

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

Electronic Investigation of)	
Amendments to the Public Utility)	Case No.
Regulatory Policies Act of 1978 and)	2022-00369
Electrification of Transportation)	

COMMENTS OF CHARGEPOINT, INC.

ChargePoint, Inc. (“ChargePoint”) provides these comments regarding funding available to the Commonwealth of Kentucky under the Infrastructure Investment and Jobs Act, H.R.3684 (IIJA) as requested in the Kentucky Public Service Commission’s (“Commission”) November 7, 2022 Order.¹ ChargePoint appreciates the opportunity to submit these comments and the Commission’s consideration of them in making its final determination.

The IIJA directs each state to consider “measures to promote greater electrification of the transportation sector.” This includes establishing rates that promote affordable and equitable EV charging options for residential, commercial, and public EV charging infrastructure; and accelerate third-party investment in EV charging, among other things.² ChargePoint’s recommendations below support increased investment in electric vehicle supply equipment (“EVSE”) and identify actions for the Commission to consider in determining how to facilitate receipt and deployment of available federal funding.

In summary, ChargePoint recommends that the Commission:

- Initiate a proceeding for utilities to propose alternatives to traditional demand-based rates;
- Authorize utilities to increase staffing that is dedicated to EV charging infrastructure to accommodate the anticipated influx of new service requests;
- Encourage utilities to develop make ready programs.

¹ See Kentucky Public Service Commission Case No. 2022-00369, Order. (November 7, 2022).

² IIJA SEC. 40431.

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 hosts³ 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

³ 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.

Kentucky Public Service Commission Case No. 2022-00369

Comments of ChargePoint, Inc.

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.⁴ 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.

By the end of the year, funds authorized from IIJA will be released from the NEVI through state formula grants. States will receive annual funding on a proportionate basis, similar to the allocation for the federal highway formula funds. Kentucky is expected to receive \$69.5 million over 5 years to support the expansion of EV charging.⁵ Kentucky will also have the opportunity to apply for the \$2.5 billion in grant funding dedicated to EV charging in the bill.

III. Comments

Though Kentucky's adoption of electric vehicles may have lagged behind other states historically, the substantial private, local, state, and federal investment in EVs and EV infrastructure are expected to increase Kentucky's EV adoption to align with the national average

⁴ 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>.

⁵ Kentucky's Electric Vehicle Infrastructure Deployment Plan ("NEVI Plan"), filed in July 2022 and approved by the Federal Highway Administration in September 2022, is available at: <https://transportation.ky.gov/Planning/Air Quality Documents/KY EV Infrastructure Deployment Plan.pdf>.

Kentucky Public Service Commission Case No. 2022-00369

Comments of ChargePoint, Inc.

in the near future. Indeed, the Commonwealth’s projections show the percentage of EVs registered in Kentucky will increase by a factor of 40 by 2030.⁶ Kentucky’s anticipated EV growth underscores the need for complementary actions defining a clear role for utilities to manage new EV charging load and take advantage of the utilities’ core competency of installing and maintaining distribution assets. The best way for Kentucky to take advantage of formula funds and competitive grants is to ensure its policies and regulations support and enable the competitive market for electric vehicle charging infrastructure. This includes expanding utility infrastructure programs to support and manage new load from EV charging stations.

a. Develop Alternatives to Traditional Demand-Based Rates

The IIJA implements amendments to the Public Utility Regulatory Policies Act (“PURPA”) which direct utility regulators across the country to consider measures that promote greater electrification of the transportation sector through third party investments.⁷ Specifically, the PURPA amendments require utility regulators in every state to make a final determination before November 2023 whether to establish new 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.

⁶ NEVI Plan at 33.

⁷ See IIJA Section 40431, pp. 620-621.

i. Demand charges are a barrier to EV charger deployment.

A competitive market currently exists in Kentucky to build, own, and operate DCFC stations. The Commission should maximize the impact of IJA funds for EV charging infrastructure through EV rate designs by ensuring that federal investments are economically sustainable and contribute to the long-term growth of the EV charging industry. To do this, initiating a proceeding on an expedited basis to adopt rates and other methods of support for transportation electrification is paramount for Kentucky 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 (“C&I”) 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.⁸

Kentucky’s NEVI plan lays out the Commonwealth’s strategy to spend its dedicated \$69.5 million of IJA funds on interstate DCFC infrastructure. It also identifies utility demand charges as a barrier to EV infrastructure deployment. Specifically, the plan notes that “Rate structures are

⁸ 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.

not friendly for high power low utilization loads like a DCFC. While EV adoption is low, utilization will also be low, and costs for electricity will be high. Increased utilization alleviates demand charge impacts, but it is difficult to get to high utilization if costs are high.”⁹ Notably, the current demand-based commercial rate structures may not only slow down the deployment of NEVI stations, but also inhibit growth of third-party investments in DCFC.

ii. Demand charges must be mitigated through rate design to avoid disrupting EV driver experience.

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 negatively impact the driver experience and thus defeat the purpose of expanding public DCFC infrastructure. Under traditional demand-based rates, site hosts will effectively be penalized for providing charging services not only in the early-stage EV market, but also as charging power levels increase in the future. Additionally, demand charges can permanently penalize site hosts that provide charging services in locations that will continuously have low, sporadic, or seasonal utilization, such as rural and remote sites.

Simply put, high demand charges coupled with low utilization can be an impediment to the widespread deployment of EV charging stations. The most appropriate and sustainable solution to

⁹ NEVI Plan at 36.

this issue 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.

iii. There are many alternatives to demand-based rates currently in effect.

There is no “one-size-fits-all” alternative to traditional demand-based rates, and utilities should have flexibility in developing appropriate solutions for their 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. ChargePoint urges the Commission to initiate a separate proceeding for each service territory to consider rate designs that more precisely allocate costs and benefits of EV load.

This type of intervention by the Commission is particularly important for Kentucky, which has over 50 utilities operating in the Commonwealth. As such, EV-supportive rates in some areas but not others may lead to inequitable geographic disparities for access to EV charging infrastructure. The majority of the BEVs registered in Kentucky today are in urban areas.¹⁰ If EV-supportive rate designs are only enabled in areas with higher EV adoption rates, there may be many chargers deployed in urban areas and fewer chargers deployed in rural areas. Since NEVI’s primary intent is to enable interstate travel in an EV, a patchwork of EV rates may both limit NEVI’s impact and underserve rural and disadvantaged communities.¹¹

There are numerous examples of alternatives to traditional demand-based rate structures that are currently in effect. Notably, some of the alternative rate structures are “technology neutral,” enabling any commercial and industrial customer to take service on the applicable rate

¹⁰ *Id.* at 33.

¹¹ *Id.* at 15.

Kentucky Public Service Commission Case No. 2022-00369

Comments of ChargePoint, Inc.

structure, whether the customer operates an EV charging station or not. ChargePoint highlights a few of these existing alternative rate structures – which it regards as current best practice – for the Commission and Staff below.

- 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.¹² 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 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.¹³ 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.¹⁴
- 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.¹⁵

¹² 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>.

¹³ https://www.evergy.com/-/media/documents/billing/kansas-central/other/bevcs-business-ev-charging-service-12062021_03282022.pdf.

¹⁴ 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>.

¹⁵ https://www.eversource.com/content/docs/default-source/rates-tariffs/ct-electric/ev-rate-rider.pdf?sfvrsn=e44ca62_4.

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. ChargePoint believes that this solution should be considered as it could provide a simple, effective solution for prohibitive demand charges. However, ChargePoint believes that 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.¹⁶ The Rate Rider DCFC includes a load factor limit which the customer must be under to be eligible for participation, and includes three periods in which the load factor limit decreases, ultimately sunsetting in 2031.¹⁷ 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 ChargePoint does believe 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.

b. Dedicate Utility Personnel to EV Charging Deployment

IIJA funding opportunities will result in significant increases in service requests for new EV infrastructure. Accordingly, it is 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 installations could potentially lead to delays in processing the influx of new service requests.

¹⁶ 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.

¹⁷ 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%.

Increased utility personnel dedicated to EV charger energization will also enable the Kentucky 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”). To meet this demand, ChargePoint encourages increasing the utility workforce dedicated to the topic of electric vehicle charging infrastructure, and identifying ways to accelerate utility system planning, investment, and deployment processes.

c. Utility Make Ready Programs

Kentucky’s NEVI plan indicates that the existing electrical grid is likely sufficient to meet new demand incurred by EVs as a direct result of NEVI.¹⁸ Increased EV charging will also increase utility revenues. As a result, additional EV load is likely to apply downward pressure on rates for all ratepayers, given that revenues collected from charging EVs will exceed the cost to serve them.¹⁹ However, the continued development of the competitive EV charging market will require an expansion of the distribution network, which the utility can support to ensure that it is executed in a manner that manages the grid responsibly and reduces the costs for all ratepayers. Utility “make ready” programs offer an effective strategy for Kentucky to access and expand the benefits of electrification while minimizing the risk and burden to ratepayers.

Make ready programs are designed to support increased deployment of EV charging stations by offsetting the costs of make ready infrastructure incurred by site hosts 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

¹⁸ NEVI Plan at 32.

¹⁹ See MJ Bradley, “Plug-in Electric Vehicle Cost-Benefit Analysis: Nevada” at (Jan. 2021), available at: https://www.mjbradley.com/sites/default/files/NV_PEV_CB_Analysis_FINAL_0.pdf.

Kentucky Public Service Commission Case No. 2022-00369

Comments of ChargePoint, Inc.

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.

Make ready programs represent the most prudent role for utilities to play in transportation electrification because they take advantage of utilities' core competency of installing and maintaining distribution assets. The cost of make-ready infrastructure is one of the key barriers to deploying EV charging stations as these costs for the customer represents a large portion of total project costs. Therefore, it is both appropriate and effective for the utility to invest in such infrastructure to support transportation electrification.

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 Kentucky. ChargePoint recommends the Commission direct the state's utilities to develop and implement make ready programs as a fundamental first step for the Commission, the utilities, and the competitive market to ensure Kentucky is well positioned to take advantage of available federal grants and loans under IIJA.

IV. Conclusion

ChargePoint thanks the Commission for the opportunity to comment on how Kentucky can best be positioned to take advantage of the federal funding available under the IIJA to accelerate deployment of EV charging infrastructure throughout the Commonwealth. ChargePoint respectfully requests the Commission's consideration of these 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 Kentucky. ChargePoint looks forward to

Kentucky Public Service Commission Case No. 2022-00369

Comments of ChargePoint, Inc.

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 16th day of December 2022.

/s/ Matthew Deal

Matthew Deal

Manager, Utility Policy

ChargePoint, Inc.

202.528.5008

matthew.deal@chargepoint.com