

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

**In the Matter of the South Dakota
Public Utilities Commission,
Electrification of Transportation
Investigation**

Case No. AA22-002

COMMENTS OF CHARGEPOINT, INC.

Consistent with the June 21, 2022, Order¹ of the South Dakota Public Utilities Commission (Commission) in the above-captioned proceeding, ChargePoint, Inc. (ChargePoint), thanks the Commission for the opportunity to provide these comments regarding funding available to the state of South Dakota under the Infrastructure Investment and Jobs Act, H.R.3684 (IIJA).

IIJA directs each state to consider “measures to promote greater electrification of the transportation sector,” including establishing rates that, among other things, promote affordable and equitable EV charging options for residential, commercial, and public EV charging infrastructure and accelerate third-party investment in EV charging.² In these comments, ChargePoint makes several recommendations that will support increased investment in electric vehicle supply equipment (EVSE), and as such, identify actions that may be appropriate for this Commission to consider taking in order to facilitate receipt and deployment of available federal funding.

In summary, ChargePoint recommends:

- The Commission should initiate a proceeding to consider measures that promote greater transportation electrification, including EV-specific rates.

¹ See South Dakota Public Utilities Commission Case No. AA22-002, Order Requesting Comment on Measures to Promote Greater Electrification of the Transportation Sector. (June 21, 2022).

² IIJA SEC. 40431.

- Utilities should be authorized to increase staffing that is dedicated to EV charging infrastructure to accommodate the anticipated influx of new service requests.
- The Commission should encourage the utilities to develop make ready programs.
- The Commission should simplify and standardize EV infrastructure planning through the adoption of line extension policies.

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. Infrastructure Investment and Jobs Act of 2021

On November 15, 2021, President Joe Biden signed into law H.R. 3684, the IIJA.³ The IIJA will allocate \$5 billion to states through the National Electric Vehicle Infrastructure (NEVI) Formula Program, which aims to develop a national highway charging system. In addition, \$2.5 billion in competitive grants administered by the federal government will support the deployment of Alternative Fuel Infrastructure, such as electric vehicle charging stations, both along highway corridors and in communities.

Earlier this year, South Dakota's Electric Vehicle Infrastructure Deployment Plan (NEVI Plan) was approved by the Federal Highway Administration, and funds authorized from IIJA will soon be released from NEVI through state formula grants. South Dakota will receive annual funding on a proportionate basis, similar to the allocation for the federal highway formula funds. South Dakota is expected to receive \$29 million over 5 years to support the expansion of EV charging along highway corridors.⁴ Additionally, South Dakota will also have the opportunity to apply for \$2.5 billion in grant funding dedicated to non- corridor EV charging in the bill.

III. Comments

³ H.R. 3684 became Pub. L. No: 117-58 on November 15, 2021, available at: <https://www.congress.gov/bill/117th-congress/house-bill/3684/text>.

⁴ https://www.fhwa.dot.gov/bipartisan-infrastructure-law/evs_5year_nevi_funding_by_state.cfm

The historic programs contained within IIJA underscore the need for complementary utility actions, such as make ready programs and line extension policies, a focus on streamlining new service requests/upgrades, and development of alternatives to traditional demand-based rates which will bolster the ability for South Dakota to make the most of one-time sources of funding dedicated to increasing access to electric transportation. South Dakota will put itself in the best position to take advantage of formula funds and competitive grants by ensuring that policies and regulations support and enable the competitive market for electric vehicle charging infrastructure, including expanding utility infrastructure programs.

a. Develop Alternatives to Traditional Demand-Based Rates

IIJA implements amendments to the Public Utility Regulatory Policies Act (PURPA) which directs utility regulators across the country to consider measures that promote greater electrification of the transportation sector through third party investments.⁵ Specifically, the PURPA amendments require utility regulators in every state to initiate proceedings before November 2022 to consider establishing measures, including EV-specific rate designs that:

1. Promote affordable and equitable EV charging options for residential, commercial, and public EV charging infrastructure;
2. Improve the customer experience associated with EV charging, including by reducing charging times;
3. Accelerate third-party investment in EV charging; and
4. Appropriately recover the marginal costs of delivering electricity to EVs and EV charging infrastructure.

A competitive market currently exists in South Dakota to build, own, and operate EV charging stations, and the Commission can induce greater impact of IIJA funds for EV charging infrastructure through EV rate designs by ensuring that federal investments are economically

⁵ See IIJA Section 40431, pp. 620-621.

sustainable and contribute to the long-term growth of the state’s EV charging industry. Initiating a proceeding to adopt EV-specific rates and other methods of support for transportation electrification as expeditiously as possible will position South Dakota to fully realize the benefits of EV charging infrastructure investments.

Public and private entities that invest in EV charging stations typically take service on a commercial and industrial electricity rate which may contain demand charges based on the customer’s highest measured demand in a month. Traditional demand-based rates can pose a significant challenge to the deployment of EV charging, particularly at commercial and public charging locations, because these charging sites can be dominated by relatively rare, yet very power-intensive, fast charging sessions. This impact is amplified for fleets and other customers that require charging multiple vehicles simultaneously at high power levels and/or that do not have flexibility to adjust the timing of charging sessions for multiple vehicles. Thus, for public charging sites, conventional commercial rate design often makes otherwise viable and desirable projects uneconomic. In some markets, demand charges can account for as much as 90% of a site host’s electricity costs.⁶

Furthermore, unlike traditional commercial customers on demand-based rates, public EV charging station site hosts have very limited ability to manage or mitigate the impact of demand charges without negatively impacting the EV driver experience. For example, a factory or large commercial facility may be able to avoid turning on several large loads at the same time to avoid higher demand charges. By contrast, if a public DCFC site host offers four charging ports, the site host could only avoid significant demand charges by limiting the number of ports in use simultaneously or by restricting the amount of power to each port, or both. Either action could

⁶ Rocky Mountain Institute, 2017. “EVgo Fleet and Tariff Analysis.” Available at: https://rmi.org/wp-content/uploads/2017/04/eLab_EVgo_Fleet_and_Tariff_Analysis_2017.pdf

negatively impact the driver experience and thus defeat the purpose of expanding public DCFC infrastructure.

The South Dakota NEVI Plan identifies demand charges as a challenge to effective deployment of IIJA funds, unless “changes can be made to how the peak demand rate is calculated and applied to EV DCFC infrastructure.”⁷ The most appropriate and sustainable solution to this problem would come in the form of non-discriminatory electricity rates that reflect cost-causation, send appropriate price signals to customers, and avoid artificially subsidizing otherwise misaligned electricity rates on an ongoing basis. Simply put, high demand charges coupled with low utilization can be an impediment to the widespread deployment of EV charging stations.

There is no “one-size-fits-all” alternative to traditional demand-based rates, and utilities should have flexibility in developing appropriate solutions for its customers. It is critical for the Commission to ensure the development of long-term, sustainable, tariff-based solutions that reflect actual costs and benefits to the grid of EV load. There are numerous examples of alternatives to traditional demand-based rate structures that are currently in effect. It is important to note that some of the alternative rate structures are “technology neutral,” enabling any commercial and industrial customer to take service on the applicable rate structure whether the customer operates an EV charging station or not. Below, ChargePoint highlights a few of these existing alternative rate structures – which we regard as current best practice for the Commission and Staff.

- a. **Dominion, VA: Low Load Factor Rate (Below 200 kWh per kW):** Dominion’s GS-2 rate provides an all-volumetric, technology-neutral, low-load factor rate applicable to non-residential customers with a load factor below 200 kWh per kw.⁸ This rate effectively provides relief from prohibitive demand charges for low-load factor customers through an all-volumetric rate that has been designed to recover

⁷ South Dakota Electric Vehicle Infrastructure Deployment Plan at 37, available at: https://dot.sd.gov/media/documents/EV/SDDOTEVPlan_final.pdf

⁸ See Schedule GS-2, available at <https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/virginia/business-rates/schedule-gs2.pdf?la=en&rev=65c74050107549f299d48689f738e948&hash=7CBE70107AE10C66B8EB5C5A1E248D12>

the utility's cost to serve. ChargePoint recommends the Commission consider alternative rate designs for low-load factor customers - such as the GS-2 rate - which are designed to recover capacity costs that may traditionally be recovered through demand charges on an all-volumetric basis. Importantly, GS-2 is technology neutral enabling any low load factor customer to take service on the rate.

- b. **Evergy, Kansas: Business EV Charging Service:** Evergy's Business EV Charging Service provides a three-period time-of-use (TOU) rate option for non-residential customers for the exclusive use of charging electric vehicles.⁹ While this rate eliminates the demand charge and has been designed to recover the majority of costs through volumetric energy charges, it does include a small kW-based facility charge (\$2.32/kW).
- c. **Madison Gas and Electric, WI: Low Load Factor Rate (50% Demand Reduction):** The Low-load factor rate provides a 50% discount in the demand charge for customers with load factors below 15%. This technology-neutral rate is targeted not only for DCFC facilities, but also other types of low-load-factor customers.¹⁰
- d. **Eversource, Connecticut: Electric Vehicle Rate Rider:** Eversource's EV Rate Rider converts the per-kW demand-based charges included in the Company's general service rate schedule into an equivalent per-kWh volumetric rate. This rider is available for all public EV charging stations, non-public DCFC, and non-public installations of four or more networked Level 2 chargers that are enrolled in a managed charging program.¹¹

Eversource's EV Rate Rider essentially converts its traditional general service rate into an all-volumetric rate for customers providing EV charging services under the specific conditions outlined in the tariff. This solution should be considered as it could provide a simple, effective solution for prohibitive demand charges. However, this solution would need to be modified to be inclusive of all commercial EV charging use cases.

- e. **Arizona Public Service (APS): Rate Rider DCFC Pilot:** APS' Rate Rider DCFC provides an upper limit on the monthly billed demand for customers who are taking service on one of APS' E-32 TOU rates and where electricity is consumed only by public, DCFC stations.¹² The Rate Rider DCFC includes a load factor limit which

⁹ https://www.evergy.com/-/media/documents/billing/kansas-central/other/bevcs-business-ev-charging-service-12062021_03282022.pdf

¹⁰ See <https://www.mge.com/MGE/media/Library/pdfs-documents/rates-electric/E32.pdf>. See also <https://apps.psc.wi.gov/ERF/ERFview/viewdoc.aspx?docid=402247>.

¹¹ https://www.eversource.com/content/docs/default-source/rates-tariffs/ct-electric/ev-rate-rider.pdf?sfvrsn=e44ca62_4

¹² See APS' Direct Current Fast Charging Pilot Schedule at <https://www.aps.com/en/Utility/Regulatory-and-Legal/Rates-Schedules-and-Adjustors#Business>, located under the Rate riders tab.

the customer must be under to be eligible for participation, and includes three periods in which the load factor limit decreases, ultimately sunsetting in 2031.¹³ The monthly billed demand is limited through the following formula:

$$(\text{Monthly Billed kWh}) / [\text{load factor limit} * \text{Days} * 24 \text{ hours}]$$

While this rider does represent a step in the right direction to provide relief from demand charges, it is not ChargePoint's preferred solution for alternative rate designs for commercial EV charging customers. First, the pilot is only available to public DCFC stations. This fails to acknowledge that demand charges are also an impediment for the deployment of EV charging stations for other high demand, low-load factor use cases (e.g., fleet charging, clustered public Level 2 charging, clustered Multi-family Level 2 charging). Additionally, this solution does not provide a long-term, cost-based solution to a problem that will continue to persist. For example, low-load factor EV charging stations will continue to exist after the Rate Rider DCFC sunsets, even as EV adoption increases, to serve certain charging segments. While there is some merit in considering a similar solution, it would need to be modified to ensure that all use cases are considered and provide a long-term solution.

Commission evaluation of rates will help ensure that the State Department of Transportation's charging infrastructure investments will be economically sustainable for the long term while advancing social equity goals and attracting private sector investment. Therefore, ChargePoint urges the Commission to initiate a separate proceeding to consider such long-term sustainable rate designs that more precisely allocate costs and benefits of EV load. This type of long-term, sustainable tariff-based EV rate design is necessary to attract private investment in EV charging infrastructure, especially at the DCFC level.

b. Dedicate Utility Personnel to EV Charging Deployment

IIJA funding opportunities will result in significant increases in service requests for new EV infrastructure and it will be vitally important for the utilities to internally scale to meet the increased demand. A lack of staff at the utilities dedicated to EV charging infrastructure

¹³ Period One is December 1, 2021 through June 30, 2025 with a load factor limit of 25%, Period Two is July 1, 2025 through June 30, 2028 with a load factor limit of 20%, and Period Three is July 1, 2028 through June 30, 2031 with a load factor limit of 15%.

installations could potentially lead to delays in processing the influx of new service requests. Increased utility personnel will also enable the South Dakota Department of Transportation, and other state agencies, to better engage and consult with the utilities on EV planning in a timely manner that meets deadlines set out by the Federal Highway Administration (FHWA) and the U.S. Department of Transportation (USDOT). ChargePoint encourages increasing the utility workforce dedicated to the topic of electric vehicle charging infrastructure, and to identifying ways to accelerate utility system planning, investment, and deployment processes.

c. Utility Make Ready Programs

Make ready programs are designed to support increased deployment of EV charging stations by offsetting the costs of make ready infrastructure incurred by site hosts¹⁴ who wish to install, own and operate L2 and/or DCFC stations on their property. Generally speaking, make ready infrastructure includes all the electrical and construction work necessary on the utility's side of the electric meter and the customer's side of the electric meter to make a site ready to connect EV charging equipment. 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 for the customer is a large portion of total project costs and aligns with the utility's key competency of installing and maintaining distribution assets.

Importantly, utility make ready programs should not be viewed as a replacement for other available funding sources, such as IIJA funding and private third-party capital, but instead offer complimentary support to help deploy EV infrastructure across South Dakota. ChargePoint recommends the Commission direct the State's utilities to develop and implement make ready

¹⁴ 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.

programs as a fundamental first step for the Commission, the Utilities, and the competitive market to ensure South Dakota is well positioned to take advantage of available federal grants and loans under IIJA.

d. Line Extension Policies

ChargePoint recommends that the Commission provide long-term support to utility customers seeking to install EV charging infrastructure by creating permanent EV line extension policies. By doing so, the Commission would authorize the utilities to rate base the make ready infrastructure on the utility side of the meter needed to supply EV charging stations. This would provide administrative and economic efficiencies, support the competitive EV charging market, enable customer choice and is consistent with the policies that have been adopted by several states that are national leaders in EV policies and deployment. Line extensions policies are not necessarily mutually exclusive to make ready programs. They can work in tandem with customer side make ready programs to further increase the ability for site hosts to deploy EV charging stations.

Adoption of ChargePoint's suggested line extension policies would make EV infrastructure on the utility side of the meter a core utility function and put EV infrastructure on par with other utility distribution investments. This would also echo the recent approval of New Jersey's A2360/S3285 Law and of the EV Infrastructure Rules (Rules) enacted by the California Public Utilities Commission (CPUC) in October 2021. These policies have ensured that customers seeking EV charging solutions will not be subject to the uncertainty of funding for utility-side make ready investments.

On January 18, 2022, New Jersey Governor Phil Murphy signed A2360/S3285 into law (P.L.2021, c.441), establishing that electric public utilities are authorized to install any distribution infrastructure necessary to support the installation of L2 electric vehicle charging stations at

multifamily properties. Further, the legislation directed that, “prudent costs incurred by the electric public utility shall be deemed consistent with the provisions of R.S.48:2-27 governing the extension of public utility facilities,” and that the “utility shall be entitled to full and timely recovery of all such prudently incurred costs, provided that the cost of any electric vehicle charging station or installation thereof is not included.”¹⁵ This policy will create a clear pathway for New Jersey’s utilities’ ability to expand access to EV charging for multi-unit dwellings across the state. By streamlining the processes for the expansion of distribution infrastructure necessary to make multifamily properties EV ready, policies like these will allow states to meet their transportation electrification goals efficiently, effectively, and promptly.

Similarly, the CPUC’s EV Infrastructure Rules have enabled California’s investor-owned utilities to deploy all electrical distribution infrastructure on the utility side of the customer’s meter for all EV charging station infrastructure. The CPUC’s October 7, 2021, resolution established that,

Per the direction of the Public Utilities Code (PU Code) Section 740.19, these costs related to utility-side distribution infrastructure that support EV charging will be recovered through the IOUs’ [general rate cases] GRCs...With the approval of this

¹⁵ New Jersey A2360/S3285 P.L. 2021, c.441 requires electric public utility to charge residential rate for service used by residential customer for electric vehicle charging at charging stations within certain designated parking spaces, available at: https://www.njleg.state.nj.us/Bills/2020/A2500/2360_R3.HTM

Text of Sec. 1(e):

An electric public utility, upon the request of an applicant for electric service at a planned real estate development, shall install, up to the point of utility delivery, any distribution infrastructure necessary to facilitate the future installation of an electric vehicle charging station that provides Level 2 charging capability, under rates, terms and conditions as established by the board. Any prudent costs incurred by the electric public utility shall be deemed consistent with the provisions of R.S.48:2-27 governing the extension of public utility facilities, subject to any maximum cost as may be established by the board. The electric public utility shall be entitled to full and timely recovery of all such prudently incurred costs, provided that the cost of any electric vehicle charging station or installation thereof is not included.

Resolution the IOUs will, moving forward, track these costs within a Memo Account and seek approval of these costs within a GRC.^{16,17}

Implementing a similar policy could significantly simplify and standardize EV infrastructure planning and development and encourage private investment in commercial EV charging infrastructure. The Natural Resources Defense Council has estimated that the CPUC's Rule will reduce the costs of installing EV charging stations by approximately 25%.¹⁸ Further, establishing a rule to treat distribution infrastructure on a rolling basis through general rate cases (GRCs) – rather than through sequential regulatory processes – will critically reduce deployment timelines and ensure the Utilities' ability to meet future demand for charging infrastructure.

ChargePoint presents these line extension policies as models for consideration to accelerate and simplify how readily public charging can be deployed across South Dakota. Enactment of line extension policies would also uniquely position South Dakota to expeditiously utilize IJA funds once they become available.

IV. Conclusion

ChargePoint thanks the Commission for the opportunity to comment on how South Dakota can best be positioned to take advantage of the federal funding available under the Infrastructure and Investment Jobs Act in order to accelerate deployment of EV charging infrastructure throughout the state. ChargePoint respectfully requests the Commission's consideration of

¹⁶ *Resolution E-5167 Pacific Gas & Electric, Southern California Edison, and San Diego Gas & Electric request approval to establish new Electric Vehicle (EV) Infrastructure Rules and associated Memorandum Accounts pursuant to Assembly Bill 841*, Public Utilities Commission of the State of California, Resolution E-5167 at 3 (Oct. 7, 2021).

¹⁷ California Public Utilities Code § 740.19 states:

The purpose of this section is to change the commission practice of authorizing the electrical distribution infrastructure located on the utility side of the customer meter needed to charge electric vehicles on a case by-case basis to a practice of considering that infrastructure and associated design, engineering, and construction work as core utility business, treated the same as other distribution infrastructure authorized on an ongoing basis in the electrical corporation's general rate case.

¹⁸ Miles Muller and Max Baumhefner, CA Approves New Rules to Support EV Charging Infrastructure (Oct. 2021), available at <https://www.nrdc.org/experts/miles-muller/ca-approves-new-rules-support-ev-charginginfrastructure>.

South Dakota Public Utilities Commission Case No. AA22-002

Comments of ChargePoint, Inc.

ChargePoint's comments 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 South Dakota. ChargePoint looks forward to participating and contributing to future discussions with other interested parties and stakeholders on how to effectively use competitive forces to efficiently utilize federal funding to achieve widespread beneficial transportation electrification.

Respectfully submitted this 21st day of October 2022.

/s/ Matthew Deal

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