STATE OF NORTH DAKOTA
BEFORE THE NORTH DAKOTA PUBLIC SERVICE COMMISSION

Public Service Commission **Case No. PU-22-147**
Electrification of Transportation
Investigation

COMMENTS OF CHARGEPOINT, INC.

I. Introduction

In response to the Notice of Issues and Request for Comment issued by the North Dakota Public Service Commission (Commission) on October 3, 2022 in the above-captioned proceeding, ChargePoint, Inc. (ChargePoint) thanks the Commission for the opportunity to provide these comments.

In addition to ChargePoint's initial comments regarding this proceeding submitted on June 15, 2022, ChargePoint respectfully requests that the Commission consider the following recommendations regarding the issues of interest:

- The Commission should define the utilities' role in EV infrastructure buildout, including appropriate limitations on utility ownership of charging stations;
- Authorize make-ready pilot programs for commercial customers;
- Authorize a residential home charging pilot that requires participation in a managed charging program, and;
- Order utilities to design EV charging rates to accommodate the variety of commercial EV use cases and enable actionable price signals where appropriate.

II. Comments

a. The Commission should define the utilities' role in EV infrastructure buildout, including appropriate limitations on utility ownership of charging stations.

Utilities have an important role to play in transportation electrification in North Dakota. When regulated utilities and the private sector work in a complementary manner, North Dakota can meet its transportation electrification needs while balancing protecting competitive markets and ensuring an efficient use of ratepayer funds. First and foremost, utilities must ensure that any new load associated with transportation electrification is incorporated in a safe, reliable, and

efficient manner. This process begins with long term resource planning to ensure there is adequate capacity to meet the needs of transportation electrification and continues to the practical installation of distribution equipment to connect third-party charging stations to the electric grid. Importantly, there are additional measures discussed below that utilities can take to encourage transportation electrification such as make-ready programs, managed charging programs, and rate design. With the utility undertaking such measures and the third parties taking responsibility for the operation of EVSE, the competitive markets for EV charging services will support transportation electrification for North Dakota residents, visitors, and freight sector.

The Commission has identified in the Notice of Issues and Request for Comment, two questions related to utility ownership of charging stations and what constitutes unfair competition between utilities and third-party charging providers. Each of these questions are important considerations for the development of a competitive marketplace for EV charging. As the Commission considers these questions ChargePoint encourages the Commission to carefully consider the competitive advantages a utility has by the fundamental nature of its business model and the impacts the expansion of that business model into EV charging can have on the competitive marketplace for EV charging services.

Utilities have several competitive advantages as owners and operators in the competitive EV charging market. First, utilities are authorized to earn a regulated rate of return on their investments. With the ability to recover costs from ratepayers, utility-owned charging stations may use monopoly power to offer artificially low prices for charging services than what is possible for market actors without a regulated rate of return. Second, utilities benefit from an understanding of their own systems to energize electric vehicle supply equipment (EVSE) and connect to the distribution grid. Third, utilities benefit from name recognition and familiarity across all customers in their service territory.

Despite all the competitive advantages that utilities would have as operators of EVSE, proponents of utility ownership may argue that utility ownership is needed to develop EV charging stations because the market cannot stand on its own at the current low rate of EV adoption. However, this logic is self-fulfilling because utility ownership of charging stations may stifle the competitive market in North Dakota before it has time to develop. While utility-ownership may lower prices and build stations for EV drivers in the short-term, it would undercut the competitive market, lead to a "race to the bottom" where charging providers lower prices to unsustainable rates

to compete with utility-owned stations, and have a chilling effect on private investment to build more stations. The utility-ownership model also shifts the cost and risk of building the EV charging network entirely to ratepayers, rather than allowing the private market to invest and compete to identify the best solutions for drivers and site hosts.

Considering the competitive advantages of utilities as players in the EV charging market, the Commission should adopt an approach to EV infrastructure buildout that better leverages private investment to maximize public value. In a competitive marketplace for charging services, site hosts select the technologies they prefer in an open market, invest their own capital, seek any incentives available through public agencies or utilities, and offer competitive charging services to attract drivers and recoup necessary expenses. The EV charging market is growing and dynamic, and there is no one static business case for the EVSE industry or for EV charging site hosts. The business case, or value proposition, for various entities to install and operate charging stations incorporate many different value streams and varies across use cases. Many ChargePoint customers provide EV charging services to align with their own operations and business goals. For example, a multi-unit dwelling (MUD) may choose to install EV charging to attract and retain tenants, whereas a retail location may choose to install charging to attract customers, serve their own fleet vehicles, or advance sustainability goals.

In other situations, a site host may not want to own the charging station at all, in which case they may opt to invest in a subscription-based model such as ChargePoint's turnkey solution called "ChargePoint as a Service" in which the site host prepares the site for the installation of charging equipment, is the utility customer of record, sets pricing to align with its business model, but ChargePoint retains ownership and is responsible to the ongoing maintenance of the station. The benefit of a market-driven approach to EV charging infrastructure is that it requires market actors to compete to offer innovative products and services, such as "ChargePoint as a Service", that customers want across different use cases.

Decision-makers in North Dakota and states across the country are fostering competition within federal, state, and utility-funded EV programs and the Commission should continue this trend.

- The North Dakota Electric Vehicle Infrastructure Plan was approved in September 2022 by the Federal Highway Administration to spend $29 million in federal funds allocated by the Infrastructure Investment and Jobs Act (IIJA) to build the interstate EV charging

network. The Plan proposes to delegate ownership, operation, and maintenance responsibilities of the federally-funded stations to third party businesses.[1]

- A proposed decision by the California Public Utilities Commission (CPUC) regarding the State's Transportation Electrification Framework opts for program designs such as rebates to support transportation electrification rather than utility ownership of EVSE. The CPUC notes that this approach "allows for technology and construction flexibility, while reducing the cost burden that capitalized IOU expenditures impose on ratepayers."[2]
- In an investigation to determine the role of distribution companies in EV charging, the Massachusetts Department of Public Utilities (DPU) found that distribution companies have a competitive advantage to own and operate EVSE, and that the companies' primary responsibility is to deliver safe and reliable distribution service, not own and operate EVSE.[3] The DPU established a standard of review for all utility proposals associated with ownership and operation of EVSE. Such proposals must be in the public interest; must meet a need regarding the advancement of EVs in the Commonwealth not likely to be met by the competitive EV charging market; and must not hinder the development of the competitive EV charging market.
- A straw proposal filed by the New Jersey Board of Public Utilities (BPU) explored questions regarding who should construct, own, operate, and pay for the charging network necessary to enable EV adoption in New Jersey.[4] The BPU ultimately recommended a "shared responsibility" model, in which electric utilities are responsible for delivering electricity and operating distribution infrastructure, and non-utility entities are responsible for installing, owning, operating, and marketing EV charging stations as private capital. The straw proposal identified the utility as the "party of last resort" to enable investment

[1] North Dakota Electric Vehicle Infrastructure Plan at 33, available at: https://www.dot.nd.gov/projects/docs/North-Dakota-EV-Plan.pdf
[2] CA PUC R.18-12-006*, Order Instituting Rulemaking to Continue the Development of Rates and Infrastructure for Vehicle Electrification*, Proposed Decision at 97 (October 14, 2022).
[3] MA DPU 13-182-A, *Order On Department Jurisdiction Over Electric Vehicles*, The Role Of Distribution Companies In Electric Vehicle Charging And Other Matters, at 13 (August 4, 2014).
[4] NJ BPU Docket No. QO20050357, In the Matter of Straw Proposal on Electric Vehicle Infrastructure Build Out, *Notice of New Jersey Electric Vehicles Infrastructure Ecosystem 2020 Straw Proposal* at 2 (May 18, 2020), available at: https://www.nj.gov/bpu/pdf/Final_EV_Straw_Proposal_5.18.20.pdf

in EVSE where it is not occurring. The burden of demonstrating that such investments are reasonable and prudent lies with the utilities.[5]

ChargePoint respectfully suggests that the Commission adopt appropriate limitations on utilities' ability to own EVSE in a forthcoming order to ensure the ability of the competitive marketplace for EV charging services to continue in North Dakota. Should the Commission decide to allow utility-ownership of EVSE, ChargePoint recommends the Commission establish a standard of review that limits utility ownership to instances where private investment is not meeting a public need and intervention will not impede the competitive market. In these instances, the Commission should also require customer choice as a program design feature to prevent unintended stifling of the competitive market. For example, if utilities own EVSE on behalf of site hosts, site hosts should be able to select between at least two options for hardware and software, as well as set prices of charging services on their own property. Site hosts should also be required to share some of the costs of development (i.e., *skin in the game*).

In addition, ChargePoint respectfully recommends the Commission clarify the role that the utilities should assume to advance transportation electrification. Considering utilities' unique technical expertise and knowledge of the distribution system, a cohesive partnership between regulated utilities and competitive market actors will be critical to build out the EV charging network. The electric utilities should focus on the role only they can fulfill – to expand and maintain distribution infrastructure to provide safe and reliable service for EVs – and make room for competitive market actors to develop financially-sustainable models for station ownership and operation.

b. The Commission should authorize make-ready pilot programs for commercial customers.

The cost of EV infrastructure installation may present a barrier to site hosts and inhibit charger deployment. Utility-funded incentives are highly effective in increasing site host interest in charging infrastructure investments, and thereby increasing competition among multiple providers of EV charging equipment and services. Cost-effective and risk-averse ratepayer-funded investments will accelerate expansion of EV charging and EV adoption in North Dakota.

[5] Ibid. at 7

Importantly, utility-funded incentive programs can encourage EV charger deployment without committing ratepayers to propping up the cost of charging services in perpetuity.

In ChargePoint's experience in helping to shape and participate in the implementation of utility EV programs across the country, the most strategic roles for utilities have been as follows:

- **Make-Ready:** A utility installs, owns, and maintains the supporting electrical infrastructure necessary for installation of charging hardware. By conducting this work, a utility prepares a site for installation of the charging station itself, which is purchased and operated by a site host. It is important to note that the make-ready costs are significant for the customer, typically comprising a majority of the total project costs, and the deployment of make-ready infrastructure aligns with the utility's key competency of installing and maintaining distribution assets.
- **Customer Rebates:** A utility provides rebate incentives to their customers to install and operate charging stations, which are used to offset the construction and installation and/or the purchase of qualifying electric vehicle charging stations. Qualification standards for EV charging stations can be determined to ensure capabilities that will enable grid benefits.

ChargePoint recommends that the Commission consider utility proposals for make-ready programs to incentivize EV charger deployment for all commercial electric customers, including public charging, workplaces, MDU, retail locations, and fleet depots. If the Commission does not prohibit utility-ownership of EVSE entirely, make-ready pilot programs should be offered for at least three years to give the market time to develop and respond to available incentives before the Commission considers any proposals for utility-ownership.

c. The Commission should authorize a residential home charging pilot that requires participation in a managed charging program.

The Commission raises several related issues regarding residential charging, including what the anticipated distribution system impact will be and whether special EV rates or pilots are appropriate.

Existing grid assets may be efficiently utilized to support growing EV load if managed charging programs are available to EV drivers. Managed charging programs take advantage of the fact that the start and end times of EV charging sessions are flexible, so long as the vehicle is recharged for its next trip. Because the majority of EV charging occurs at home where a vehicle

may be plugged in overnight or for many hours at a time, such programs effectively shift load to avoid coinciding with distribution system peaks. Residential managed charging programs help ensure that any potential distribution system expansions are minimal, and if implemented effectively, can also result in customer savings without negatively impacting EV driver experience.

Managed charging programs offered by the utility may refer to dynamic rates that encourage EV drivers to shift charging overnight or direct load management control programs that allow the utility to ramp down charging during peak events. ChargePoint recommends that the Commission authorize a residential home charging pilot program that offers residential customers an incentive to purchase qualified Level 2 charging equipment of their choice in exchange for participation in a managed charging program.

A residential EV program would be mutually beneficial to the customer and the utility. The customer benefits by receiving an incentive to purchase a networked (i.e., Wi-Fi or cellular enabled) Level 2 charging unit that makes EV ownership practicable for many drivers. The utility benefits through the ability to monitor distribution system impacts as EV adoption grows, as well as mitigate grid impacts and load by managing charging speeds at high-cost times. Even non-EV drivers would benefit from a residential EVSE pilot because it would enable utilities to avoid distribution system upgrade costs that would be borne by all ratepayers. A 2016 study from California found that effective managed charging of EVs leads to downward pressure on rates for all ratepayers because the increased utility revenue from greater electricity consumption outweighed the cost of expanding the distribution system.[6]

Another option the Commission may consider to mitigate potential distribution system impacts of EVs is a rate offering with dedicated peak and off-peak periods to encourage EV drivers to shift their charging schedules to off-peak times. However, ChargePoint cautions against any rate solution that would require installation of a secondary meter to participate; such a program would be highly costly to implement and limit potential benefits. Should the Commission prefer to pursue a residential EV rate solution, ChargePoint respectfully suggests that EV charging data for billing purposes be reported to the utility by a Level 2 charging unit with embedded meter-grade capability.

[6] Synapse Energy Economics, Electric Vehicles Are Driving Electric Rates Down (June 2019), available at https://www.synapse-energy.com/sites/default/files/EVs-Driving-Rates-Down-8-122.pdf

d. The Commission should order utilities to design multiple EV charging rates to accommodate the variety of commercial EV use cases and enable actionable price signals where appropriate.

In the Notice of Issues and Request for Comment, the Commission expressed interest in the anticipated distribution system impact of fleet charging. Like residential charging, the impact of fleet charging on the grid will depend on the extent to which charging is incentivized to occur off-peak. Compared to other commercial use cases, fleets are more flexible to shift load to low-cost, off-peak times if offered adequate price signals or incentives to do so. However, unlike residential customers, fleet customers pay commercial electric rates that include a demand charge component to reflect the distribution-related costs of high power consumption. As discussed in detail in ChargePoint's initial comments in this proceeding submitted on June 15, 2022, demand charges present a significant operating cost barrier to commercial EVSE deployment.

Because a fleet that utilizes EV charging will have much different charging behavior and more control over charging activities when compared to a site host that provides DCFC charging to the public, multiple EV charging rates should be developed around these specific use cases to provide both demand charge relief and actionable price signals to mitigate distribution system impacts. Providing rate options will give EV charging station site hosts more tools to adapt to both customer preferences and system needs. For example, a time-of-use (TOU) option may encourage fleet operators to schedule charging to maximize their operational savings and minimize impact to the distribution system. In any case, relief from traditional demand charges should not be contingent upon commercial EV customers' ability to shift EV load.

III. Conclusion

ChargePoint thanks the Commission for the opportunity to comment on the Commission's issues of interest related to appropriate action to advance transportation electrification in North Dakota. ChargePoint looks forward to participating in the public hearing regarding this proceeding on November 3, 2022.

Respectfully submitted this 31st day of October 2022.

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