BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Application of Duke Energy Ohio, Inc. for Authority to Adjust PowerForward Rider.	)))	Case No. 19-1750-EL-UNC
In the Matter of the Application of Duke Energy Ohio, Inc. for Approval of Certain Accounting Methods	)))	Case No. 19-1751-GE-AAM

REPLY COMMENTS OF CHARGEPOINT, INC.

I. INTRODUCTION

ChargePoint, Inc. (“ChargePoint”) is pleased to offer these reply comments to the Public Utilities Commission of Ohio (“PUCO” or “Commission”) in response to initial comments filed by various stakeholders on April, 15, 2020 regarding Duke Energy Ohio Inc.'s ("Duke" or “The Company”) proposed Electric Transportation Pilot Program (“Pilot” or “Pilot Program”) as part of its Infrastructure Modernization Plan.

In summary, our reply comments are as follows:

- The Pilot Program’s approach to include utility-owned make ready investments and rebates for customer-owned electric vehicle service equipment (“EVSE”) provides significant value to Ohio’s transportation electrification efforts.
- The proposed Pilot Program is not prohibited by state law.
- Site Hosts should be empowered to set pricing for EV charging services.
- As proposed, the Pilot will create system-wide benefits that accrue to all customers, not just those participating in the program.
- The proposed EV load management program will increase the effectiveness of the residential program and provide grid optimization benefits.
- If the Commission requires EV-Only TOU rates, they can be implemented through the embedded metrology in smart EV chargers. Traditional demand-based rates can hinder DCFC charging services in earlier-stage EV markets.

II. REPLY COMMENTS

A. The Pilot Program's approach to include utility-owned make ready investments and rebates for customer-owned EVSE provides significant value to Ohio's transportation electrification efforts.

In Comments, Staff expressed concerns with the make ready aspects of the Pilot Program and believes that a rebate program would be a better alternative.[1] Duke's proposed make ready program is the first of its kind in Ohio and, as such, will provide the Commission, the Company, and ratepayers with vital information regarding expanding necessary infrastructure to "support public and private EV charging development in the various communities within the Company's service territory."[2] ChargePoint recommends the Commission reject Staff's recommendation to modify the Pilot to only include rebates.

Duke's Proposed EV Transportation Pilot contains three make ready programs (EV Fast Charge Program, Electric Transit Bus Program, and Commercial EV Charging Program). Make ready programs are among the most efficient and effective ways for utilities to support transportation electrification. They are also a best practice of successful utility EV programs across the county.[3]

The make-ready model limits a utility's investment to the equipment necessary to connect charging infrastructure to the grid. This may include upgrades to transformers and service capacity

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[1] Staff Comments, p 12.

[2] Testimony of Lang W. Reynolds, p 4.

[3] *See*, e.g., Massachusetts Department of Public Utilities Docket No. 17-05, "Petition of NSTAR Electric Company and Western Massachusetts Electric Company, each doing business as Eversource Energy, Pursuant to G.L. c. 164, § 94 and 220 CMR 5.00 et seq., for Approval of General Increases in Base Distribution Rates for Electric Service and a Performance Based Ratemaking Mechanism" (available at: https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/9171660); Michigan Public Service Commission. Case No. U-20134. "In the matter of the application of Consumers Energy Company for authority to increase its rates for the generation and distribution of electricity and for other relief." (available at https://mi-psc.force.com/s/case/500t0000009fPPSAA2/in-the-matter-of-the-application-of-consumers-energy-company-for-authority-to-increase-its-rates-for-the-generation-and-distribution-of-electricity-and-for-other-relief); and, Pennsylvania Public Utilities Commission. Docket Number R-2018-3000124, "Pa. PUC v. Duquesne Light Company" (available at http://www.puc.pa.gov/pcdocs/1586084.pdf).

and/or running new service drops. In some cases, it may also mean trenching and running conduit and cable to specific areas of a host site, such as in a parking lot at a workplace. Since this can often be a large part of project costs, utility investment can increase the pace and lower the costs of infrastructure investment by opening new sources of low-cost capital. In addition, deploying and maintaining distribution system infrastructure is one of a utility's core competencies. Accordingly, one of the most effective ways for a utility to support EVSE is for it to support make ready deployments.[4]

In the make-ready model, the EV charging infrastructure installation, ownership, operation, and maintenance are left to the host site and competitive marketplace, which may offer a wider range of pricing structures and other customer options.

B. The Proposed Pilot Program does not conflict with state law.

Several intervenors mistakenly argue that allowing electric distribution utility ("EDU") ownership and operation of EV services conflicts with Ohio's pro-competitive policy.[5] However, these parties misconstrue Duke's proposed Pilot Program. The Pilot Program does not propose that Duke would own and operate EV chargers or directly provide competitive EV charging services to customers. Rather, Duke's proposal explicitly states that "the customer will install, own and operate EVSE."[6]

The Commission has recognized that "there may be justification for limited EDU participation in the development of EV charging infrastructure."[7] Indeed, Duke is supporting the development of EV infrastructure through a mix of beneficial programs "designed to deploy a foundational level of fast charging infrastructure, research the effects of increasing adoption of

[4] MJ Bradley & Associates, Utility Investment in Electric Vehicle Charging Infrastructure: Key Regulatory Considerations (2017) pp.9-10.

[5] *See*, Kroger, OCC, OMAEG.

[6] Testimony of Lang W. Reynolds, p 21.

[7] PowerForward at 20.

different types of electric vehicles on the electric system, research customer EV charging behavior, and ascertain the potential financial and environmental benefits to the state of Ohio," all of which involve only a limited role for Duke.[8]

C. Site Hosts should be empowered to set pricing for EV charging services.

Without making specific recommendations, Environmental Advocates state that, "[f]or the Direct Current Fast Charging Station Program, the Company should work to ensure that EV drivers are able to realize fuel cost savings relative to gasoline at DCFC deployed pursuant to the ET Pilot." ChargePoint agrees that fuel cost savings are a key determinant in EV adoption. However, it would be inappropriate to peg the price of EV charging services to the price of gasoline. The price of gasoline is determined by a competitive market that is heavily influenced by global geopolitical pressures, whereas a site host's electricity costs are based in part on the Company's distribution and transmission costs, neither of which is related to the price of gasoline.

The nature of "refueling" at an EV charging station is inherently different than refueling an internal combustion engine ("ICE") vehicle, and the business models for site hosts of both types of technologies are different. Whereas refueling an ICE vehicle takes a matter of minutes and does not result in longer-term parking with the driver absent from the vehicle, charging an EV has a longer timeframe and often results in a parked, unattended vehicle. The combination of charging and parking services associated with EV charging infrastructure is unique.

Different types of charging services present different value propositions to drivers, and the Commission should allow prices to reflect those services accordingly. DC fast chargers allow EVs to charge at rates that are seven times faster or more than typical residential or workplace charging, which is a valuable service to drivers that is costlier to provide. Even in the event that usage fees could be higher for a driver's occasional DC fast charge, the total fueling costs for an

[8] Testimony of Lang W. Reynolds, p 3.

EV will still be mitigated by the lower costs from home and workplace charging. Therefore, the Commission should reject recommendations to impose pricing restrictions based on the price of gasoline.

Duke's proposed Pilot allows for site host operational control of EV charging infrastructure, including pricing of charging services. ChargePoint supports the Company's approach to provide flexibility in setting prices to site hosts without any default or recommended option. Pricing policies are used by site hosts to incentivize driver behavior and the site host should be allowed to make the choice that is right for its individual property.

D. The Pilot Program will provide benefits to all customers, not just those participating in the program.

Electrification of the transportation sector brings many benefits, including benefits to all electric ratepayers. OCC states that Duke's proposed Residential EV Charging Rebate Program will benefit very few customers because any customers not receiving a rebate do not benefit.[9] In addition, Staff recommends that incentives only be made available for publicly-available EV charging infrastructure, or EVSE with multiple users.[10] However, OCC and Staff fail to recognize that the EVSE investments – both public and private – proposed in the Pilot will create system-wide benefits that accrue to all customers, not just those participating in the program.

As stated in ChargePoint's initial comments, prudent investment in EV infrastructure, including make ready, benefits all utility customers regardless of EV ownership by increasing the number of kilowatt hours over which a utility can spread its fixed costs.[11] All things being equal, these increased energy sales will reduce retail rate pressure for all customers.[12]

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[9] OCC Comments, p 14.

[10] Staff Comments, p 13.

[11] ChargePoint Comments, p 6.

[12] MJ Bradley & Associates, Utility Investment in Electric Vehicle Charging Infrastructure: Key Regulatory Considerations (2017) p 4.

Moreover, NARUC's recent report explains, "[b]ecause EV load is flexible, if charging can be moved to times of low demand or abundant renewable generation, EVs represent a significant opportunity for increased grid flexibility."[13] The Regulatory Assistance Project similarly finds that EV load is capable of responding quickly to a signal, as well as being inherently flexible over time, therefore, EVs are flexible over the course of a day as well as "within minutes and seconds."[14] EV load is a particularly good match to support increased volumes of variable energy resources on the grid like wind and solar because it can be moved to times when variable renewable energy resources are more prevalent.[15]

Further, the Company has proposed including publicly accessible EVSE in the Pilot – whether that is publicly-accessible EV chargers or electrification of public fleets (public transit buses, school buses, etc.). This means that all customers throughout the Company's service territory directly or indirectly benefit, including but not limited to: (i) families with school children will benefit from the availability and use of electric school buses; (ii) public transportation patrons will benefit from the availability and use of electric city buses; and (iii) society will benefit from lower emissions and improved air quality.

E. Managed Charging will increase the effectiveness of the residential program and provide grid optimization benefits.

In comments, IGS recommends that the Commission reject the Residential EV Charging Rebate Program.[16] IGS bases its recommendation on the perception that "Duke will simply be

[13] NARUC, Electric Vehicles: Key Trends, Issues, and Considerations for State Regulators, at 21 (Oct. 2019) ("NARUC EV White Paper"), available at https://pubs.naruc.org/pub/32857459-0005-B8C5-95C6-1920829CABFE (citing Jones et al. "The Future of Transportation Electrification: Utility, Industry and Consumer Perspectives," Lawrence Berkeley National Laboratory (2018), at http://eta-publications.lbl.gov/sites/default/files/feur_10_transportation_electrification_final_20180813.pdf), p 25.

[14] Regulatory Assistance Project, Beneficial Electrification of Transportation, at 37, (Jan. 2019) ("RAP 2019 Electrification Report"), available at https://www.raponline.org/wp-content/uploads/2019/01/rap-farnsworth-shipley-sliger-lazar-beneficial-electrification-transportation-2019-january-final.pdf.

[15] *Id.*

[16] IGS Comments, p 12.

providing a ratepayer funded subsidy to those customers that do not use their EV charging station during the hours selected by Duke."[17] However, IGS's recommendation stems from a narrow view of EV charging load management and should be rejected.

Duke proposes an additional utility EV load-managed incentive under the Residential EV Charging Rebate Program for customers participating in load management events.[18] The Company's load management proposal is as follows:

> The first year will gather "unmanaged charging" data to achieve a baseline for comparison with "managed charging" events in years two and three. To implement managed charging, each month the Company will set and communicate specific time frames to avoid residential EV charging within 6-9 a.m. and 4-7 p.m. The customer is then responsible to avoid charging their EV within the set time frames to be eligible for the incentive. Participants can opt out of two (2) peak charging sessions per month and still be eligible for the incentive.[19]

Duke's proposed EV load management program will further the goals of the EV Pilot Program, namely, to "collect usage characteristics of EV charging behavior, better understand potential grid and utility impacts from EV charging, and implement utility-managed charging."[20]

Residential charging is perfectly-suited for EV load management programs due to the long dwell times available for charging and the ability to shift charging within that time period. EV drivers charge their vehicles at home over 60% of the time.[21] EV charging at home has the potential to be even larger throughout Duke's service territory. As part of its Pilot Program, Duke has proposed to implement and study a passive load management program. Duke is proposing to offer an incentive in the latter years of the program to incentivize customers to shift residential EV charging to avoid peak times. Duke will then compare the unmanaged EV charging data to the

[17] IGS Comments, p 11.

[18] Testimony of Lang W. Reynolds, p 19-20.

[19] Testimony of Lang W. Reynolds, p 20.

[20] Testimony of Lang W. Reynolds, p 20.

[21] Smart, John, *Lessons Learned About Workplace Charging in the EV Project*, Idaho National Labs (2015), available at https://www.energy.gov/sites/prod/files/2015/07/f24/vss170_smart_2015_p.pdf.

managed charging data to determine the impacts of managed and unmanaged EV charging on the distribution grid. The data and information gathered through this Pilot Program will inform whether alternative load management techniques should be implemented. These are essential activities for EDUs to prepare to optimize the grid for increasing EV adoption.

F. If the Commission requires EV-Only TOU rates, they can be implemented through the embedded metrology in smart EV chargers.

In their initial comments, Environmental Advocates argue that, "For the Residential EV Charging Program, the Company should require that recipients of rebates take service on an applicable time-of-use rate for purposes of charging the vehicle, and metering for electricity usage on that rate should be tested using the metering capabilities embedded in the smart charging stations to be deployed under that program."[22] Environmental Advocates argue further, "With the smart charging stations that would be deployed under the Residential component, Duke has an opportunity to test the metrology embedded in those charging stations and avoid requiring a participating customer to put all of their electricity use on a time-of-use rate, or to install a second meter, which can be cost prohibitive. The Environmental Advocates recommend that Duke incorporate this additional element for its EV Pilot in order to more fully evaluate the options for vehicle-grid integration."[23]

ChargePoint takes no position in this proceeding whether the Commission should require EV-only TOU rates as a condition for participation in the Residential EV Charging Program. However, should the Commission require TOU rates as a precondition of participation, ChargePoint recommends that it does not require installation of a second utility meter.

Utility commissions traditionally require the installation of separate utility meters to implement EV-specific TOU rates. However, requiring a second utility meter unnecessarily adds

[22] Environmental Advocates Comments, p 4.

[23] Environmental Advocates Comments, pp 8-9.

costs and fails to take advantage of existing capabilities in smart EV chargers. For example, the Minnesota Public Utilities Commission has required utilities to evaluate "options to reduce the upfront cost burden for customers looking to opt into [EV-specific tariffs] and a discussion of sub-metering technologies available."[24]

There are a range of methods available on the market that can facilitate the implementation of EV-specific rates without the added cost of secondary utility meters or sub-meters. ChargePoint urges the Commission to avoid adding unnecessary costs to the proposed Pilot by requiring the installation of a second utility meter should it require Duke to implement an EV-only TOU rate.

G. Traditional demand-based rates can hinder DCFC charging services in earlier-stage EV markets.

According to the Environmental Advocates, "[R]eforming demand charges in general is good policy."[25] DC fast charging stations can have a low load factor, with sporadic instances of high energy use. Under traditional demand-based rates, site hosts can face high demand charges due to the few peak charging sessions that occur each month, which can inadvertently hinder DCFC charging services in earlier-stage EV markets.

ChargePoint supports the recommendation to consider alternatives to traditional demand-based rates in earlier stage EV markets to sensibly address this challenge as an output of the Pilot. Many other jurisdictions have already taken up this issue with much success. For example:

- Replacing or pairing demand charges 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.[26]

[24] Minnesota Public Utilities Commission Docket Nos. M-15-111, M-15-112, M-15-120: Order Accepting 2017 Annual Reports And Establishing Requirements For Next Annual Reports.

[25] Environmental Advocates, p 15.

[26] Pacific Power has implemented such a rate in Oregon, providing for a demand charge transition discount of 90% and an on-peak energy charge transition discount of 10% on May 15, 2017, and reducing the demand charge transition

- A monthly bill credit representing a percentage of the nameplate demand associated with installed charging station's behind a commercial customer's metered service.[27]
- Implement a "rate limiter" as EV adoption increases, in which the average cost equivalent of a customer's demand charges would be limited to no more than a set cents/kWh value.[28]
- Forgive a portion of billed demand when the customer has a low load factor.[29]

III. CONCLUSION

ChargePoint thanks the Commission for the opportunity to provide these reply comments. ChargePoint looks forward to continue working with the Commission, Company and stakeholders to achieve Ohio's transportation electrification goals by reducing barriers to sustainable and scalable growth in the competitive EV charging market.

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discount gradually each year to 0% on May 15, 2026 while increasing the on-peak energy charge transition discount gradually each year to 100% on May 15, 2016. *See* Pacific Power, Oregon Schedule 45, Public DC Fast Charger Optional Transitional Rate Delivery Service at https://www.pacificpower.net/content/dam/pcorp/documents/en/pacificpower/rates-regulation/oregon/tariffs/rates/045_Public_DC_Fast_Charger_Optional_Transitional_Rate_Delivery_Service.pdf. Approved in Oregon PUC Docket No. 485 onMay 16, 2017.

[27] *See* EEI, *EV Trends and Key Issues* at 2 (Mar. 2019) ("On December 20, 2018... the Pennsylvania Public Utility Commission approved PECO's five-year EV DCFC Pilot Rider (EV-FC). This rider...will provide a demand credit to the customer's billed distribution demand. The credit...will be equal to 50 percent of the combined maximum nameplate capacity rating for all DCFCs connected to the service. Eligible customers will receive the credit for up to 36 months or until the pilot ends, whichever comes first. (Docket R-2018-3000164).)" at https://www.eei.org/issuesandpolicy/electrictransportation/Documents/EV_Trends_and_%20Key%20Issues_Mar2019_WEB.pdf. *See also* https://www.peco.com/SiteCollectionDocuments/ThirdPartyEV.pdf.

[28] Ameren implemented such a rate in Illinois, which was designed to limit the average monthly cost for customers who limited their total kWh usage during the four summer billing periods of June through September to 20% or less of their annual kWh consumption. *See* https://www.ameren.com/-/media/rates/files/illinois/aiel14rtds4.pdf. (Docket No. 16-0387).

[29] Xcel Minnesota's general service rate offers an example of this approach, see https://www.xcelenergy.com/staticfiles/xe/Regulatory/Regulatory%20PDFs/rates/MN/Me_Section_5.pdf.

Respectfully submitted on behalf of
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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing Motion to Intervene was served upon the parties of record listed below this 15th day of May 2020 *via* electronic mail.

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Summary: Reply Comments of ChargePoint, Inc. electronically filed by Teresa Orahood on behalf of Dylan F. Borchers