and third-parties to have advanced remote load management controls to facilitate off-peak charging and other managed charging strategies. A smart charger can also collect interval data to inform usage patterns, and provide enhanced network communication capabilities between the EV driver and the utility, or third-party systems. These capabilities can be of significant importance to customers to enable charging, as well as to utilities since the smart station provides a wealth of information related to charging behaviors and load profiles that can enable various demand side management programs. Metering embedded in smart charging stations can provide the following important capabilities to satisfy utility and customer needs while maintaining security:

- Precise accuracy across all supported current and temperature ranges;
- Measurement of energy delivered to vehicle only, separate from any other loads;
- Granular clock-aligned interval data;
- Capability to receive remote firmware updates;
- Real-time power monitoring;
- Secure communication between the charging station and a utility or third-party server;
- Local storage of charging data on the charging station; and
- Compliance with cybersecurity requirements.

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NIST Handbook (“HB”) 44 Section 3.40 provides the basis for EVSE internal meter calibration.⁵ Smart charging stations that comply with NIST HB 44 provide at least 1% accuracy in the laboratory and 2% accuracy in the field. While not all states have adopted NIST HB 44 metering guidelines, major U.S. markets such as California have done so. As a result, compliance with this code by many smart charging station manufacturers enables consistency and reliable performance across the country.

Smart EV chargers will enable customers, utilities, and vendors to reap significant benefits from increased functionality, wider program design options, and ultimately a more successful program deployment.

ii. All Alternative Technologies Should Meet Minimum Functional Requirements

ChargePoint recommends that each utility establish minimum functional requirements that all technology options must meet in order to be qualified by the utility to participate in managed charging programs. ChargePoint reiterates its recommendation that all utility managed charging programs be vendor and technology neutral. Thus, it is important that these minimum requirements be applied equally to all vendors and all technologies. For example, National Grid proposes different minimum qualifications for vehicle telemetry and networked L2 EV chargers. According to National Grid’s proposal, “for an L2 charger to qualify for the smart charging program, the Company currently expects eligibility criteria to include, but not be limited to the following:

- Must be internet-enabled (e.g., Wi-Fi or ethernet) with an active internet service available at the customer site;
- Must meet metering and billing accuracy criteria;
- Must provide sufficiently detailed interval metering (i.e., 15-minute intervals aligned to the hour);
- Must have ability to retrieve interval energy usage data and certain onboard data storage;
- Charging device must be UL Listed, and/or ENERGY STAR certified;
- Must have administrative privileges that enable the Company to access charging data and receive information from the EVSE; and
- Must allow for remote operation consistent with the EV Smart Plan.”⁶

However, National Grid proposes that “vehicle telematics-based approaches to managed charging will meet the same data standards networked L2 chargers are required to meet, where applicable.”⁷ National Grid’s proposal could lead to significant differences in the amount, type, and quality of data that vehicle-telematics devices will provide compared to networked L2 chargers. This could result in a severe program deficiency that could be multiplied if it were to be replicated in each utility program. There is no reason to apply different data standards based on technology. The utility should establish the necessary data requirements for the program, and qualify technologies capable of providing the

⁵ See NIST Handbook 44 Section 3.40.

⁶ National Grid Residential EV Managed Charging Proposal, Case 18-E-0138, page 10.

⁷ ID, at 10

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data necessary to effectively implement the managed charging program. ChargePoint recommends that the eligibility currently applied to networked L2 EV chargers should also be applied to vehicle telematics devices, as well as any alternative technology qualified under each utility managed charging program.

Further, all alternative technologies qualified in the managed charging programs should have robust consumer protection features and be reliably accurate. It would be advisable to establish minimum criteria to this effect, such as ensuring that alternative metering devices meet or exceed the requirements set forth in the electricity-as-motor-fuel sections of NIST Handbook 44 or meet the accuracy requirements of ANSI C12.1-2008 (1% class) as applied to embedded EVSE metering. In the event that the Commission declines to incorporate such consumer protection considerations in utility managed charging filings, we recommend that these issues be considered through the Commission's Technical Standards Working Group.⁸

IV. Conclusion

ChargePoint appreciates the opportunity to provide comments on the utility managed charging proposals and respectfully request the utilities consider these comments in developing their revised proposals for submission currently expected in Spring 2021. ChargePoint reserves its right to provide additional comments on individual utility managed charging filings once revised. ChargePoint looks forward to continuing to work with the Commission, Staff, the Joint Utilities and other stakeholders over the course of this proceeding.

⁸ See "Notice Announcing Technical Standards Working Group," Case 18-E-0138, Issued October 5, 2020.