

STATE OF NORTH CAROLINA
BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-2, SUB 1197
DOCKET NO. E-7, SUB 1195

In the Matter of Application by Duke Energy)
Carolinas, LLC and Duke Energy Progress, LLC) **INITIAL COMMENTS OF**
For Approval of Proposed Electric Transportation) **CHARGEPOINT, INC.**
Pilot)

Consistent with the May 28, 2021, order of the North Carolina Utilities Commission (“Commission”) in the above-captioned proceedings, ChargePoint, Inc. (“ChargePoint”) thanks the Commission for the opportunity to provide these comments regarding the proposed transportation electrification Make Ready Credit Programs (“MRC Programs”) submitted by Duke Energy Carolinas, LLC (“DEC”) and Duke Energy Progress, LLC (“DEP”) (together, the “Companies”) on April 30, 2021.¹

ChargePoint generally supports the Companies’ proposed MRC Programs. As a participant in developing utility EV programs in many jurisdictions, ChargePoint supports the goals and objectives of the proposed MRC Programs and respectfully offers several recommendations that will achieve the goals of advancing transportation electrification while ensuring a healthy and competitive market for EV charging services.

In summary, our comments are as follows:

- The Commission should approve the Companies’ MRC Programs with minor modifications.
- The Commissions should direct the Companies to require EV chargers installed through the MRC Programs to meet the following eligibility requirements:
 - Smart and capable of connecting to a charging network;
 - Managed charging capabilities;

¹ See Duke Energy Carolinas, LLC and Duke Energy Progress, LLC's Request for Approval of Make Ready Credit Program Docket Nos. E-2, Sub 1197 and E-7, Sub 1195 (April 30, 2021) (“Application”).

- ENERGY STAR certified (Level 2)
- Certified for safety by UL or another Nationally Recognized Testing Laboratory.
- The Commission should require the Companies to clarify that site hosts receiving incentives under the MRC Program have the ability to establish the prices and pricing policies for EV charging services located on their property.

BACKGROUND

The Companies' ET Pilots come before the Commission pursuant to the Commission's November 24, 2020 *Order Approving Electric Transportation Pilots, In Part*, in the above captioned Docket Nos. E-2, Sub 1197 and E-7, Sub 1195 ("ET Order").

I. About ChargePoint

ChargePoint is a world-leading 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 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 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.

II. The Companies' Proposals For Make Ready Credit Programs

The Companies have proposed residential and non-residential MRC Programs which are designed to support increased deployment of EV charging stations by offsetting the costs of make ready infrastructure incurred by site hosts² who wish to install, own, and operate Level 2 (“L2”) and/or Direct Current (“DC”) Fast Charging (“DCFC”) stations on their property. For the purposes of the Application, the Companies define make ready infrastructure as “the infrastructure necessary to make a location ready for installation of the Electric Vehicle Service Equipment (“EVSE”), including the cost of investments in the safe and reliable installation of wiring and other upgrades that support EV charging, but excluding the cost of the charging station itself.”³ The Companies’ proposed MRC sub programs are summarized below:

- **Residential MRC Program:** A residential customer may receive revenue credits for make ready infrastructure either through a reduction in the price charged by a contractor that has been approved by the Company (Contractor Credit Option) or through a direct application submitted to the Company by the customer (Customer Credit Option). The proposed revenue credit levels

² Site host refers to the owner or lessor of the property on which an EV charging station is located. Site hosts include residential customers; owners of multifamily housing units (MFH); commercial customers that offer charging to the public, their customers, and/or their employees; fleet owners; and government entities.

³ Application , p. 8.

for residential customers are based on estimates of the aggregate increase in electric revenue for the first five years following installation of newly-installed EVSE.⁴

- Contractor Credit Option: Under the Contractor Credit Option, the customer seeking installation of EVSE and make ready infrastructure at the customer's premises selects a Contractor that has been approved by the Company for participation in the MRC Program. The Contractor must contact the Company to determine the customer's make ready infrastructure revenue credits based on information provided by the customer. The Contractor is then responsible for including the make ready infrastructure revenue credits in the price quoted to the customer for make ready infrastructure installation. The customer is responsible for providing the Contractor with evidence of EV registration.⁵
- Non-Residential MRC:
 - Multi-Family Dwellings and Housing Authorities: For a non-residential customer applicant that is an owner or property manager of a building or complex with four or more housing units (Multi-Family Dwelling or MFD), or a public entity that provides housing targeted toward low-income and moderate-income residents seeking to provide EV charging access to a property or properties that contains four or more housing units (Housing Authority or HA), and where the customer demonstrates that all EVSEs will be accessible to residents of the MFD or HA and installed for the primary use of such residents, the Company will determine a Make Ready Infrastructure revenue credit amount based on the completed Customer Usage Profile form and the expected increase in revenue to be achieved through such usage for the first five years of operation, with the revenue credits not to exceed the Demonstrated Costs.⁶
 - Non-Residential Customers other than MFDs and HAs: For all other non-residential customer applicants, the Company will determine a Make Ready Infrastructure revenue credit amount based on the completed Customer Usage Profile form and the expected increase in revenue to be achieved through such usage for the first three years of operation, with the revenue credits not to exceed the Demonstrated Costs.⁷

COMMENTS

I. Utility Investment in EV Charging Infrastructure Should Complement the Competitive Market

⁴ Application Attachment A, p. 1.

⁵ Application Attachment A, p. 1.

⁶ Application Attachment A, p. 3.

⁷ Application Attachment A, p. 3.

Utilities are well-suited to assist in the growth of a competitive, sustainable EV charging ecosystem. ChargePoint believes the Commission should authorize strategic, risk-averse activities and cost-effective, ratepayer-funded infrastructure investments by utilities that will help accelerate expansion of EV charging and EV adoption in North Carolina.

The investment models used by utilities have taken many forms, and some have included a portfolio of approaches. In ChargePoint's experience, the most successful programs focus on make-ready investment by the utility along with rebates toward the EV charging stations or rebates toward the installation and construction costs of the EVSE.⁸

ChargePoint believes that there are three components of effective utility investment to support a long-term, sustainable competitive market:

- The ability for site hosts to choose among multiple, qualified vendors of charging equipment and networks.
- Site host operational control of EV charging infrastructure located on their properties, including controls over pricing of the charging service provided to drivers.
- Private investment in EV charging infrastructure in the form of shared cost with incentives, rebates, or supplemented project funding.

All three components relate to the following core outcomes that will drive the competitive market in the long-term: (1) the variety of technology choices available to the market, (2) the degree to

⁸ See, e.g., Alternate Proposed Decision Regarding Southern California Edison Company's Application for Charge Ready and Market Education Programs, CPUC, Docket No. A.14-10-014, (Jan. 16, 2016), available at: <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M157/K682/157682806.PDF>; Petition of the Electric Vehicle Work Group for Implementation of a Statewide Electric Vehicle Portfolio, Case No. 9478, Order No. 88997, (MPSC Jan. 14, 2019), available at: <https://www.psc.state.md.us/wp-content/uploads/Order-No.-88997-Case-No.-9478-EV-Portfolio-Order.pdf>; Decision Directing PG&E to Establish an Electric Vehicle Infrastructure and Education Program, CPUC, Docket No. 16-12-065 (Dec. 21, 2016); Massachusetts Department of Public Utilities. Docket 17-05. "Order Establishing Eversource's Revenue Requirement." November 30, 2017. (available at <https://eeaonline.eea.state.ma.us/EEA/FileService/V1.4.0/FileService.Api/file/FileRoom/dehehcjj>); New York Public Service Commission. Matter No. 17-00887. "Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Niagara Mohawk Power Corporation d/b/a National Grid for Electric Service." (available at <http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=17-E-0238>) (utility-provided make-ready coupled with EVSE rebates provided by NYSERDA).

which site hosts can make choices about how to operate the charging stations deployed on their property, and (3) the impact of spurring private investment in the deployment. ChargePoint believes that these best practices are critical features of cohesive, complementary utility programs for EV charging infrastructure.

II. ChargePoint Generally Supports the Companies' MRC Programs

ChargePoint generally supports the goals and objectives of the Companies' proposed MRC Programs to "encourage and support customer adoption of EVs across market segments as well as the development of a competitive market for charging infrastructure beyond the Companies' EV pilots."⁹ A cohesive partnership between the Companies and competitive market actors will be critical to meeting North Carolina's ambitious energy, environmental, and transportation goals.

- a. The Companies' make ready investments for customer-owned EVSE provide significant value to North Carolina's transportation electrification efforts*

Utility investment in make ready infrastructure is among the most efficient and effective way for utilities to support transportation electrification. Make ready programs are also a best practice of successful utility EV programs across the country.¹⁰ As proposed, the MRC Programs limit the Companies' investment to the equipment necessary to connect charging infrastructure to the grid. Utility investment in make ready infrastructure reduces the upfront costs of installing charging stations and can help to accelerate and leverage private capital for businesses, governments, and other sites looking to operate charging stations. This matching of utility funded

⁹ Application, p. 6.

¹⁰ 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." (<https://mi-psc.force.com/sfc/servlet/shepherd/version/download/068t000000BZ1c9AAD>); 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>).

make ready and private capital funded charging equipment helps to spread funding further, leading to more ports deployed, which benefits all ratepayers. Further, site hosts that make a financial contribution to the charging station are far more likely to actively support the successful installation and ongoing operation and preventive maintenance of the charging station because they have “skin in the game.” financial commitment ft Further, by design In addition, deploying and maintaining distribution system infrastructure is one of a utility’s core competencies. Accordingly, one of the most effective ways for the Companies to support EVSE is to support make ready deployments.¹¹

Leveraging site host contributions stretches the value of ratepayer dollars by increasing the net funds available for equipment and services and ensures that choice of qualified equipment and services are responsive to customer needs. Utility investments can catalyze growth in the EV and EV charging markets when programs are designed to support competition, leverage private capital, and balance the costs and benefits to ratepayers.

b. The proposed MRC Program will enable site hosts to choose their preferred EV charging solution

The Companies MRC Program will allow charging station site hosts to choose the EV charging equipment and network service provider that best meets their needs, which supports the existing competitive market for EV charging station hardware and network services. By leveraging the Companies’ access to capital and expertise managing construction projects to install make-ready infrastructure, customers will enjoy a lower total cost for installing charging equipment and the Companies will be able to generate additional kWh sales by increasing charging station deployment and encouraging EV adoption. By leveraging the competitive market for EV charging

¹¹ MJ Bradley & Associates, Utility Investment in Electric Vehicle Charging Infrastructure: Key Regulatory Considerations (2017) pp.9-10.

hardware and services, customers will be able to choose the charging equipment and network services that best fit their needs.

Further, protecting customers' ability to choose their preferred solution – rather than providing a “one-size, fits-all” solution – is essential to protecting the competitive market for EV charging stations in North Carolina. EV drivers benefit from that competitive market. When customers can choose the charging station and network software that works best for them, charging station 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 they cease. In doing so, market forces will be in play, private market actors will be encouraged to invest their own capital, and site hosts will be able to maximize station utilization and optimize the EV driver experience.

- c. The MRC Program will provide benefits to all customers, not just those participating in the program

Electric vehicle adoption is rising in North Carolina and across the nation,¹² and the EV charging market is experiencing rapid growth.¹³ Electrification of the transportation sector brings many potential benefits that can be maximized by utilities and regulators. One benefit is that increased usage of electric vehicles and charging stations can allow the spreading of the costs of the electric system across a greater amount of off-peak load, resulting in downward pressure on unit energy costs that benefits all utility customers regardless of EV ownership. According to a NARUC report, EV load that charges during off-peak hours can provide positive net revenue due

¹² See <https://www.iea.org/reports/global-ev-outlook-2021/trends-and-developments-in-electric-vehicle-markets>; <https://www.ncdot.gov/initiatives-policies/environmental/climate-change/Pages/electric-vehicles.aspx>; <https://cleanenergy.org/wp-content/uploads/Transportation-Electrification-in-North-Carolina.pdf>; <https://pluginncc.com/wp-content/uploads/2021/03/Plug-in-NC-State-of-the-State-Report-Final.pdf>.

¹³ See <https://www.grandviewresearch.com/industry-analysis/electric-vehicle-charger-and-charging-station-market>.

to the efficient use of the existing electric grid.¹⁴ A study by Synapse Energy Economics found that in the territories of Pacific Gas & Electric and Southern California Edison, the incremental revenue provided by EV programs exceeded the additional costs to the electric system by more than 3 to 1.¹⁵ The addition of new dispersed load during off-peak hours can result in the wider distribution of fixed costs across customers, leading to lower rates for all ratepayers.¹⁶ A study that modeled the costs and benefits of increased EV penetration in Massachusetts, Connecticut, New York, Maryland, and Pennsylvania found that net revenue from off-peak EV charging could lower electric rates in these states by 3-7%.¹⁷

Further, as NARUC's 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." 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."¹⁸ The Rocky Mountain Institute states that EVs can provide "a wide range of valuable grid services, from demand response and voltage regulation to distribution-level services."¹⁹

¹⁴ 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).

¹⁵ Synapse Energy Economics, "Electric Vehicles Are Driving Rates Down," at 4 (Feb. 2019), available at <https://www.synapse-energy.com/sites/default/files/EVs-Driving-Rates-Down-8-122.pdf>.

¹⁶ NARUC EV White Paper at 21.

¹⁷ MJ Bradley, "Electric Vehicle Cost-Benefit Analyses," at 2 (March 2017), available at https://mjbradley.com/sites/default/files/NE_PEV_5_State_Summary_14mar17.pdf.

¹⁸ 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-shipleigh-sliger-lazar-beneficial-electrification-transportation-2019-january-final.pdf>.

¹⁹ Rocky Mountain Institute, "Electric Vehicles as Distributed Energy Resources," at 6 (2016), available at <https://rmi.org/insight/electric-vehicles-distributed-energy-resources/>.

In addition, EV load is a particularly good match to support increased volumes of variable energy resources like wind and solar on the grid, because it can be moved to times when variable renewable energy resources are more prevalent.²⁰

III. ChargePoint’s recommended modifications to the MRC Program

As noted previously, ChargePoint strongly encourages utility investment in charging infrastructure and electrification programs and agrees with the Companies’ intent to accelerate deployment and adoption across multiple segments. However, ChargePoint respectfully offers several recommendations to the proposed MRC Programs intended to further support increased deployment of EV charging infrastructure throughout the Companies’ service territory.

- a. The MRC Program should establish additional minimum functional standards for qualified EVSE*

The Companies have proposed that “to be eligible for revenue credits under this Program, each Level 2 EVSE installed at the customer’s premises must feature at least one SAE J1772 charging plug and each Level 3 (DC Fast Charging) EVSE installed at the customer’s premises must feature at least one SAE J1772 CCS1 charging plug.”²¹ ChargePoint appreciates the Companies’ focus on incentivizing the deployment of standard, non-proprietary charging ports. EV charging stations that offer standard plug types encourage EV adoption generally, because any EV driver can use them. ChargePoint recommends the Companies also establish certain additional standard eligibility criteria for EV charging stations to be included in the MRC Program in order to expand customers’ equipment choices.

First, ChargePoint recommends that the Companies and the Commission require any EV chargers installed through the program be networked. Networked or smart charging equipment has

²⁰ California Public Utilities Commission, “Vehicle-Grid Integration: A Vision for Zero-Emission Transportation Interconnected throughout California’s Electricity System,” at 4 (Oct. 2013), available at <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M081/K975/81975482.pdf>.

²¹ Application, Attachment A, p. 1; Application, Attachment B, p. 1.

the ability to communicate with the cloud and manage the charging of the electric vehicle. Smart chargers also enable drivers to locate publicly accessible chargers and determine if the station is in use in real-time. Smart chargers will be vital to ensuring that EV charging benefits the distribution grid by enabling the Companies and third-parties to have advanced load management capabilities 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 and third-party providers since the smart station provides a wealth of information related to charging behaviors and load profiles.

ChargePoint recognizes that the Companies have not proposed managed charging programs in this application. However, requiring smart charger capabilities now will future-proof investment in EV charging infrastructure. Requiring smart chargers from the outset, will enable the Companies, third-party providers, vendors, and customers to reap significant benefits from increased functionality and wider future program design options.

Second, ChargePoint recommends that all Level 2 charging equipment be ENERGY STAR certified. The US Environmental Protection Agency awards ENERGY STAR certification to EV charging equipment that meets specific efficiency standards in standby mode, meaning that a charger conserves energy when not actively charging. ENERGY STAR certified chargers can use up to 40% less energy than standard chargers while not in active use.²² To fully achieve the benefits of electrifying the transportation sector, the Commission should require that all Level 2 charging equipment that is installed under the Companies' MRC Program be ENERGY STAR certified.²³

²² https://www.energystar.gov/products/other/ev_chargers.

²³ ENERGY STAR certification is not yet available for DCFCs.

Third, ChargePoint recommends that the Commission require that charging equipment be certified for safety by a third-party Nationally Recognized Testing Laboratory. Requiring products to be certified by a third-party Nationally Recognized Testing Laboratory, such as Underwriters Laboratories or UL, gives customers and regulators confidence that they are purchasing or incentivizing products that have been rigorously tested to ensure safety and reliability. This requirement will further the “safe and reliable” installation of EVSE.

b. The MRC Program should empower to establish pricing and pricing policies for EV charging services

Finally, ChargePoint recommends the Companies clarify that site hosts receiving incentives under the MRC Program have the ability to establish the prices and pricing policies for EV charging services located on their property. Site host ability to establish and set pricing is important to ensuring that site hosts can achieve their unique goals for hosting EV charging stations. For example, a restaurant may offer free or discounted charging for the first hour to attract customers, while a library may charge a fee for all charging sessions to ensure they recover the cost of electricity. Some site hosts might prefer a flat fee or a per-minute fee, while others may prefer a per-kWh price. Site hosts should be free to set prices and change prices as they see fit to support their goals. Ultimately this will encourage site hosts to maximize station utilization through signage, parking enforcement, maintenance, and pricing.

CONCLUSION

ChargePoint thanks the Commission for the opportunity to comment on the Companies’ proposed MRC Programs, and for its consideration of transportation electrification programs generally. ChargePoint respectfully requests the Commission’s consideration of ChargePoint’s proposed amendments to the proposed MRC Program recommended herein and the adoption of programs that will support a long-term sustainable and competitive market for the installation and

operation of electric vehicle charging infrastructure in North Carolina. ChargePoint looks forward to participating and contributing to future discussions with other interested parties and stakeholders on how to effectively use competitive forces to achieve beneficial transportation electrification.

Respectfully submitted this 8th day of July, 2021.

NELSON MULLINS RILEY & SCARBOROUGH LLP

/s/ Joseph W. Eason

Joseph W. Eason
N.C. State Bar No. 7699
joe.eason@nelsonmullins.com
4140 Parklake Avenue, Suite 200
Raleigh, North Carolina 27612
Phone: (919) 329-3800
Fax: (919) 329-3799

/s/ Weston Adams

Weston Adams
N.C. State Bar No. 18659
weston.adams@nelsonmullins.com
1320 Main Street
Meridian 17th Floor
Columbia, SC 29201
Phone: (803) 799-2000
Fax: (803) 256-7500

Counsel for ChargePoint, Inc.

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Comments of ChargePoint, Inc. filed in Docket Nos. E-2, Sub 1197 and E-7, Sub 1195 was served electronically or via U.S. mail, first-class postage prepaid, upon all parties of record.

This the 8th day of July, 2021.

/s/ Joseph W. Eason
Joseph W. Eason

Counsel for ChargePoint, Inc.