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May 23, 2022

Hon. Michelle L. Phillips
Secretary to the Commission
New York State Public Service Commission
Empire State Plaza
Agency Building 3
Albany, NY 12223-1350

RE: Comments by ChargePoint on Alternatives to Traditional Demand-Based Rate Structures for Commercial Electric Vehicle Charging in Case No. 22-E-0236: Proceeding to Establish Alternatives to Traditional Demand-Based Rate Structures for Commercial Electric Vehicle Charging.

Dear Secretary Phillips,

Attached for electronic filing in the above-referenced matter, please find comments by ChargePoint, Inc.

Respectfully,

Matthew Deal
Manager, Public Policy
ChargePoint

I. Introduction

On April 21, 2022, the New York Public Service Commission ("Commission") issued a notice soliciting comments ("Notice") in response to the enactment of Public Service Law ("PSL") §66-s, which requires the Commission to "commence a proceeding to establish a commercial tariff utilizing alternatives to traditional demand-based rate structures, other operating cost relief mechanisms, or a combination thereof (collectively, "solutions") to facilitate faster charging for eligible light duty, heavy duty, and fleet electric vehicles."[1] ChargePoint supports the goals and objectives outlined in PSL §66-s and appreciates the opportunity to provide these initial comments in response to the Commission's Notice.

II. About ChargePoint

ChargePoint is a world leading electric vehicle ("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[2] to manage charging onsite with features like Waitlist, access control, charging analytics, and real-time availability. ChargePoint's hardware features a modular design to help minimize downtime and make maintenance and repair more seamless, all products are also 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.

[1] PSL §66-s (2).
[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.

III. Comments on Alternatives to Traditional Demand-Based Rate Structures for Commercial Electric Vehicle Charging

i. General Rate Design Principles for Commercial EV Charging

ChargePoint recommends the following rate design principles for the consideration of any potential solutions identified in this proceeding and for the Commission to consider when designing rates for EV charging going forward.

a. Provide Rate Optionality

Providing multiple rate options, including the ability to switch to a standard commercial rate schedule, will provide EV charging station site hosts more tools to adapt to both customer preferences and system needs as load factor or load profiles change. Additionally, EV charging is not a one-size-fits-all application. For example, a fleet that utilizes EV charging will have much different charging behavior and more predictable utilization when compared to a site host that provides DCFC charging to the public. Additionally, rural, standalone, low usage, high-capacity chargers have different economics and cost causation than chargers deployed in densely populated suburban areas. Enabling choice among qualifying rates optimizes economics while enabling near-term investment.

b. Rates Should Be Broadly Applicable

All current and future rates intended to expand EV charging infrastructure should apply to currently installed as well as yet to be installed stations, consistent with §66-s. In anticipation of significant increases in demand, site hosts have invested their own private capital to deploy charging stations across NY State. These site hosts should not be disadvantaged by making a rate only applicable to newly deployed charging stations.

c. EV charging rates should be simple, predictable, and actionable

ChargePoint believes that for EV charging rates to be most effective they should be simple, predictable, and actionable. Simple and predictable rates provide consistency to utility customers who want to provide EV charging services while complex rate structures make it difficult for prospective EV charging providers to predict operating expenses and can reduce private investment through unreasonably high costs. Through the development of simple and predictable EV charging rates, utilities can spur private investment in EV charging infrastructure by providing consistency and certainty to its customers regarding operating expenses for EV charging stations.

Further, time-of-use (TOU) rates may encourage EV drivers to shift charging behavior *in certain use cases* and it will be imperative that any peak periods be limited in nature (i.e., no more than 6 hours) to ensure drivers can reasonably take action to shift behavior. Prolonged peak periods will simply penalize drivers due to an inability to shift a significant amount of driving and charging to narrow off-peak windows.

d. Rates should be cost-based

Rates designed for EV charging should be cost-based and do not need to be subsidized. Rates designed to reflect the utility's underlying time-varying marginal costs encourage EV drivers to charge at times when grid cost are lower. Recovery of marginal costs to serve, without costs associated with existing infrastructure or unrelated utility programs, may best meet policy goals to promote transportation electrification and fuel switching incentives. This will allow EV drivers to realize the fuel cost savings that are a motivator of EV purchases and, by encouraging higher EV penetration, will increase the incremental electric revenues that benefit all ratepayers.

e. Minimize Demand Charges and maximize use of volumetric rates

As recognized by PSL §66-s, demand charges remain a significant operating cost barrier to the deployment of public EV charging infrastructure. Implementing appropriate rate designs that eliminate, defer, or reduce demand charges will be key to spurring increased investment in the EV charging infrastructure necessary to support EV drivers in New York state. Emphasizing accurate TOU rates over demand charges ensures that site hosts may encourage their customers, *to the extent feasible*, to charge at times that provide the most system benefits, rather than trying to minimize demand charges. For example, 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. Eliminating demand charges will not create a cost shift if TOU rates are cost-based and represent incremental revenues.

However, While TOU rates and other price signals can be an effective tool for incentivizing off-peak EV charging, they may not be an effective option for certain EV charging use cases – such as public charging, especially at DCFC stations. Simply put, demand for public DCFC charging is not elastic enough for a price signal to have a meaningful effect on charging behavior and public DCFC charging rates that utilize price signals to shift load to off-peak periods will largely not be actionable by EV drivers. For example, reporting from the Public Service Company of Colorado regarding its Schedule S-EV, a rate available to C&I customers where electrical service is used solely for EV charging and includes CPP, concluded that the "aggregate load patterns for all S-EV customers do not reveal a definitive response to CPP events."[3]

f. Limit monthly fixed charges

Any fixed costs should be limited to the cost of the customer-specific facilities used to provide access to the grid (i.e., to the service drop and meter, plus ongoing costs for customer service & billing).

g. Alternative rates should be designed as a long-term solution

Temporary demand charge limiters, or "holidays", do not provide a long-term solution to serve unique load shapes of nonresidential charging stations. EV charger utilization will always need to stay relatively lower than other commercial use cases given the trade-off between customer utilization, also

[3] See p. 11 of the Public Service Company of Colorado's Secondary Voltage Time-of-Use Electric Vehicle Service Supplemental Report #3, filed on August 11, 2021 in Colorado PUC Proceeding No. 19AL-0290E.

known as load factor, and customer experience so that customers will not need to wait in line to fuel their vehicles, which would discourage EV adoption.[4] As such, commercial EV rates should be designed to be long-term solutions, such as permanent, technology-neutral low load factor rates.

ii. Solutions should be designed to address sites that may be necessary to establish a minimum network of public charging but are located in areas that are likely to experience lower utilization in the long run.

While it is expected that, on average, EV charging stations across New York state will experience increased utilization over time, utilization will vary based on location. For example, charging stations deployed in less-traveled areas of the state will likely consistently experience lower utilization than a high-volume corridor deployment, irrespective of statewide EV adoption. It will be important for any proposed solution to consider these important charging stations that will be vital to establishing a statewide network of charging stations but may perpetually experience low utilization. Thus, providing a short-term solution to demand charges will likely exclude certain areas of the state, especially those with predominantly remote or low utilization sites, from EV infrastructure investments as the operating expenses will be unpredictable and prohibitively high. This has the potential to create "charging deserts" where there is not sufficient EV charging infrastructure. Additionally, demand charges can restrict site hosts from upgrading their sites to include additional capacity, limit initial buildout of charging stations to lower power levels and may result in station operators imposing power caps at charging sites to avoid costly demand charges. This is especially concerning as it will limit site host's ability to provide high speed charging services and adopt future technology that allows for charging at even higher power levels.

iii. The Commission should wholistically evaluate any proposed solution.

In its Notice seeking stakeholder comments and proposals the Commission stated that "utilities affected by these possible changes are asked to provide comments regarding the potential impacts to ratepayers from adoption of a rule change that would eliminate or change the traditional demand-based rate for commercial purposes."[5] ChargePoint is concerned that the plain language in the Notice may inadvertently lead utilities and other stakeholders to focus solely on potential impacts that may be perceived to be negative (i.e., potential cost shifts, etc.) rather than providing the full scope of potential impacts. However, PSL §66-s as amended by Chapter 168, expressly states that "the Commission shall evaluate the relative costs ***and*** benefits of proposed solutions" (emphasis added). Therefore, ChargePoint encourages the Commission to wholistically evaluate any solution proposed by a utility or other stakeholder to consider all costs and benefits of proposed solutions consistent with the intent of PSL §66-s.

[4] While higher utilization of a charging station will minimize the impact of a demand charge, as the bill impact of a $/kW charge can be spread over more kWh, high usage beyond a certain point is not ideal for a public charging station, as customers will have to wait in line, or "queue" to fuel, which may then discourage EV adoption and provides much uncertainty for EV drivers.
[5] Notice at 3.

iv. **Properly designed rates will not result in cost shifting.**

Rates that provide alternatives to traditional demand-based structures, and are designed to be cost-based, will not result in undue shifts in cost from customers who host commercial EV charging stations to other utility ratepayers. In fact, data from Xcel Energy in Colorado demonstrates that load from EV charging customers contributes much less to system peaks when compared to other commercial and industrial customers.[6] This indicates that under traditional demand-based rates EV charging customers are allocated costs in excess of the actual cost to serve, or in other words, EV charging customers are subsidizing rates of utility customers who do not have EV charging. This provides further justification for the development of alternative rate structures and demonstrates that with properly designed rates no cost shift from customers with EV charging to those without charging will occur due to the development or alternative rates.

v. Examples of alternatives to demand-based rates from jurisdictions outside of New York that should be considered.

There are numerous examples of alternatives to traditional demand-based rate structures that are currently in effect.[7] 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.

ChargePoint would like to highlight a few of these existing alternative rate structures – which we regard as current best practice - for the Commission and Staff. We include a more detailed list as attachment B to these comments.

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 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.

   While all-volumetric rates may represent a novel approach in the state of New York to recovering these costs from commercial customers, it is not unheard of in utility rate design. For example, in Iowa MidAmerican Energy Company provides certain large industrial customers, that have high demands, the option of taking service under its Rate

[6] *See* p. 19 of Hearing Exhibit 101 in Colorado PUC Proceeding No. 21AL-0494E.
[7] *See* Attachment A.
[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

ICR – Individual Customer Rate, in which individual cost-based rates are designed for the customers.[9] Under Rate ICR eligible customers have the option of taking service under an energy-only rate with no demand component.[10] While the individual rate designs may not be directly analogous to those which would be effective for EV charging, this provides an existing example of all-volumetric rates which are being design in a way that effectively recovers the cost to serve (i.e., does not result in cost shift to other customers).

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.[11] 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.[12]

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.[13]

   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 as further discussed below.

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.[14] The Rate Rider DCFC includes a load factor limit which the

[9] *See* Original Sheet No. 215 of MidAmerican's Iowa Electric Tariff No. 2 at https://www.midamericanenergy.com/media/pdf/iowa-electric-tariffs.pdf
[10] See p. 9 of the Iowa Utility Board's June 19, 2015, Order in Docket No. TF-2014-0338.
[11] https://www.evergy.com/-/media/documents/billing/kansas-central/other/bevcs-business-ev-charging-service-12062021_03282022.pdf
[12] 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.
[13] https://www.eversource.com/content/docs/default-source/rates-tariffs/ct-electric/ev-rate-rider.pdf?sfvrsn=e44ca62_4
[14] *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.

customer must be under to be eligible for participation, and includes three periods in which the load factor limit decreases, ultimately sunsetting in 2031.[15] The monthly billed demand is limited through the following formula:

(Monthly Billed kWh) / [load factor limit*Days*24 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.

ChargePoint recommends that the proposed solutions should reduce or eliminate demand charges and maximize the use of volumetric rates that will not create a cost shift if designed as cost-based and represent incremental revenues for the utilities. Emphasizing accurate volumetric rates over demand charges ensures that EV charging site hosts may encourage their customers to the extent feasible to charge at times that provide the most system benefits, rather than trying to minimize demand charges. The utilities can recuperate their costs without discouraging investment in EVs through prohibitive demand charges. In addition, any rate proposal should be designed as long in duration (e.g., 10 years) and should remain technology neutral. Ultimately, fueling vehicles should not result in business operational uncertainty nor inadvertently discourage EV adoption.

Given the fluctuations in energy used and total energy consumed at EV charging stations, rates should employ a technology neutral approach to account for the inherent low load factor of fast charging stations.[16]

IV. Conclusion

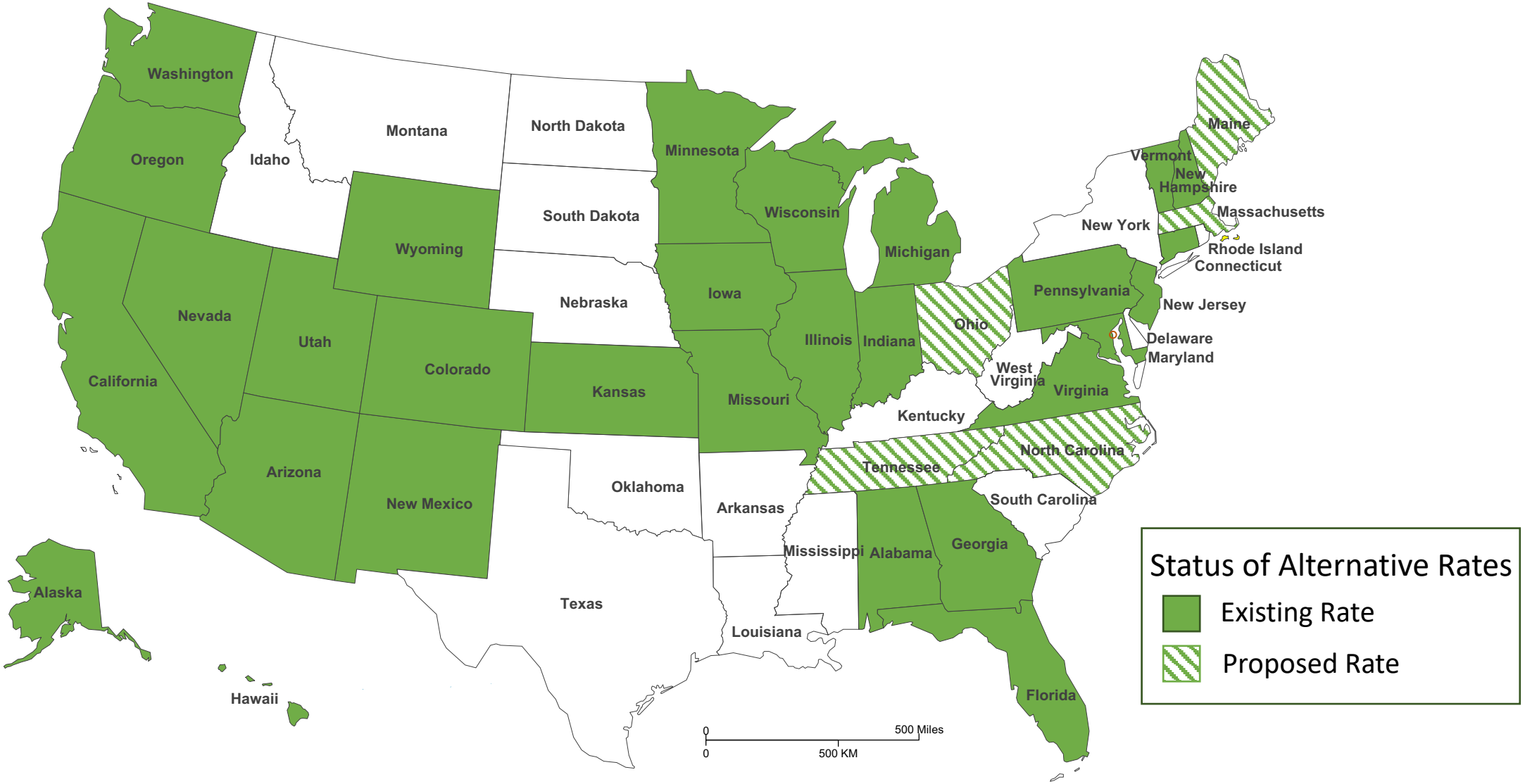
ChargePoint appreciates the opportunity to provide these comments regarding alternatives to traditional demand-based rate structures for commercial EV charging in New York and respectfully requests the consideration of these comments in developing the proposal for submission by Staff later this year. ChargePoint reserves its right to provide additional comments on the individual utility alternative rate design filings. ChargePoint looks forward to continuing to work with the Commission, Staff, the utilities, and other stakeholders over the course of this proceeding.

[15] 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%.
[16] This includes DCFC and clustered L2 deployments.

Attachment A

States with Alternatives to Traditional, Demand-Based Electricity Rates

May 2022



Examples of Alternatives to Traditional, Demand-Based Electricity Rates

Utility	*State*	*Tariff/Rate description*	*Reference*
Southern California Edison	CA	10-year- all volumetric TOU; Demand charges phase in	• CPUC Decision 18-05-040, Ordering Paragraph 45 • SCE Advice Letter 3853-E: See EV-8 rate
Xcel Energy	CO	Low Load Factor Rate	See file page 56, book page 44.
Eversource	CT	EV Rider – Volumetric Rate (No Demand)	https://www.eversource.com/content/docs/default-source/rates-tariffs/ct-electric/ev-rate-rider.pdf?sfvrsn=e44ca62_0
Xcel Energy	MN	Demand Limiter (100kW)	https://www.xcelenergy.com/staticfiles/xe/PDF/Regulatory/CO-Rates-&-Regulations-Entire-Electric-Book.pdf (file page 56, book page 44)
Pacific Power (under PacifiCorp)	OR	Phased Demand Charge Discounts until 5/15/2026 with increased Energy Charges.	https://www.pacificpower.net/content/dam/pcorp/documents/en/pacificpower/rates-regulation/oregon/tariffs/rates/045_Public_DC_Fast_Charger_Optional_Transitional_Rate_Delivery_Service.pdf
San Diego Gas & Electric	CA	Subscription-based rate with 10-year phase in of non-marginal costs	Decision Authorizing San Diego Gas & Electric Company Rate for Electric Vehicle High Power Charging, D.20-12-023, available at https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M356/K212/356212154.PDF
PECO	PA	50% Demand Discount, 36 months on General Service rate	Rate: File page 86, book page 84. One-page summary available here.
National Grid	RI	100% Demand Discount (Y1, Y2) 3-year/36-month	https://www.nationalgridus.com/media/pdfs/bus-ways-to-save/ee7873-ri-discount-pilot-for-dcfc-stations.pdf
National Grid (*Proposed*)	MA	Sliding scale demand charge, tracks load factor; 10 years	MA D.P.U. 21-91, Exhibit NG-DCA-1 https://fileservice.eea.comacloud.net/FileService.Api/file/FileRoom/13758109
Dominion	VA	Low Load Factor Rate (below 200kWh per kW)	https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/virginia/business-rates/schedule-gs2.pdf?la=en&rev=65c74050107549f299d48689f738e948&hash=7CBE70107AE10C66B8EB5C5A1E248D12
Pacific Power	WA	Phased Demand Charge Discount w/ increased Energy Charges.	https://www.pacificpower.net/content/dam/pcorp/documents/en/pacificpower/rates-regulation/washington/rates/045_Public_DC_Fast_Charger_Optional_Transitional_Rate.pdf
Tacoma Power	WA	Phased Demand Charge Discounts with increased Energy Charges	Discount Tables: Schedule FC combined with either Schedule B (small) or Schedule G (general) rates https://www.mytpu.org/payment-billing/rate-information/power-rates/power-rates-schedule/
Madison Gas & Electric	WI	Low Load Factor Rate (50% Demand Reduction)	https://www.mge.com/customer-service/for-businesses/electric-rates/low-load-factor-provision
Sierra Pacific Power Company dba NV Energy	NV	10-year Demand charge reduction; incremental volumetric transition rate adder	https://www.nvenergy.com/publish/content/dam/nvenergy/brochures_arch/about-nvenergy/rates-regulatory/electric-schedules-north/EVCCR-TOU_Electric_North.pdf

Florida Power and Light	FL	Demand charge limiter 75hrs	Rate Riders GSD-1EV and GSLD-1EV
Exelon Utilities	MD	50% Demand Charge Discount expanded to public DCFC	Approved by the Commission on January 9, 2020; 30 months or until the end of 2023 (permanent rates preferred)