

September 18, 2020

VIA ELECTRONIC FILING

Aida Camacho-Welch
Secretary of the Board
New Jersey Board of Public Utilities
Post Office Box 350
Trenton, NJ 08625-0350

***Re: I/M/O the Petition of Atlantic City Electric Company For Approval of a
Voluntary Program For Plug-In Vehicle Charging***

BPU Docket No. EO18020190

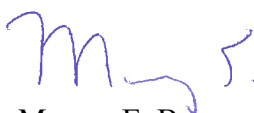
Dear Secretary Camacho-Welch:

On behalf of our client ChargePoint, Inc. ("ChargePoint"), please accept Intervenor ChargePoint's enclosed Direct Testimony of Kevin George Miller and Exhibit A for filing in the above-referenced matter.

Pursuant to the Board's Order dated March 19, 2020, in Docket No. EO20030254 temporarily waiving certain requirements for non-essential obligations, we submit these documents via electronic filing only. No paper copies will follow.

Please do not hesitate to contact me if you have any questions. Thank you.

Very truly yours,


Murray E. Bevan

Enclosure

Cc: Commissioner Chivukula (via email only, w/ enclosure)
Service list (via email only, w/ enclosure)

**BEFORE THE
NEW JERSEY BOARD OF PUBLIC UTILITIES**

**IN THE MATTER OF THE PETITION OF ATLANTIC CITY ELECTRIC COMPANY
FOR APPROVAL OF A VOLUNTARY PROGRAM
FOR PLUG-IN VEHICLE CHARGING**

BPU DOCKET NO. EO18020190

INTERVENOR CHARGEPOINT'S DIRECT TESTIMONY

Direct Testimony of

Kevin George Miller

Re: Program Design, Demand Charges and Set Point Methodology

1 **I. INTRODUCTION AND BACKGROUND**

2 **Q. Please state your name and business address.**

3 A. My name is Kevin George Miller and my business address is 254 E. Hacienda Avenue,
4 Campbell, CA 95008.

5 **Q. By whom are you employed and in what capacity?**

6 A. I am employed by ChargePoint, Inc. as Director of Public Policy.

7 **Q. Please describe your background, experience, and expertise.**

8 A. In my role at ChargePoint, I have overseen engagement in over twenty proceedings before
9 public utility commissions, including proceedings in New Jersey, regarding the
10 development of electric vehicle programs by states and utilities. I have drafted stakeholder
11 comments regarding the design of electric vehicle programs in New Jersey and other states.
12 I have supported and developed transportation electrification legislation and policy across
13 the United States, as well as in Canada and Australia. I previously served as Acting Chief
14 Financial Officer and Director of Capital and Federal Finance for the Massachusetts
15 Executive Office of Energy and Environmental Affairs. I have served as a Member
16 Representative on the New Hampshire Electric Vehicle Charging Infrastructure
17 Commission; Legislative Chair of the Maryland Zero Emission Electric Vehicle
18 Infrastructure Council; Infrastructure Co-Chair of the Massachusetts Zero Emission
19 Vehicle Task Force; Infrastructure Co-Chair of Drive Electric Pennsylvania; and
20 Infrastructure Expert Member of Canada's National Zero Emissions Vehicle Strategy
21 Working Group.

22 **Q. Have you previously testified before the New Jersey Board of Public Utilities?**

23 A. Yes. I submitted pre-filed written testimony on behalf of ChargePoint in BPU Docket No.

1 EO18101111, In the Matter Of The Petition Of Public Service Electric And Gas Company
2 For Approval Of Its Clean Energy Future – Electric Vehicle and Energy Storage (“CEF-
3 EVES”) Program On A Regulated Basis.

4 **Q. Have you testified in proceedings before other utility regulatory commissions?**

5 A. Yes. I have testified before the Massachusetts Department of Public Utilities (Docket No.
6 1518-150), in which I evaluated and made recommendations to mitigate competitive
7 market impacts stemming from National Grid’s proposal to establish a regulated price for
8 EV charging at charging stations deployed in its service territory; the New York Public
9 Service Commission (Case Nos. 19-E-065 and 19-E-0378), in which I evaluated and made
10 recommendations to ensure that the electric vehicle (EV) charging programs proposed by
11 Con Edison and New York State Electric & Gas/Rochester Gas & Electric, respectively,
12 complemented the competitive EV charging market; and the Rhode Island Public Utility
13 Commission (Docket No. 4780), in which I evaluated and made recommendations to
14 ensure that the EV charging programs proposed by National Grid complemented the
15 competitive EV charging market.

16 **Q. Please provide a description of ChargePoint.**

17 A. ChargePoint is the leading EV charging network in the world, with scalable solutions for
18 every charging need and for all of the places that EV drivers go: home, work, around town,
19 and on the road. ChargePoint’s network offers more than 116,000 places to charge,
20 including more than 1,800 spots in New Jersey, and those numbers continue to grow. With
21 thousands of customers in several segments including workplaces, cities, retailers,
22 apartments, hospitals, and fleets, ChargePoint provides an integrated experience enabling
23 consistent performance, efficiency and reliability at every touchpoint, whether one is using

1 a mobile app, plugging into a charger, managing the station or analyzing charging data. On
2 the network, drivers have completed more than 82 million charging sessions, saved
3 upwards of 98 million gallons of fuel, and driven more than 2.3 billion electric miles.

4 ChargePoint delivers scalable solutions that enable businesses to support more
5 drivers, add the latest software features and expand their electric vehicle and fleet needs
6 with minimal disruption to overall business. Hardware offerings include Level 2 (“L2”)
7 and DC fast charging (“DCFC”) products, and ChargePoint provides a range of options
8 across those charging levels for specific use cases, including light and medium duty and
9 transit fleets, multi-unit dwellings, residential (multi-family and single family), destination,
10 workplace, and more. ChargePoint’s software and cloud services enable site hosts to
11 manage charging on site with features like Waitlist, access control, charging analytics, and
12 real-time availability. All products are UL-listed, ENERGY STAR® and CE (EU)
13 certified, and the modular design minimizes downtime and makes maintenance and repair
14 more seamless.

15 ChargePoint’s primary business model consists of selling its smart charging
16 solutions directly to businesses and organizations while offering tools that empower site
17 hosts and station owners to deploy charging designed for their individual application and
18 use cases. ChargePoint provides charging network services and data-driven and cloud-
19 enabled capabilities that enable site hosts to better manage their charging assets and
20 optimize services. For example, with those network capabilities, site hosts can view data
21 on charging station utilization, frequency and duration of charging sessions, set access
22 controls to the stations, and set pricing for charging services. These features are designed
23 to maximize utilization and align the EV driver experience with the specific use case

1 associated with the specific site host. Additionally, ChargePoint has designed its network
2 to allow other parties, such as electric utilities, the ability to access charging data and
3 conduct load management to enable efficient EV load integration onto the electric grid.
4

5 **II. PURPOSE OF TESTIMONY**

6 **Q. Please describe the purpose of your testimony**

7 A. The purpose of my testimony is to address the December 17, 2019, Amended Petition of
8 Atlantic City Electric (“ACE” or the “Company”), which proposes implementation of a
9 Plug-In Vehicle (“PIV”) program to support the installation and use of electric vehicle
10 charging infrastructure within its service territory in New Jersey. I am making
11 recommendations to the Board that will improve the success of EV charging infrastructure
12 deployment in ACE’s service territory based on ChargePoint’s substantial experience in
13 other states.

14 **Q. Are you sponsoring any exhibits?**

15 A. Yes. Exhibit A is a copy of comments filed by ChargePoint with the New Jersey Board of
16 Public Utilities on June 17, 2020, regarding Board Staff’s Straw Proposal on Electric
17 Vehicle Infrastructure Build Out (BPU Docket No. QO20050357).

18 **Q. Please summarize your recommendations.**

19 A. ChargePoint recommends that ACE’s PIV program be approved by the Board with the
20 following modifications:

- 21 • The BPU should require ACE to allow for site host choice among multiple vendors of
22 EV charging hardware and software for all Offerings in the proposed program;

- 1 • The BPU should reject the set point subsidy proposed in ACE’s Offering 9, and should
2 instead order ACE to develop and file one or more long-term commercial and industrial
3 (“C&I”) rate options that provide alternatives to traditional, demand-based C&I rates
4 before the start of the program;
- 5 • Offering 2, which proposes off-bill incentives for residential customers for off-peak
6 PIV charging, should be modified to allow participation through the embedded
7 metering in EV charging stations;
- 8 • Offerings 5 and 6, which propose demand incentives and rebates for the purchase of
9 Level 2 chargers for office buildings, garages, and vehicle fleets, should be modified
10 to include utility “make ready” incentives;
- 11 • The Board should deny Offering 7, which proposes ACE’s ownership and operation of
12 public DCFC stations, and instead shift funding to Offering 9;
- 13 • Offering 8, which propose ACE’s ownership and operation of public Level 2 charging
14 stations, should be modified to provide the site host with the ability to set pricing of
15 EV charging services; and
- 16 • Offering 9, which proposes rate incentives and “make ready” work incentives for
17 private owners/operators of public DCFC stations, should be expanded to include
18 rebates for up to 50% of the upfront costs of DCFC stations.

19

20 **III. CURRENT MARKET FOR ELECTRIC VEHICLE CHARGING IN NEW JERSEY**

21 **Q. How many EVs are registered in the State of New Jersey?**

22 A. According to the New Jersey Department of Environmental Protection, as of December

1 2019, there were 30,017 electric vehicles registered in New Jersey.¹

2 **Q. How is the New Jersey market for EVs growing?**

3 A. There has been tremendous growth over the last 8 years in the number of electric vehicles
4 registered in New Jersey. In 2012 there were only 338 electric vehicles registered in the
5 state, and now New Jersey has more than 80 times that amount.² Guidehouse Insights
6 forecasts the number of EVs on the road in New Jersey will climb to approximately 284,600
7 in 2030.³

8 **Q. How many public EV charging stations are operating in New Jersey?**

9 A. According to the U.S. Department of Energy’s Alternative Fuels Data Center (“AFDC”),
10 across New Jersey, there are 857 public charging ports utilizing a standard connector that
11 enables charging of any model of EV. Each port is capable of charging a single vehicle,
12 and some stations have two ports. Of those 857 ports, there are 122 DCFC and 735 Level
13 2 charging ports.⁴ It is important to note that the AFDC total does not include essential,
14 non-public charging locations, such as workplace and residential, which are often
15 cornerstones of successful utility EVSE programs.

16 **Q. Are public EV charging stations representative of the whole market of charging
17 available in New Jersey?**

18 A. No. There are many more private charging ports that are not included in AFDC’s total
19 figure, which may have limited access to the public or have exclusive use permissions,

¹ <https://www.drivegreen.nj.gov/dg-electric-vehicles-basics.html>

² *Id.*

³ Navigant Research, Market Data: EV Geographic Forecast – North America. Published 4Q 2019.

⁴ U.S. DoE Alternative Fuel Data Center; filtered by New Jersey, Electric Fuel, Level 2 and DC Fast, Standard Connectors J1772/CCS/CHAdeMO; Accessed September 16th, 2020.
<https://afdc.energy.gov/stations/widget#/analyze?region=US-NJ&fuel=ELEC>

1 such as fleet charging stations, workplace charging stations, and residential charging
2 stations. I have also omitted Tesla charging stations from the AFDC total above, which
3 provide charging only for Tesla drivers through a proprietary connector.

4 **Q. How many networks of charging stations are available to all EV drivers in New
5 Jersey's market?**

6 A. According to AFDC, there are eight charging networks utilizing standard connectors
7 operating in New Jersey: ChargePoint, Blink, Electrify America, EV Connect, EVgo,
8 Greenlots, SemaCharge, and Volta.

9 **Q. Would you describe the market for EV charging infrastructure in New Jersey as
10 competitive?**

11 A. Yes. In the current market for EV charging infrastructure, charging station providers
12 approach site hosts with their unique products and features, competing with other providers
13 to sell or install charging equipment. Site hosts have an open choice of several options for
14 charging equipment and networks from different providers with different business models.
15 Site hosts also compete for EV drivers in providing charging services and set their pricing
16 and access features in ways that will attract drivers to their sites.

17 **Q. Is there currently active private investment in charging stations in New Jersey?**

18 A. Absolutely. ChargePoint continues to market and sell charging stations to a variety of site
19 hosts in New Jersey, who own and operate those charging stations on their properties. Site
20 hosts include municipalities, gas stations, convenience stores, car dealerships, retail
21 establishments, and more.

22 **Q. Why do site hosts invest in EV charging solutions available in the competitive market?**

23 A. The EV charging market is growing and dynamic, and there is not a single static business

1 case for the electric vehicle supply equipment (“EVSE”) industry or for EV charging site
2 hosts. The business case, or value proposition, for various entities to install and operate
3 charging stations incorporates many different value streams and varies across use cases.

4 Our customers find that the provision of EV charging services can align with and
5 augment their existing operations and core business goals. Site hosts balance costs against
6 the value created by hosting a station, which are often beyond direct revenue that may be
7 generated. Non-financial benefits include providing EV charging as an amenity to attract
8 and retain employees, attract new customers and have them stay for longer periods of time
9 for businesses, and appeal to new tenants for a multifamily property. In addition, EV
10 charging helps to meet sustainability goals for local governments and businesses.
11 Residential customers acquire L2 EVSEs for home use for convenience and to meet
12 individual vehicle charging requirements within an overnight time frame.

13 **Q. How will site hosts who do not desire to own EVSE be served?**

14 A. The marketplace for EVSE is currently providing turnkey solutions for site hosts that do
15 not wish to own the EVSE but still want to provide charging services for their customers
16 or tenants. For example, ChargePoint offers customers a subscription solution for EV
17 charging, “ChargePoint as a Service” (“CPaaS”), which is an easy way for customers that
18 do not want to own EV charging stations to provide charging solutions. It is similar to
19 “Software as a Service” (“SaaS”) models, which offer access to smart solutions at a reduced
20 cost through subscription pricing. Under the CPaaS option, a site host remains the customer
21 of record with the utility and operates the station, including setting charging parameters
22 (e.g., access and pricing), while ChargePoint retains ownership of the station.

23 Site hosts should be engaged in the provision of EV charging services, as they are

1 with many other aspects of their business. It is desirable for them to have some “skin in the
2 game” to drive efficiency and utilization of installed EV charging infrastructure, as well as
3 to minimize costs for ratepayers relative to the benefits of access to EV charging.

4 **Q. What are the capabilities of smart, connected EVSE?**

5 A. “Smart” EV charging stations is a broad term that generally refers to the EVSE having
6 connectivity and the ability to measure electricity passing through the unit, providing data
7 and load management capabilities and scheduled charging features, providing for point of
8 use payment and access control, and incorporating two-way communication from the
9 EVSE to the driver through an app as well as with the station operator via a screen or other
10 means. These capabilities can be of significant importance to site hosts to enable charging
11 services at their facilities, as well as to their utilities since the smart station provides a
12 wealth of information related to charging behaviors and load profiles that can enable
13 various demand side management programs. Those programs could include demand
14 response, or even enable a TOU rate specific to EV charging in the home through utilization
15 of the embedded meter. The associated communication and cloud-based technology
16 platform can also be leveraged to provide enhanced station management features like
17 reservations or notifications for charge completion for an improved driver experience
18 through greater visibility and interaction.

19 **Q. Would you describe the EV charging market in New Jersey as a “market failure”?**

20 A. No. This is an emerging market defined by natural demand and private investment across
21 a diversity of communities. As evidenced by the motions to intervene in this proceeding,
22 multiple providers of EV charging equipment and services, in addition to ChargePoint,
23 have been doing business with customers in New Jersey over the last few years and are

1 interested in increasing their presence in New Jersey’s competitive market. As EV adoption
2 continues to grow and become more widespread in New Jersey, we will continue to see
3 greater and increasing demand for EV charging solutions in new areas.

4 **Q. Can incentives for EV charging stations help to accelerate competitive market**
5 **activities?**

6 A. Yes. Federal, state, local, and utility-funded incentives have been highly effective in
7 increasing site host interest in investments in charging infrastructure, and thereby
8 increasing competition among multiple providers of EV charging equipment and services.
9 For example, the Board of Public Utilities and the Department of Environmental Protection
10 partnered to develop the initial *It Pay\$ to Plug In* program, which is now supported by
11 funds from New Jersey’s Environmental Mitigation Trust Fund. The program provides
12 grants to offset the cost of purchasing and installing electric vehicle charging stations.⁵ In
13 addition, in January 2020 Governor Murphy signed the Plug-In Vehicle Act (“PIV Act”),
14 which laid the foundation for one of the most robust EV rebate programs in the country,
15 including authorizing the Board to develop a residential EV charging rebate program and
16 setting long-term transportation electrification goals.⁶ The BPU has already received over
17 1,800 applications for its new residential EV purchase/lease incentive program, Charge Up
18 New Jersey.⁷

⁵ <https://drivegreen.nj.gov/plugin.html>

⁶ P.L. 2019, c. 362, N.J.S.A. 48:25-1-11. *See also* Governor Murphy Signs Legislation Establishing Statewide Goals and Incentives for Increased Use of Electric Vehicles and Charging Infrastructure (January 17, 2020), <https://www.nj.gov/governor/news/news/562020/20200117b.shtml>.

⁷ <https://chargeup.njcleanenergy.com/>; *see also* “New Jersey’s new electric vehicle rebate draws 1,800 applications, despite COVID economy woes” (August 13, 2020), <https://www.inquirer.com/science/climate/electric-vehicles-new-jersey-rebate-tesla-climate-change-fossil-fuels-greenhouse-gas-20200813.html>.

1 **Q. What utility investments in EV charging infrastructure support market**
2 **development?**

3 A. Utilities are well-situated to assist in the growth of a competitive, sustainable EV charging
4 ecosystem. ChargePoint believes the Board should authorize strategic, risk-averse
5 activities and cost-effective, ratepayer-funded infrastructure investments by utilities that
6 will help accelerate expansion of EV charging and EV adoption in New Jersey. In
7 ChargePoint’s experience in helping to shape and participate in the implementation of
8 utility EV programs across the country, the most effective roles for utilities have been as
9 follows:

- 10 • **Utility “Make-Ready”:** A utility installs, owns, and maintains the supporting
11 electrical infrastructure necessary for installation of charging hardware.⁸ By
12 conducting this work, a utility prepares a site for installation of the charging station
13 itself, which is purchased and operated by a site host. It is important to note that the
14 “make-ready” costs for the customer are typically the majority of total project costs and
15 align with the utility’s key competency of installing and maintaining distribution assets.
- 16 • **Customer Rebates:** A utility provides rebate incentives to their customers to install
17 and operate charging stations, which are used to offset the construction and installation
18 and/or the purchase of qualifying electric vehicle charging stations. Qualification
19 standards for EV charging stations can be determined to ensure capabilities that will
20 enable grid benefits.⁹ Cost recovery for utility rebates can be approached by treating

⁸ Depending on program design, the utility make-ready investment can include infrastructure on both the utility side of the meter and on the customer side of the meter.

⁹ Rebate programs have been utilized by investor owned utilities for years to support energy efficiency programs so there is already an administrative framework, making it simple to add EV program incentives without driving up utility costs.

1 the rebate as a regulatory asset, thereby allowing both cost recovery and a rate of return
2 on the investment similar to other capital investments.¹⁰

3 The investment models used by utilities have taken many forms, and some have included
4 a portfolio of investment approaches. In ChargePoint’s experience, the most successful
5 programs combine make-ready investments by the utility along with rebates toward the EV
6 charging stations or rebates toward both installation and construction costs in addition to
7 the EV charging station.¹¹

8 Critically, ChargePoint believes that there are three main components of effective
9 utility investment in EV charging infrastructure to support a long-term sustainable
10 competitive market:

- 11 1. The ability for site hosts to choose among multiple, qualified vendors of
12 charging equipment and networks;
- 13 2. Site host operational control of EV charging infrastructure located on their

¹⁰ See, e.g. I/M/O Petition of the EV Work Group for the Implementation of a Statewide EV Portfolio, Case No. 9478, MD PSC (January 14, 2019) (approving rate based rebates for three Maryland investor owned utilities); I/M/O Application of Consumers Energy Co for Authority to Increase its Rates, Case No. U-20134 , MI PSC (May 19, 2020) (approving rate based rebates for Consumers Energy); I/M/O Application of DTE Electric Company for Authority to Increase its Rates, Case No. U-20162, MI PSC (May 2, 2019) approving rate based rebates for DTE); I/M/O Petition of Virginia Electric & Power Company For Approval of a Plan for Electric Distribution Grid Transformation Projects, Case No. PUR-2019-00154, VA SCC (March 26, 2020) (approving rate based rebates for Dominion).

¹¹ See, e.g., Alternate Proposed Decision Regarding Southern California Edison Company’s Application for Charge Ready and Market Education Programs, CPUC, Docket No. A.14-10-014, (Jan. 16, 2016), available at: <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M157/K682/157682806.PDF>; Petition of the Electric Vehicle Work Group for Implementation of a Statewide Electric Vehicle Portfolio, Case No. 9478, Order No. 88997, (MPSC Jan. 14, 2019), available at: <https://www.psc.state.md.us/wp-content/uploads/Order-No.-88997-Case-No.-9478-EV-Portfolio-Order.pdf>; Decision Directing PG&E to Establish an Electric Vehicle Infrastructure and Education Program, CPUC, Docket No. 16-12-065 (Dec. 21, 2016); Massachusetts Department of Public Utilities. Docket 17-05. “Order Establishing Eversource’s Revenue Requirement.” November 30, 2017. (available at <https://eeaonline.eea.state.ma.us/EEA/FileService/V1.4.0/FileService.Api/file/FileRoom/dehehcjj>); New York Public Service Commission. Matter No. 17-00887. “Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Niagara Mohawk Power Corporation d/b/a National Grid for Electric Service.” (available at <http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=17-E-0238>) (utility-provided make-ready coupled with EVSE rebates provided by NYSERDA).

1 properties, including control over pricing of the charging service provided to
2 drivers; and

3 3. Private investment in EV charging infrastructure in the form of shared costs
4 with incentive or supplemental project financing (*i.e.* “skin-in-the-game”).

5 **Q. Why are these three components important to designing an effective utility**
6 **investment in EV charging infrastructure?**

7 A. All three components relate to the following core outcomes that will drive the competitive
8 market for the long-term: (1) the variety of technology choices available to the market, (2)
9 the degree to which site hosts can make choices about how to operate the charging stations,
10 and (3) the impact of spurring private investment alongside the deployment.

11
12 **IV. SUMMARY OF ACE’s PLUG IN VEHICLE PROPOSAL**

13 **Q. Please summarize ACE’s PIV Program proposal.**

14 A. ACE is proposing a \$42.107 million Plug-In Vehicle (“PIV”) program to advance
15 deployment of EV infrastructure throughout its service territory. The program includes
16 thirteen Offerings:

- 17 • **Offering 1: “Whole House” Time-of-Use Residential Rates – Rate Schedule “RS-**
18 **PIV”**, which consists of a whole house TOU rate that incentivizes participating
19 residential customers to shift electric load to off-peak hours. Off-peak hours are
20 designated as any time outside the hours of 12 pm to 8 pm, Monday through Friday.
- 21 • **Offering 2: Off-Peak, Off-Bill Incentive for Residential Customers with Existing,**
22 **Installed EVSE – Rider “REVCP”**, which would provide up to 300 residential
23 customers who own or acquire an EV charger with an off-bill incentive of 5 cents per

1 kWh for off peak EV charging, netted against any EV charging conducted during on-
2 peak hours. Off-peak hours are designated as any time outside the hours of 12 pm to 8
3 pm, Monday through Friday. ACE proposes to measure off-peak charging by installing
4 a Company provided mobile device into the customer's vehicle.

- 5 • **Offering 3: Level 2 EVSE and Installation Rebates for Residential Customers**
6 **without Existing Chargers, Plus Off-Peak Incentive – Rider “REVCP”**, which
7 provides up to 1,500 residential customers with a rebate equivalent to 50% of the
8 upfront cost of a Smart Level 2 EV charger, plus a rebate for 50% of installation costs.
- 9 • **Offering 4: Rebates for Level 2 EVSE and Installation, and Demand Charge**
10 **Offset Incentive for MDUs with dedicated on-site parking, currently without**
11 **existing EVSE – Rider “CEVCP”**, which provides a rebate equivalent to 50% of the
12 upfront cost of a Smart Level 2 EV charger, plus a rebate up to \$10,000 towards
13 installation costs. Participating customers would also receive a demand charge subsidy.
- 14 • **Offering 5: Rebates for Level 2 EVSE for Workplaces, Plus Demand Charge**
15 **Offset Incentive – Rider “CEVCP”**, which provides qualifying customers a rebate
16 equivalent to 50% of the upfront cost of a Smart Level 2 EV charger. The customer
17 would be responsible for all installation costs under this Offering. In addition,
18 participating customers would receive a demand charge subsidy.
- 19 • **Offering 6: Rebates for Level 2 EVSE for Electric Vehicle Fleets, Plus Demand**
20 **Charge Offset Incentive – Rider “CEVCP”**, which provides a rebate to qualifying
21 customers equivalent to 50% of the upfront cost of a Level 2 EV Charger. Participating
22 customers would also receive a demand charge subsidy.
- 23 • **Offering 7: Public Charging – Utility-Owned and Operated DCFCs – Rate**

- 1 **Schedule “PC-PIV,”** which consists of the installation of up to 45 utility owned public
2 DCFC stations at an estimated 15 locations in ACE’s service territory. ACE proposes
3 to set pricing for EV charging at these stations based on a market pricing study. ACE
4 also proposes that electricity provided to these stations would be 100% renewable.
- 5 • **Offering 8: Public Charging – Utility-Owned Level 2 EVSEs – Rate Schedule “PC-**
6 **PIV,”** which consists of the installation of up to 200 utility owned public Level 2 EV
7 charging stations at an estimated 65 neighborhood locations within ACE’s service
8 territory. ACE proposes to set pricing for EV charging at these stations based on a
9 market pricing study. ACE also proposes that electricity provided to these stations
10 would be 100% renewable.
 - 11 • **Offering 9: Demand Charge Incentive and “Make Ready” Work Incentives for**
12 **Non-Utility Owned Public DCFCs – Rider “NOUPDCFC,”** which consists of a
13 “make-ready” incentive where the Company would perform the electrical upgrades and
14 work up to the point of the charger connection. The “make-ready” incentive would be
15 available for up to 120 chargers at 30 locations. In addition, ACE proposes an off-bill
16 demand charge subsidy for third-party-owned publicly available DCFC stations.
 - 17 • **Offering 10: The Innovation Fund – Rider “CTCP,”** which provides \$2 million in
18 ratepayer funded grants for up to 50% of estimated costs for projects designed to further
19 EV charging in the state.
 - 20 • **Offering 11: Electric School Bus Fund – Rider “CTCP,”** which would provide
21 funding to school districts to cover incremental costs (compared to diesel-fueled) of up
22 to 20 electric school buses, estimated at \$250,000 per school bus. ACE also proposes
23 to provide funding for charging infrastructure, up to \$25,000 per EVSE.

- 1 • **Offering 12: New Jersey Transit Bus Electrification – Rider “CTCP,”** which would
2 provide up to \$250,000 in distribution and engineering upgrades for a New Jersey
3 transit bus depot in ACE’s service territory, and \$2.25 million for high-powered
4 charging station equipment.
- 5 • **Offering 13: The Green Adder – Rider “PIV-Green,”** which would allow customers
6 participating in Offering 1 the option to receive electricity from 100% renewable
7 sources. ACE estimates the Green Adder would increase a participating customer’s
8 rate by \$0.0543 per kWh. The Company also proposes that the Green Adder would be
9 embedded into Offerings 7 and 8 and that the costs associated with the Green Adder
10 would be borne exclusively by users of utility-owned charging stations.

11 **Q. Will ACE’s proposed PIV program contribute to overcoming barriers to deploying**
12 **EV charging infrastructure?**

13 A. Yes, with modifications. If ChargePoint’s recommendations are incorporated into ACE’s
14 proposed PIV program, the Program will help to overcome barriers to deploying EV
15 charging infrastructure by reducing the total cost of charging stations and installation
16 through a combination of utility-owned “make-ready” investments, customer rebates for
17 EV charging stations, and non-discriminatory access to relief from demand charges in
18 ACE’s existing C&I rates. In addition, the program as proposed underscores the need to
19 holistically support EV charging with efforts that encourage charging at home, at work,
20 and in public while also providing education and raising awareness on transportation
21 electrification.

22 **Q. Will ACE’s proposed PIV program only create value for participating customers?**

23 A. No. The program has the potential to create value for all customers in ACE’s service

1 territory, including those who do not participate in the program. Increased deployment of
2 EV charging infrastructure can create sufficient new load to reduce unit energy costs,
3 resulting in lower electricity rates and net benefits for all ratepayers, irrespective of EV
4 ownership.¹² For example, a state-wide cost-benefit analysis of EV adoption in Michigan
5 conducted by MJ Bradley and Associates found that net benefits (in the form of reduced
6 electricity bills) to ratepayers would be \$2.6 billion by 2050 if EV sales reach over 55% of
7 new vehicle sales.¹³ Furthermore, a cost-effectiveness analysis of EV charging
8 investments proposed by four utilities in Maryland found that the proposed investments
9 would generate net benefits to all ratepayers due to increased load.¹⁴

10 Managed charging and rate design, which is proposed in multiple ACE Offerings,
11 can help ensure that EV charging takes place at times that are most beneficial to the grid.
12 This can support the creation of widespread grid benefits resulting from more efficient grid
13 utilization and deferred capital upgrades. Some of the same studies referred to above note
14 that benefits to all ratepayers increase when EV charging is shifted off-peak or intelligently

¹² See, e.g. M.J. Bradley & Associates (2016-2017), *State-Wide Costs and Benefits of Plug-in Vehicles in Connecticut, Maryland, Massachusetts, New York, and Pennsylvania, Colorado, Illinois, Michigan*, <https://www.mjbradley.com/reports/mjba-analyzes-state-wide-costs-and-benefits-plug-vehicles-five-northeast-and-mid-atlantic>; Submission to the Maryland Public Utilities Commission re: CASE NO. 9478(2018), https://webapp.psc.state.md.us/newIntranet/Maillog/content.cfm?filepath=C:%5CCasenum%5CAdmin%20Filings%5C200000-249999%5C221921%5CJointSignatoriesComments_FF.pdf; Gabel Associates, Inc. (2018), *Long Island Cost and Benefits*, <https://www.psegliny.com/saveenergyandmoney/solarrenewableenergy/electricvehicles/-/media/2C0D0CC8E48648ECBB38463CD0405826.ashx>.

¹³ M.J. Bradley & Associates (2017), *State-wide Costs and Benefits of Plug-in Vehicles in Michigan*, https://mjbradley.com/sites/default/files/MI_PEV_CB_Analysis_FINAL_03aug17.pdf.

¹⁴ Submission to the Maryland Public Utilities Commission re: Case No. 9478 (2018), https://webapp.psc.state.md.us/newIntranet/Maillog/content.cfm?filepath=C:%5CCasenum%5CAdmin%20Filings%5C200000-249999%5C221921%5CJointSignatoriesComments_FF.pdf (Baltimore Gas and Electric Company found that revenue from residential charging would exceed program costs by two times through 2025, and Potomac Electric Power Company found that program costs would be exceeded by three times through 2025).

1 managed (e.g. smart charging programs).¹⁵ For example, a study analyzing the impacts of
2 EV charging activity and time-of-use rates for the Salt River Project in Arizona found that
3 time-of-use rates successfully shifted charging to off-peak hours, helping the utility defer
4 future capital upgrade costs.¹⁶ Further, a study commissioned by Public Service Electric
5 and Gas (PSE&G) Long Island found that managed charging could generate significant net
6 benefits in the form of deferred and reduced grid impacts, and deliver an additional 30%
7 saving to ratepayers.¹⁷

8 In addition, several studies highlight that the expected long-term electric sales from
9 incremental EV load exceeds the marginal cost of grid infrastructure to support that load.¹⁸
10 According to a NARUC report published in October 2019, EV load that charges during
11 off-peak hours can provide positive net revenue flowing back to all customers due to the
12 efficient use of the existing electric grid.¹⁹ Further, a study by Synapse Energy Economics
13 found that in the territories of Pacific Gas & Electric and Southern California Edison, the
14 incremental electrical sales enabled by EV programs exceeded the costs to the electric

¹⁵ E.g. M.J. Bradley & Associates (2016-2017) and Gabel Associates, Inc. (2018).

¹⁶ Utility Dive (2018), *Time of use rates can manage EV charging new report says*,
<https://www.utilitydive.com/news/time-of-use-rates-can-manage-ev-charging-new-report-says/515284/>.

¹⁷ Gabel Associates, Inc. (2018), *Long Island Cost and Benefits*,
<https://www.psegliny.com/saveenergymoney/solarrenewableenergy/electricvehicles/-/media/2C0D0CC8E48648ECBB38463CD0405826.ashx> (and related presentation to the Long Island Power Authority Board of Trustees, <https://www.lipower.org/wp-content/uploads/2018/10/EV-Study-LIPA-Board-Presentation-Oct-24-2018-FINAL.pdf>).

¹⁸ See, e.g., E3, *Cost-Benefit Analysis of Plug-in Electric Vehicle Adoption in the AEP Ohio Service Territory*, April 2017. https://www.ethree.com/wp-content/uploads/2017/10/E3-AEP-EV-Final-Report-4_28.pdf.

¹⁹ NARUC, *Electric Vehicles: Key Trends, Issues, and Considerations for State Regulators*, at 21 (Oct. 2019) (“NARUC EV White Paper”), available at <https://pubs.naruc.org/pub/32857459-0005-B8C5-95C6-1920829CABFE> (citing Jones et al. “The Future of Transportation Electrification: Utility, Industry and Consumer Perspectives,” Lawrence Berkeley National Laboratory (2018), at http://eta-publications.lbl.gov/sites/default/files/feur_10_transportation_electrification_final_20180813.pdf).

1 system by more than 3 to 1.²⁰ The addition of new dispersed load during off-peak hours
2 can result in the wider distribution of fixed costs, leading to lower rates for all customers.²¹
3 In effect, prudent investments in EV charging infrastructure result in increases in electric
4 use, exerting downward pressure on retail rates that can benefit all utility customers
5 regardless of EV ownership.

6 Electrification of the transportation sector will also advance New Jersey’s emission
7 reduction goals which will further benefit all residents of New Jersey regardless of EV
8 ownership. The transportation sector accounts for nearly 50% of New Jersey’s greenhouse
9 gas emissions.²² Electrification of the transportation sector can significantly reduce
10 greenhouse gas emissions and other harmful air pollutants.²³ Even an electric vehicle
11 charged with 100% coal-fired power will be cleaner than a gasoline-fueled internal
12 combustion engine vehicle.²⁴ In New Jersey, the electricity system is substantially cleaner,
13 therefore the emissions benefits of electric vehicles are far greater.

14 **Q. Are there other benefits from ACE’s proposed PIV program that you would like to**
15 **discuss?**

16 **A.** Yes. ACE has proposed including publicly accessible EVSE in the Pilot – whether that is

²⁰ Synapse Energy Economics, *Electric Vehicles Are Driving Rates Down*, at 4 (Feb. 2019), available at <https://www.synapse-energy.com/sites/default/files/EVs-Driving-Rates-Down-8-122.pdf>.

²¹ NARUC EV White Paper at 21.

²² Governor Murphy’s *New Jersey Energy Master Plan: Policy Vision to 2050* at 24 (January 27, 2020), available at https://www.nj.gov/emp/docs/pdf/2020_NJBPU_EMP.pdf.

²³ EPRI, *Environmental Assessment of a Full Electric Transportation Portfolio* (September 2015), available at <https://www.epri.com/research/products/00000003002006875>.

²⁴ Regulatory Assistance Project, “Regulatory Considerations for Transportation Electrification,” at 11 (May 2017), available at <https://www.raonline.org/wp-content/uploads/2017/06/RAP-regulatory-considerations-transportation-electrification-2017-may.pdf>.

1 publicly accessible EV chargers, or electrification of public fleets (school buses, public
2 transit buses, municipal fleets, etc.). Therefore, all customers in ACE’s service territory
3 will directly or indirectly benefit including, but not limited to: (i) families with school
4 children will benefit from the availability and use of electric school bus fleets; (ii) public
5 transportation patrons will benefit from the availability and use of electric city bus fleets;
6 (iii) fleet owners will benefit from lower total cost of ownership, and a healthier experience
7 for drivers; and (iv) society will benefit from lower emissions and improved air quality.

8 **V. EVALUATION OF ACE’S PIV PROPOSAL**

9 **Q. Do you recommend the BPU approve ACE’s PIV program as proposed?**

10 A. No. ChargePoint supports achieving the goals of New Jersey’s Plug-In Vehicle Act, P.L.
11 2019, c. 362, N.J.S.A. 48:25-1-11. However, we believe modifications are necessary to
12 improve ACE’s program to more effectively expand deployment of EV infrastructure in
13 support of New Jersey’s energy, environment, and electric transportation goals.

14 **Q. Are programmatic modifications necessary to improve the ACE’s program?**

15 A. Yes. From ChargePoint’s perspective, a critical flaw in ACE’s proposal is its decision to
16 choose one network software provider across its entire PIV program.²⁵ As discussed
17 previously, one of the main pillars of effective utility investment is the ability for site hosts
18 to choose among multiple, qualified vendors of charging equipment and network software
19 in order to find the best solution for their specific needs. Protecting customers’ ability to
20 choose their preferred solution – rather than providing a “one-size, fits-all” solution – is
21 essential to protecting the competitive market for EV charging stations in New Jersey.
22 When customers can choose the charging solution that works best for them, charging

²⁵ ACE’s Amended Petition, Direct Testimony of Jennifer M. Grisham (“Grisham”) at 35.

1 solution vendors will compete to make high-quality, innovative products that customers
2 want. Creating ongoing competition between vendors through customer choice within
3 utility programs is essential to ensuring that a competitive market can thrive within utility
4 programs and sustainably continue after they cease.

5 ACE should also prepare to effectively manage EV charging load from a wide
6 variety of networks, rather than limiting its preparations to a scenario in which it can only
7 manage EV charging load from one type of network software.

8 **Q. Why is network choice important?**

9 A. In the current EV charging market, there are charging hardware providers and national
10 network software providers and site hosts choose from a variety of both hardware and
11 network software providers to obtain the suite of smart features that best fits their particular
12 circumstances. A charging network is a cloud-based software platform that connects to
13 charging hardware, collects data on charging sessions, and enables advanced features and
14 controls to manage charging stations. Just like a customer choosing the smart phone that
15 they want as well as the carrier that they want, the site host's choice of both EV charging
16 hardware and network software makes for a cohesive customer experience. Notably, in the
17 EV charging market, charging networks provide a vast array of smart features and
18 functions that differ from network to network, making the choice of network software
19 provider arguably more consequential to an EV charging site host compared to their choice
20 of hardware provider.

21 **Q. Does the lack of EV charging network choice in ACE's proposed program pose a risk
22 to the competitive EV charging market?**

23 A. Absolutely. Without site hosts' ability to choose from the full range of solutions that are

1 available in a competitive market, ACE will promote a single network software provider
2 over others currently active in the market while failing to properly accommodate for the
3 diverse needs and desires of the Company’s own customers. Conversely, accommodating
4 multiple network choices would increase program participation, support a more dynamic
5 EV charging marketplace, and prepare ACE for managing load from multiple disparate EV
6 charging providers irrespective of their participation in one of the proposed Offerings.

7 **Q. Is it possible for utility programs to include choice of multiple networks and still**
8 **achieve the goals of the program?**

9 A. Yes. And there are many examples of utility programs in other jurisdictions that have site
10 host choice of both network and hardware. For example, Consumers Energy’s
11 PowerMIDrive EV charging rebate program allows participating site hosts to choose
12 hardware and network software that meet functional requirements, which the Michigan
13 Public Service Commission noted would enable the utility to utilize EV charging data to
14 better understand impacts to the grid and trends of charging on- and off-peak.²⁶ Additional
15 examples include San Diego Gas & Electric “Power Your Drive,” Pacific Gas & Electric’s
16 EV Charge Network, and Southern California Edison’s “Charge Ready 2” in California.²⁷

17 **Q. Does ACE need to own or operate one single EV charging network to support the EV**
18 **charging stations in its service territory?**

²⁶ *I/M/O Application of Consumers Energy Company*, 2019 WL 237014, at 8-9 (Mich. P.S.C. Jan. 9, 2019).

²⁷ Decision Regarding Underlying Vehicle Grid Integration Application and Motion to Adopt Settlement Agreement, CPUC, Docket No. A.14-04-014 (January 28, 2016); Decision Directing PG&E to Establish an Electric Vehicle Infrastructure and Education Program, CPUC, Docket No. 16-12-065 (Dec. 21, 2016); Decision Authorizing Southern California Edison Company’s Charge Ready 2 Infrastructure and Market Education Programs, Docket No. A.18-06-015 (August, 2020).

1 A. No, ACE does not need to (i) own all of the EV charging stations, (ii) operate all of the
2 charging stations, or (iii) limit its customers to one single EV charging network within its
3 service territory in order to effectively implement its EV charging program.

4 Today's EV charging market is rapidly evolving, which presents many hardware
5 and network vendors and solutions to current and prospective EV charging site hosts.
6 Hardware and network software options vary based on price, quality, and available
7 features. As the market needs shift, the EV charging industry innovates and differentiates
8 to best meet the needs of the site hosts.

9 New products and companies are constantly entering the market to meet those
10 shifting needs. This diversity and competition are benefits for EV drivers and commercial
11 site hosts, and highlight how no single vendor could ever cover the wide breadth of the
12 deployed EV charging base. ACE can achieve the largest coverage and grid benefit
13 throughout its Offerings by seeking network-agnostic solutions and utilizing information
14 technology solutions to integrate data and load control signals from multiple qualified
15 networks.

16 **Q. How can IT-based solutions help utilities manage new load taking place on multiple**
17 **EV charging networks?**

18 A. ChargePoint and many of its competitors provide the ability for station operators to grant
19 access rights to utilities to manage data and conduct demand response on their stations.
20 Like any other utility demand response program, participants would likely receive an
21 incentive from the utility in exchange for offering this capability. Load management signals
22 are typically communicated through standards-based application programming interfaces
23 (“APIs”) to automatically send demand response commands to stations in the field.

1 Another method for implementing direct load management is via OpenADR, which
2 is an open, highly secure, and two-way information exchange model and global Smart Grid
3 standard. OpenADR has received approval as an international electrotechnical standard,
4 providing an important standard to allow for utilities to run demand response programs via
5 communication with networked charging stations.

6 OpenADR load management does not require a utility to own all of the participating
7 EVSE, nor is it necessary for a utility to manage a single, ubiquitous EV charging network.
8 While many utility demand response pilots use custom APIs, utilities are increasingly
9 adopting OpenADR.

10 In addition, Distributed Energy Resource Management Systems (“DERMS”) are
11 also becoming a popular platform for utilities to implement programs for technologies on
12 the customer side of the meter. These systems help connect various technologies (e.g. smart
13 thermostats, hot water heaters, and EVSE) from multiple vendors into a single platform
14 and interface from which a utility can obtain a unified view of data and issue demand
15 response events. This provides the utility the value of charging data and demand response
16 from the largest selection of solution providers without limiting the site host’s choice to an
17 unnecessarily restricted set of options.

18 **Q. Are there any examples of utility programs that support multiple EV charging**
19 **networks while still effectively delivering grid benefits through demand side**
20 **management?**

21 A. Yes. Examples of successful utility programs that support multiple EV charging network
22 software providers while still effectively managing EV load include, but are not limited to:

- 1 • Green Mountain Power’s Smart Home Charging Program;²⁸
- 2 • BGE’s (MD) EVsmart Residential and Multifamily EV Charger Program;²⁹
- 3 • Pepco’s (MD) EVsmart Residential and Multifamily EV Charger Program;³⁰
- 4 • Delmarva’s (MD) EVsmart Residential and Multifamily EV Charger Program;³¹
- 5 • PSE&G Long Island Smart Residential Charger Program;³²
- 6 • Burlington Electric Department Smart Home Charger Program;³³ and
- 7 • Con Edison’s SmartCharge New York Program.³⁴

8 **Offering 1: “Whole House” Time-of-Use Residential Rates – Rate Schedule “RS-PIV”**

9 **Q. Does ChargePoint support ACE’s proposed Offering 1?**

10 A. Yes, ChargePoint supports Offering 1 as proposed by ACE. TOU pricing is an important
11 tool to encourage residential customers to change their charging behavior so that it aligns
12 with grid system needs. Incentivizing energy consumption, including EV charging, to take
13 place during off-peak periods decreases peak demand pressure on utility assets such that
14 the need for additional capacity and grid infrastructure can be avoided. In addition, as this
15 is an optional rate, customers that are unable to shift sufficient load to off-peak hours have
16 the ability to remain on their existing rate.

²⁸ <https://greenmountainpower.com/rebates-programs/electric-vehicles/in-home-ev-charger/>

²⁹ I/M/O Petition of the EV Work Group for the Implementation of a Statewide EV Portfolio, Case No. 9478, MD PSC (January 14, 2019).

³⁰ *Id.*

³¹ *Id.*

³² See PSE&G Long Island Utility 2.0 Long Range Plan, NY PSC Matter No. 14-01299.

³³ <https://www.burlingtonelectric.com/sites/default/files/inline-files/Residential%20EV%20Rate%20Tariff.pdf>

³⁴ Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service, NY PSC Case No. 19-E-0065 (January 16, 2020).

1 **Offering 2: Off-Peak, Off-Bill Incentive for Residential Customers with Existing, Installed**
2 **EVSE – Rider “REVCP”**

3 **Q. Does ChargePoint support ACE’s proposed Offering 2?**

4 A. ChargePoint generally supports the goals of Offering 2, but recommends that the program
5 be modified to include an option for customers to participate by utilizing embedded
6 metering in existing qualified EVSE. Many currently available networked EV charging
7 stations have the capability to directly implement TOU rates, as well as various demand
8 response programs, without requiring a separate utility submeter, or additional car
9 connected devices. In fact, ACE has proposed requiring smart chargers under its Offering
10 3 in order to take advantage of the embedded metrology of the EV chargers.³⁵ This
11 recommendation would ensure that Offering 2 is implemented in a vendor-neutral and
12 technology-neutral manner, which is the approach that has been taken for similar off-peak,
13 off-bill incentives for residential customers to charge at times that are beneficial to the
14 grid.³⁶

15 The Direct Testimony of ACE Witness Grisham acknowledges the benefits of smart
16 chargers by stating they, “remotely operate and offer two-way communication with the
17 utility and longer term can be used to provide more advanced managed charging functions
18 such as start-time scheduling, power throttling, load curtailment and other beneficial load
19 management programs.”³⁷ By utilizing EVSE already installed at the residential customers’
20 premises, the Company can offer discounted rates to encourage EV charging to take place

³⁵ Grisham at 7-8.

³⁶ See Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service, NY PSC Case No. 19-E-0065 (January 16, 2020).

³⁷ Grisham at 8.

1 during off-peak hours when it is more beneficial for the distribution grid while lowering
2 overall program costs.

3 **Offering 3: Level 2 EVSE and Installation Rebates for Residential Customers without**
4 **Existing Chargers, Plus Off-Peak Incentive – Rider “REVCP”**

5 **Q. Does ChargePoint Support ACE’s proposed Offering 3?**

6 A. Yes, with one recommended modification. ChargePoint supports ACE’s proposal to
7 provide rebates for installation of qualified networked Level 2 EV chargers for residential
8 customers, which will effectively reduce barriers to EV adoption in the residential sector.
9 ChargePoint supports ACE’s proposal that residential customers will own the EV chargers
10 and will have the ability to choose from a variety of vendors for hardware options to meet
11 their preference and needs.³⁸ By reducing the cost of Level 2 charging infrastructure for
12 residential customers, ACE will facilitate widespread adoption of electric vehicles by
13 ensuring residential customers have the ability to charge their EVs at home where they are
14 parked for long periods of time.

15 However, Offering 3 should be modified to also provide residential customers the
16 ability to choose from multiple qualified vendors of EV charging network software.
17 Protecting customers’ ability to choose their preferred solution – rather than providing a
18 “one-size, fits-all” solution – is essential to protecting the competitive market for EV
19 charging stations in New Jersey. When customers have the opportunity to select the
20 charging solutions that work best for them, vendors will compete to make high-quality,
21 innovative products that customers want. Preserving customer choice among vendors is
22 essential to ensuring that a competitive market can thrive within utility programs and

³⁸ Grisham at 35.

1 sustainably continue after the conclusion of those programs.

2 ChargePoint supports ACE's proposal to incentivize customers participating in
3 Offering 3 to charge their EVs during off-peak hours. Residential charging is perfectly
4 suited for effective load management programs due to the long dwell times available for
5 charging and the great deal of flexibility in when the vehicle must actually be charged. EV
6 drivers tend to charge their vehicles at home over 80% of the time.³⁹ As such, EV drivers
7 are often very willing, with the right incentive, to defer charging to later times when it is
8 more ideal and efficient for the grid.

9 **Offering 4: Rebates for Level 2 EVSE and Installation, and Demand Charge Offset Incentive**
10 **for residential multi-family dwellings with dedicated on-site parking, currently without**
11 **existing EVSE – Rider “CEVCP”**

12 **Q. Does ChargePoint Support ACE's proposed Offering 4?**

13 A. Yes, with one recommend modification. ChargePoint supports ACE's proposal to provide
14 rebates for installation of EVSE combined with rebates toward the upfront costs of
15 purchasing qualified networked Level 2 charging equipment, which will effectively reduce
16 barriers to EV adoption in multi-dwelling units. The multifamily residential market
17 segment can present higher barriers to deployment than other commercial or residential
18 settings because of unique infrastructure challenges that warrant special consideration.
19 ACE proposes that the networked Level 2 EV charging stations at residential multi-family
20 dwellings be owned and operated by a third party.⁴⁰ Additionally, customers will be able

³⁹ See, U.S. Department of Energy, Office of Energy Efficiency & Renewable Energy, available at:
<https://www.energy.gov/eere/electricvehicles/charging-home>.

⁴⁰ This could be the property owner/site host, EV service provider, or other entity.

1 to choose from a variety of vendors for hardware options to meet their preferences and
2 needs.⁴¹

3 However, Offering 4 should be modified to provide site hosts with the ability to
4 choose from multiple qualified vendors of EV charging network software in addition to the
5 choice of hardware. Protecting customers' ability to select their preferred solutions of both
6 software and hardware – rather than providing a “one-size, fits-all” solution – is essential
7 to protecting the competitive market for EV charging stations in New Jersey. When
8 customers can choose the charging solutions that work best for them, vendors will compete
9 to make high-quality, innovative products that customers want. Preserving customer choice
10 among vendors is essential to ensuring that a competitive market can thrive within utility
11 programs and sustainably continue after the conclusion of those programs.

12 **Offering 5: Rebates for Level 2 EVSE for Workplaces, Plus Demand Charge Offset Incentive**
13 **– Rider “CEVCP” and Offering 6: Rebates for Level 2 EVSE for Electric Vehicle Fleets, Plus**
14 **Demand Charge Offset Incentive – Rider “CEVCP”**

15 **Q. Does ChargePoint support ACE’s proposed Offering 5 and Offering 6?**

16 A. Yes, but with two modifications. ChargePoint supports ACE’s proposal to provide
17 customer rebates for up to 50% of the cost of qualified Level 2 EVSE installed at the
18 workplace (Offering 5) and to support fleet electrification (Offering 6). The customer
19 rebates proposed in these Offerings will provide access to EV charging at critical locations
20 throughout ACE’s service territory. Research has shown that supporting deployment of
21 EVSE at workplaces makes employees six times more likely to purchase an EV, which

⁴¹ Grisham at 35.

1 would accelerate achievement of New Jersey’s EV goals.⁴²

2 However, ChargePoint is concerned that providing customer rebates for only a
3 portion of the cost of the EVSE itself will be insufficient to incentivize the necessary
4 deployment of EV charging infrastructure targeted in these Offerings. Therefore,
5 ChargePoint recommends that Offerings 5 and 6 be expanded to authorize utility-owned
6 “make ready” investments, in addition to customer rebates for EVSE, to further support
7 fleet electrification and workplace charging.

8 Typically, the cost to install a charging station in an existing parking lot or fleet
9 depot is equal to or more than the cost of the hardware itself. Installation costs downstream
10 from the customer of record’s utility meter necessary to complete “make ready”
11 construction include trenching or boring, conduit, wiring, labor, mounting, site
12 reconditioning, and landscaping along with signage. These costs are unlikely to experience
13 significant reductions over time and vary greatly with on-site conditions.

14 ACE acknowledges that workplace locations, “face obstacles to infrastructure
15 investment that are similar to the obstacles faced by MDUs.”⁴³ ChargePoint agrees with
16 ACE that, “[a]dding charging stations in [workplace/fleet] locations can extend the daily
17 range of PIVs and increase PIV visibility and expand PIV awareness. Experience gained
18 with [these] offering[s] will help to meet...demand for charging solutions and provide
19 useful information for adding future value to this segment.”⁴⁴

20 Our second recommendation for Offerings 5 and 6 relates to customer choice in EV

⁴² U.S. DOE, Workplace Charging Challenge, available at:
https://www.energy.gov/sites/prod/files/2017/01/f34/WPCC_2016%20Annual%20Progress%20Report.pdf.

⁴³ Grisham at 13.

⁴⁴ Grisham at 13.

1 charging network providers. ACE proposes that the networked Level 2 EV charging
2 stations for fleet electrification and workplace charging be owned and operated by a third
3 party, and that customers will be able to choose from a variety of vendors for hardware
4 options to meet their preferences and needs.⁴⁵ ChargePoint believes the program should be
5 modified to also provide site hosts with the ability to choose from multiple qualified
6 vendors of EV charging network software. Protecting customers' ability to choose their
7 preferred solutions of both hardware and software – rather than providing a “one-size, fits-
8 all” solution – is essential to protecting the competitive market for EV charging stations in
9 New Jersey. When customers can choose the charging solutions that work best for them,
10 vendors will compete to make high-quality, innovative products that customers want.
11 Preserving customer choice among vendors is essential to ensuring that a competitive
12 market can thrive within utility programs and sustainably continue after the program ends.

13 **Offering 7: Public Charging – Utility-Owned and Operated DCFCs – Rate Schedule “PC-**
14 **PIV” and Offering 8: Public Charging – Utility-Owned Level 2 EVSEs – Rate Schedule “PC-**
15 **PIV”**

16 **Q. Does ChargePoint support ACE’s proposed Offering 7 & Offering 8?**

17 A. ChargePoint generally supports the goals of the proposed Offerings; however, we believe
18 that these goals could be better accomplished utilizing different models of utility
19 investment that do not involve utility ownership and operation of EV charging
20 infrastructure. Utility ownership and operation of charging infrastructure can have a
21 detrimental impact on the competitive market, which can be avoided through alternative
22 program designs.

⁴⁵ Grisham at 35.

1 **Q. Does ACE’s proposal provide for site host choice for utility-owned charging stations?**

2 A. No. In response to ChargePoint Interrogatory (CP-ACE-0015) ACE stated that, “ACE may
3 choose two or more hardware vendors for Company-owned EV charging stations and ACE
4 will coordinate with commercial site hosts on the selection for the site.” Therefore, while
5 ACE will pre-qualify multiple vendors of EV charging hardware,⁴⁶ ACE will only
6 coordinate with commercial site hosts, rather than provide site hosts the ability to choose
7 the EV charging hardware ultimately deployed on the commercial site host’s property.

8 Additionally, ACE’s response to ChargePoint Interrogatory (CP-ACE-0015)
9 completely omits site hosts for charging stations deployed on government-owned property.
10 ChargePoint interprets this omission to mean that for charging stations installed on
11 government-owned property, ACE, not the site host, will ultimately determine what type
12 of charging station is deployed, regardless of site host preference or needs.

13 **Q. Does ACE’s proposal enable the site host to set pricing for charging services to EV
14 drivers?**

15 A. No. ACE proposes that the rates charged to EV drivers using the utility-owned public
16 chargers under Offerings 7 and 8 will be based on an assessment of the prevailing market
17 rates in New Jersey (one rate for L2 and one rate for DCFC) based on a market pricing
18 study of current charging prices.⁴⁷

19 **Q. Why is site host control of charging stations located on their properties important?**

20 A. As EV charging is a competitive service, the operation and pricing of the charging station
21 is a direct reflection of a site host’s goals for hosting that service: to attract drivers and

⁴⁶ See Grisham at 35.

⁴⁷ ACE’s Amended Petition, Direct Testimony of Michael Normand (“Normand”) at 11-12.

1 encourage use of stations in a way that aligns with activities onsite.

2 Networked EV charging stations provide site hosts with the ability to set pricing
3 for EV charging services in many ways. These dynamic pricing tools allow charging station
4 site hosts to incentivize driver behavior, which is essential given that EV charging is a
5 combination of vehicle refueling and parking. Flexibility in pricing allows site hosts to
6 tailor pricing to the unique needs of the site, including, but not limited to:

- 7 • A free charging session;
- 8 • A fixed rate for the session, for which the driver pays a set fee for the entire session;
- 9 • An energy rate, for which the driver pays for the energy consumed on a per kilowatt-
10 hour (“kWh”) basis;
- 11 • An hourly rate, for which the driver pays per hour, similar to how a parking meter
12 operates;
- 13 • Length-of-Stay pricing, for which one price is charged during the first x hours and
14 another price is charged for every hour afterwards;
- 15 • Time-of-Day pricing, for which one price is charged during peak hours and another
16 during off-peak hours;
- 17 • A minimum and/or a maximum fee per session;
- 18 • A combination of the above, in which, for example, a flat session fee is followed by an
19 hourly rate, an hourly rate is followed by per kWh pricing, a minimum session fee is
20 followed by an hourly rate, or a free period of time is followed by per kWh pricing;
21 and
- 22 • Driver groups, for which station owners may set unique policies for different
23 classifications of drivers (e.g. employees vs. visitors) using the options above.

1 **Q. Do you have any recommendations for ACE’s proposal to own and operate Public**
2 **DCFC stations in Offering 7?**

3 A. Yes. In support of its PIV Program Proposal, ACE conducted a benefit/cost analysis
4 (“BCA”) that evaluated each individual Offering. The results of the BCA are presented in
5 the testimony of witness Mark Warner. According to Mr. Warner’s Direct testimony,
6 Offering 7: Utility-Owned Public DCFC provides “a net benefit on an NPV basis, with a
7 Benefit/Cost ratio of 2.01.”⁴⁸ Additionally, according to Mr. Warner’s Direct testimony,
8 Offering 9: Privately Owned Public DCFC provides “a net benefit on an NPV basis, with
9 a Benefit/Cost ratio of 4.14.”⁴⁹ Mr. Warner concludes that the results of the BCA
10 pertaining to privately owned public DCFC, “demonstrate that benefits outweigh costs for
11 all ratepayers to an *exceptional degree*.”⁵⁰ Based on the evidence provided by ACE,
12 privately-owned DCFC stations deployed under ACE’s PIV program provide more than
13 double the net benefits (on an NPV basis) than stations owned and operated by ACE.

14 Given the results of ACE’s own BCA determining that third-party owned DCFC
15 stations provide more than double the net benefits to ratepayers compared to utility-owned
16 DCFC stations, ChargePoint recommends the Board deny ACE’s proposed Offering 7 in
17 favor of an expanded Offering 9 (which involves utility incentives to support private
18 ownership and operation of DC charging stations). Doing so will ensure that ratepayer
19 funds are invested in a manner that minimizes risk and maximizes benefits to all ratepayers.

20 If the Board declines to adopt ChargePoint’s recommendation to deny Offering 7,

⁴⁸ Warner at 54.

⁴⁹ Warner at 59.

⁵⁰ Warner at 59 (emphasis added).

1 ChargePoint recommends that the Offering be modified to (1) explicitly provide site host
2 choice of both charging equipment ***and*** network solutions, and (2) provide site host control
3 over pricing and access. These are intrinsic features of New Jersey’s competitive market,
4 and should be included in each Offering of ACE’s PIV program in order to avoid any
5 negative impacts on the competitive market.

6
7 **Q. Do you have any recommendations for ACE’s proposal to own and operate Level 2**
8 **charging stations in Offering 8?**

9 A. Yes. ChargePoint has two recommendations regarding public Level 2 charging stations.
10 First, ChargePoint recommends the Board direct ACE to provide “make ready” and/or
11 customer rebates for non-utility owned public Level 2 EVSE, which is currently absent
12 from the proposed PIV Program.

13 Second, ChargePoint recommends that Offering 8 be modified to (1) explicitly
14 provide site host choice of both charging equipment ***and*** network solutions and (2) provide
15 site host control over pricing and access. These are intrinsic features of New Jersey’s
16 competitive market, and should be included in each Offering of ACE’s PIV program in
17 order to avoid any negative impacts on the competitive market.

18 **Q. Does ACE have to change its ownership model in order to accommodate site host**
19 **choice of charging equipment and network solutions and site host control over pricing**
20 **and access?**

21 A. ChargePoint believes that incentive-based programs, like rebate and “make-ready”
22 incentive programs, which ACE has proposed elsewhere in its PIV Program, more easily
23 and seamlessly accommodate site host choice and operation, as site hosts maintain

1 ownership of charging stations in those models.

2 In the event that the Board would prefer to consider options involving ACE's
3 ownership and operation of EV charging equipment, it is critically important to note that
4 ACE could own EV charging infrastructure in a manner that maintains site host choice and
5 site host operation. There are examples in other jurisdictions of utilities owning and
6 operating EV charging stations in a manner that maintains site host choice and site host
7 operation, such as the San Diego Gas & Electric Power Your Drive Program, Pacific Gas
8 & Electric's EV Charge Network, and Southern California Edison's Charge Ready 2
9 programs in California.⁵¹

10 **Q. Are there other actions that ACE, or the Board, could undertake to incentivize**
11 **deployment of public charging stations (i.e., in travel corridors, on government**
12 **properties, etc.)?**

13 A. Yes. Prior to approving ACE's ownership and operation of EV charging stations, the Board
14 should first require exploration of alternative incentives or increased rebates for third-
15 party-owned charging stations (this includes both DCFC and Level 2 stations) because
16 these are less costly and less risky for ratepayers, and are more flexible alternatives that
17 will accelerate the competitive market.

18 ChargePoint recommends that the Board direct ACE to participate in a stakeholder
19 working group within its ongoing Electric Vehicle Infrastructure stakeholder process (BPU

⁵¹ See Decision Regarding Underlying Vehicle Grid Integration Application and Motion to Adopt Settlement Agreement, CPUC Docket No. A.14-04-014 (January 28, 2016); Decision Directing PG&E to Establish an Electric Vehicle Infrastructure and Education Program, CPUC Docket No. 16-12-065 (Dec. 21, 2016); Decision Regarding Underlying Vehicle Grid Integration Application and Motion to Adopt Settlement Agreement, CPUC Docket No. A.14-04-014 (January 28, 2016); Decision Directing PG&E to Establish an Electric Vehicle Infrastructure and Education Program, CPUC Docket No. 16-12-065 (Dec. 21, 2016); Decision Authorizing Southern California Edison Company's Charge Ready 2 Infrastructure and Market Education Programs, CPUC Docket No. A.18-06-015 (August, 2020).

1 Docket No. QO20050357)⁵² to determine whether additional financial incentives are
2 necessary to support EVSE development along travel corridors, at government-owned
3 properties, and in underserved communities, among other strategic locations. Granting
4 ACE the flexibility to propose additional incentives in response to unique community
5 needs will support wider and more equitable access to electric transportation. Authorization
6 for additional incentives could be granted temporarily by the Board and revisited
7 periodically.

8 **Offering 9: Demand Charge Incentive and “Make Ready” Work Incentives for Non-Utility**
9 **Owned Public DCFCs – Rider “NOUPDCFC”**

10 **Q. Does ChargePoint support ACE’s proposed Offering 9?**

11 A. ChargePoint supports ACE’s proposal to deploy utility-owned ‘make-ready’ infrastructure
12 to support broader deployment of DCFC stations throughout the Company’s service
13 territory. Installation costs for a DCFC station represent a significant investment by a site
14 host and have proven to be a hurdle in deploying these higher-powered charging stations.
15 In addition, DCFC stations can be deployed in “clusters” and as such, installation costs can
16 be significant due to the additional infrastructure required as well as the potential for higher
17 electricity requirements which means a higher likelihood of needing to upgrade on-site
18 energy capacity.

19 I will address ACE’s proposed off-bill incentive to offset the impact of demand
20 charges on third party owned DCFC stations and related issues in Section VI of my
21 testimony.

22 **Q. Do you have any recommendations for ACE’s proposed Offering 9?**

⁵² ChargePoint filed comments supporting Board Staff’s Straw proposal with recommended modifications. See ChargePoint’s June 17, 2020, comments, attached as Exhibit A.

1 A. Yes. ChargePoint recommends the Offering be expanded to provide customer rebates of
2 up to 50% of the upfront cost of qualified DCFC stations. While ACE has proposed to
3 support deployment of DCFC stations through utility-owned “make-ready” infrastructure
4 investments, the cost of the DCFC station itself may prove to be an additional barrier to
5 site host investment. Customer rebates toward the upfront purchase costs of DCFC stations
6 combined with “make-ready” incentives have been utilized by utilities across the country
7 to successfully incentivize deployment of EV infrastructure while minimizing overall
8 program costs.⁵³ ACE’s addition of these customer rebates to its Offering 9 would lower
9 market barriers to DCFC deployment while leveraging matching investment from site
10 hosts. The additional deployment of publicly available DCFC has the potential to provide
11 widespread benefits for all of ACE’s customers.

12 **Offering 10: The Innovation Fund – Rider “CTCP”**

13 **Q. Does ChargePoint support ACE’s proposed Innovation Fund?**

14 A. ChargePoint supports the proposed Innovation Fund. ACE is proposing up to \$2 million in
15 matching grants to support innovative transportation electrification programs designed to
16 spur electrification efforts into areas that might otherwise go unserved without the
17 proposed grants. ChargePoint recommends that the grants be awarded through an open

⁵³ See, e.g., Alternate Proposed Decision Regarding Southern California Edison Company’s Application for Charge Ready and Market Education Programs, CPUC Docket No. A.14-10-014 (Jan. 16, 2016), available at: <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M157/K682/157682806.PDF>; Petition of the Electric Vehicle Work Group for Implementation of a Statewide Electric Vehicle Portfolio, MDPSC Case No. 9478, Order No. 88997 (Jan. 14, 2019), available at: <https://www.psc.state.md.us/wp-content/uploads/Order-No.-88997-Case-No.-9478-EV-Portfolio-Order.pdf>; Decision Directing PG&E to Establish an Electric Vehicle Infrastructure and Education Program, CPUC Docket No. 16-12-065 (Dec. 21, 2016); Order Establishing Eversource’s Revenue Requirement, Massachusetts Department of Public Utilities Docket 17-05 (November 30, 2017), available at <https://eeaonline.eea.state.ma.us/EEA/FileService/V1.4.0/FileService.Api/file/FileRoom/dehehcjj>; Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Niagara Mohawk Power Corporation d/b/a National Grid for Electric Service, NYPSC Matter No. 17-00887 (March 15, 2018), available at: <http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=17-E-0238>) (utility-provided make-ready coupled with EVSE rebates provided by NYSERDA).

1 and transparent process based on clear objective criteria.

2 **Offering 11: Electric School Bus Fund – Rider “CTCP” and Offering 12: New Jersey Transit**

3 **Bus Electrification – Rider “CTCP”**

4 **Q. Does ChargePoint support the proposed Electric School Bus Fund and New Jersey**
5 **Transit Bus Electrification Offerings?**

6 A. ChargePoint supports both the proposed Electric School Bus Fund and New Jersey Transit
7 Bus Electrification Offerings. ACE is proposing to provide funding for the incremental
8 costs of up to 20 electric school buses as well as up to \$25,000 for EVSE required to support
9 the buses for public K-12 school districts in ACE’s service territory. The Company is also
10 proposing to provide up to \$2.5 million in funding to support electrification of New
11 Jersey’s public transit buses.

12 As discussed earlier in my testimony, transportation electrification provides
13 significant benefits to customers across ACE’s service territory in the form of lower total
14 cost of ownership, decreased emissions and improved air quality, among others.
15 Electrification of school and transit buses further enables emissions reduction by replacing
16 higher emitting diesel vehicles with cleaner, more efficient electric vehicles.

17 Offerings 11 and 12 are also consistent with New Jersey’s 2019 Energy Master
18 Plan, which provides:

19 **...the state will also work with school district-owned and commercially-**
20 **owned school bus fleet operators to incentivize and encourage EV**
21 **adoption as a means to upgrade fleets and reduce operating costs.** Those
22 may include, as an example, incentives for Boards of Education that
23 prioritize contracting with bus companies that utilize EVs.

1 New Jersey should also consider truck and **bus rebate or grant programs**
2 **to reduce the incremental up-front cost of purchasing EVs over their**
3 **conventional counterparts**, or explore a state-wide procurement
4 mechanism wherein the batteries in medium- and heavy-duty EVs are
5 leased, thereby reducing the up- front cost of one comparable to a new diesel
6 vehicle, and allowing the reduced operating costs (e.g., for fuel and
7 maintenance) to cover the battery lease payments over time.⁵⁴
8

9 **VI. SET POINT**

10 **Q. Does ACE address how participation in Offering 9 could be affected by its existing**
11 **commercial and industrial (“C&I”) rate structures?**

12 A. Yes. ACE’s witness Grisham states that “a single usage on a DCFC can cause a
13 significantly high demand charge for the commercial owner, disincentivizing them to
14 install a DCFC in locations that might not be heavily utilized initially.”

15 **Q. Is witness Grisham’s description consistent with ChargePoint’s experience in the EV**
16 **charging market?**

17 A. Yes. High demand charges represent one of the biggest financial challenges facing EV
18 charging providers. Unsustainable demand charges can be triggered if multiple drivers plug
19 into a bank of DC fast chargers at the same time, or if just one driver plugs into a higher-
20 powered DC fast charger. Studies show that demand charges can increase EV charging
21 station utility bills by thousands of dollars per month.⁵⁵ In some markets, demand charges

⁵⁴ NJ 2019 EMP at 68, 74-75,166 (emphasis added).

⁵⁵ U.S. Department of Energy Vehicle Technologies Office, 2015. “Costs Associated with Non-Residential Electric Vehicle Supply Equipment.” Available at: https://afdc.energy.gov/files/u/publication/evse_cost_report_2015.pdf

1 can account for as high as 90% of total electricity costs.⁵⁶ The structural problems with
2 traditional, demand-based C&I rates are not necessarily mitigated by higher utilization, as
3 the total cost share of demand charges at DCFC stations that experience five charging
4 sessions per day can still range from 30-to-80 percent relative to total energy costs.⁵⁷

5 **Q. How does ACE propose to mitigate demand charges in its existing C&I rates for**
6 **customers that participate in Offering 9?**

7 A. ACE proposes a short-term subsidy to its C&I rates that is “intended to lower the non-
8 utility owner/operator’s overall cost of electricity to a known ‘set point’ during the term of
9 the program.”⁵⁸

10 **Q. Is ChargePoint supportive of ACE’s proposed “set point” subsidy in Offering 9?**

11 A. No. ChargePoint acknowledges that the set point subsidy would lower the cost to operate
12 DC fast chargers for customers that are allowed to participate in Offering 9, which would
13 be preferable to the status quo. However, we are concerned that the set point subsidy is an
14 unsuitable method to mitigate unintentional flaws in ACE’s rates that lead to high demand
15 charges for DCFC customers.

16 **Q. Why is the set point subsidy an unsuitable method to mitigate demand charges?**

17 A. As proposed, the set point subsidy (i) ignores the root causes of unsustainable demand
18 charges in ACE’s C&I rates for DC fast charging customers, (ii) inappropriately seeks to
19 regulate the price of DC fast charging services, and (iii) provides discriminatory relief to

⁵⁶ Rocky Mountain Institute, “EVgo Fleet and Tariff Analysis” (2017), available at https://rmi.org/wp-content/uploads/2017/04/eLab_EVgo_Fleet_and_Tariff_Analysis_2017.pdf.

⁵⁷ Great Plains Institute, “Overcoming Barriers to Expanding Fast Charging Infrastructure in the Midcontinent Region” (2019), available at https://scripts.betterenergy.org/reports/GPI_DCFC_Analysis_July_2019.pdf.

⁵⁸ ACE’s Amended Petition, Direct Testimony of Kevin M. McGowan at 30.

1 demand charges.

2 **Q. How does the set point subsidy ignore the root causes of unsustainable demand**
3 **charges in ACE’s C&I rates?**

4 A. ACE witness Warner claims that this demand charge barrier is due to “the challenging
5 economics associated with low utilization of these facilities while the PIV population is
6 still low,”⁵⁹ and that the set point subsidy would be “temporary in nature until utilization
7 increases.”⁶⁰ ACE witness Grisham claims that an “increase in PIVs would lead to an
8 increase in public charging and DCFC owners would reach a break-event point for the
9 charger by the conclusion of this Offering, thereby no longer needing the financial
10 incentive.”⁶¹ There is no evidence provided to substantiate ACE’s claim that, at the end of
11 five years, all stations operating under Offering 9 will experience sufficient utilization such
12 that the Company’s C&I rates are no longer a barrier. To the contrary, DCFC stations
13 deployed in a less-traveled corner of ACE’s service territory will consistently experience
14 lower utilization than a high-volume corridor deployment, irrespective of statewide EV
15 adoption. It would be short-sighted to assume that the unintended impacts of demand
16 charges will be overcome at the conclusion of a short-term rate subsidy.

17 **Q. Why would it be inappropriate to regulate the price of DC fast charging services?**

18 A. ACE Witnesses Grisham and Normand admit that the set point subsidy “was proposed in
19 relation to anticipated pricing of charging services to EV drivers,” and is based on two
20 market analogs: “a) equivalent cost with gasoline, and b) current DCFC pricing

⁵⁹ Warner at 35.

⁶⁰ *Id.* at 36.

⁶¹ Grisham at 20.

1 benchmarks in New Jersey.”⁶² Both of the considerations used to develop the set point
2 subsidy are inappropriate.

3 It would be generally inappropriate for ACE to determine whether, and how,
4 participants in Offering 9 set prices for services provided on their premises. The set point
5 subsidy is specifically designed to influence the price for EV charging, which is antithetical
6 to a competitive market. The Legislature identified that EV charging is a competitive
7 service in the New Jersey Plug-In Vehicle Act, N.J.S.A. § 48:25-10.

8 Even if the Board were to determine that the set point subsidy is a generally
9 acceptable component of Offering 9, it would be specifically inappropriate to calculate
10 such a subsidy based on the price of gasoline. Gasoline prices are determined by market
11 prices, not by the Board. In contrast, a site host’s electricity costs are based in part on the
12 utility’s distribution and transmission costs, both of which have no relation whatsoever to
13 the price of gasoline. Therefore, a set point subsidy that is based on gasoline prices fails to
14 appropriately capture the cost to serve DCFC customers.

15 **Q. In what way does ACE’s proposed set point subsidy adversely affect the competitive**
16 **EV market?**

17 A. Although the set point subsidy would correct inherent flaws in ACE’s C&I rates, it is
18 problematic because ACE proposes to limit it to customers participating in Offering 9.
19 Participants in Offering 9 would then be able to set artificially-lower prices for DC fast
20 charging services, and therefore have a competitive advantage over (i) existing C&I
21 customers operating DC fast charging stations, (ii) customers that do not elect to participate
22 in Offering 9, and (iii) the future customers that would ostensibly host what the Company

⁶² ACE’s response to CP-ACE-22.

1 describes as the “25 percent of necessary charging locations to be deployed by the private
2 market without ACE’s involvement.”⁶³

3 Further, the Company’s proposal to provide relief from demand charges to public
4 DCFC stations is discriminatory to private (or semi-public) DCFC stations that provide
5 equally valuable charging services in the New Jersey market. In effect, the DCFC stations
6 receiving the set point subsidy would have a competitive advantage over those that do not
7 and in certain instances the competitive advantage could be significant enough that site
8 hosts may choose to cease operating the stations. This outcome would be counter to New
9 Jersey’s transportation electrification goals.

10 **Q. Did ACE consider any alternatives to the set point subsidy?**

11 A. While ACE considered alternatives to the set point subsidy, those alternatives would have
12 similarly failed to create a sustainable C&I rate for customers with load profiles like DC
13 fast charging site hosts. The alternatives that ACE considered included “a temporary
14 ‘demand charge holiday,’ a specialized tariff for public DCFC that does not include
15 demand charges, or a fixed-rate rebate offered for a fixed period of time.”⁶⁴ The concerns
16 that I have identified about the set point subsidy would equally apply to the alternatives
17 considered by ACE.

18 **Q. Are there examples of sustainable C&I rates that ACE could have considered?**

19 A. Yes. There are many examples that have already been successfully implemented or are
20 currently being developed in other jurisdictions, including (but not limited to):

- 21 • **Oregon, Pacific Power:** Schedule 45, which provides a demand charge transition

⁶³ Grisham at 23.

⁶⁴ ACE’s response to CP-ACE-22.

- 1 discount paired with an on-peak energy charger transition discount;⁶⁵
- 2 • **Oregon, Pacific Power:** Schedule 29 which combines a TOU rate with a demand
- 3 charge based on utilization in which the average energy price declines as utilization
- 4 increases;⁶⁶
- 5 • **California, SCE:** TOU-EV-8, which provides TOU rates for the initial 5 years with
- 6 demand charges phased back in years 6-10;⁶⁷
- 7 • **California, SDG&E:** TOU-M, an interim rate where sites can switch to a rate with
- 8 \$2.50/kW demand charge and the cap is waived;⁶⁸
- 9 • **Connecticut, Eversource:** EV Rate Rider Pilot (EVRRP), which converts demand
- 10 charges to an equivalent \$/kWh charge;⁶⁹
- 11 • **Virginia, Dominion:** GS-2, where low usage sites qualify for a non-demand general
- 12 service rate;⁷⁰ and
- 13 • **Wisconsin, Madison Gas & Electric:** Low Load Factor Provision where
- 14 commercial customers on rate schedules Cg-4, Cg-2, or Cg-2A with an annual

⁶⁵ See Pacific Power, Oregon Schedule 45, Public DC Fast Charger Optional Transitional Rate Delivery Service at 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. Approved in Oregon PUC Docket No. 485 on May 16, 2017.

⁶⁶ See I/M/O PACIFICORP, dba PACIFIC POWER, Request for a General Rate Revision, Oregon PUC Docket No. UE 374 (Proposed) (February, 2020), available at: <https://www.oregon.gov/puc/edockets/Pages/default.aspx>.

⁶⁷ See Southern California Edison Electric Vehicle Rates for Businesses at <https://www.sce.com/business/rates/electric-car-business-rates/business/rates/electric-car-business-rates>.

⁶⁸ See San Diego Gas & Electric, Interim Rate Waiver, at <https://www.sdge.com/interim-rate-waiver>.

⁶⁹ See Eversource Rider EV.04-01-19, at https://www.eversource.com/content/docs/default-source/rates-tariffs/ct-electric/ev-rate-rider.pdf?sfvrsn=e44ca62_0. (Docket No. 17-10-46RE01).

⁷⁰ See Virginia Electric and Power Company, at <https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/virginia/business-rates/schedule-gs2.pdf?la=en&rev=ca651fa03bb44ed4acf86a71547ba786&hash=6EF6530D86014E12AB2986EFCDD0FDA9B>.

1 electric load factor <15% qualify for an on-peak demand reduction of 50%.⁷¹

2 **Q. Does ChargePoint have recommendations relative to the set point subsidy in Offering**
3 **9?**

4 A. Yes. ChargePoint recommends that the BPU remove the set point subsidy and order ACE
5 to develop and file one or more long-term C&I rate options that provide alternatives to
6 traditional, demand-based C&I rates before the start of the program.

7 In the event that such options cannot be offered before the start of ACE's program,
8 ChargePoint recommends that the Board:

- 9 • Amend the set point subsidy to allow non-discriminatory access to all of ACE's C&I
10 customers; and
11 • Order ACE to develop and file one or more alternatives to traditional, demand-based
12 C&I rates by January 1, 2021, which must be made available to all customers before
13 the conclusion of Offering 9.

14

15 **VII. CONCLUSION**

16 **Q. Please summarize your recommendations to the Board.**

17 A. ChargePoint recommends that ACE's PIV program be approved by the Board with the
18 following modifications:

- 19 • The Board should require ACE to allow for site host choice among multiple vendors
20 of EV charging hardware and network software for all Offerings in the program;
21 • The Board should reject the set point subsidy proposed in ACE's Offering 9, and should
22 instead order ACE to develop and file one or more long-term commercial and industrial

⁷¹ See Madison Gas & Electric, at <https://www.mge.com/customer-service/for-businesses/electric-rates/low-load-factor-provision>. (Docket: 3270-TE-103, Approved June 6, 2019; PSC REF# 368677).

- 1 (“C&I”) rate options that provide alternatives to traditional, demand-based C&I rates
2 before the start of the program;
- 3 • Offering 2, which proposes off-bill incentives for residential customers for off-peak
4 PIV charging, should be modified to allow participation through the embedded
5 metering in EV charging stations;
 - 6 • Offerings 5 and 6, which propose demand incentives and rebates for the purchase of
7 Level 2 chargers for office buildings, garages, and vehicle fleets, should be modified
8 to include utility “make ready” work incentives;
 - 9 • The Board should deny Offering 7, which proposes ACE’s ownership and operation of
10 public DCFC stations, and instead shift funding to Offering 9;
 - 11 • Offering 8, which proposes ACE’s ownership and operation of public Level 2 charging
12 infrastructure, should be modified to provide site hosts with the ability to set pricing of
13 EV charging services; and
 - 14 • Offering 9, which proposes rate incentives and “make ready” incentives for private
15 owners/operators of public DCFC stations, should be expanded to include rebates for
16 up to 50% of the upfront costs of DCFC stations.

17 **Q. Based on the foregoing discussion, please provide your overall opinion on ACE’s**
18 **proposed electric vehicle programs.**

19 A. ChargePoint believes ACE’s proposed Plug-In Vehicle Program can play a critical role in
20 lowering barriers to more widespread adoption of electric vehicles and related charging
21 technology in New Jersey. The Program will achieve its objectives more efficiently and
22 effectively by incorporating the recommended modifications outlined here, while
23 preserving and fostering an open and competitive market for EVSE products and services

1 for the benefit of the State's consumers.

2 **Q. Does this conclude your direct testimony?**

3 **A.** Yes.

4

KEVIN GEORGE MILLER

PROFESSIONAL EXPERIENCE

ChargePoint, Campbell, CA 2016 – Present

Director, Public Policy

- Plan, direct and implement state and US federal policy and business development focused on company priorities.

Executive Office of Energy and Environmental Affairs (EEA), Boston, MA 2014 – 2015

Acting Chief Financial Officer

- Lead for fiscally related issues to Governor’s Office and House and Senate Ways & Means committees.
- Senior advisor to Cabinet Secretary on policies of seven agencies, 2,600 FTEs, and \$500M+ annual spending.

Executive Office of Energy and Environmental Affairs, Boston, MA 2012 – 2015

Director of Capital and Federal Finance

- Developed and managed \$250M+ in annual capital investment programs to support the Commonwealth’s energy and environmental priorities.
- Oversaw the Commonwealth’s federally-funded initiatives related to energy and the environment.

Executive Office for Administration and Finance, Boston, MA 2011 – 2012

Fiscal Policy Analyst

- Analyst in charge of \$2.6B portfolio for Governor’s budget office including statewide collective bargaining, Environmental Affairs, Public Safety, Sheriffs, and Health and Human Services agencies.
- Appointed Secretary’s designee on the Regional Greenhouse Gas Initiative Auction Trust Committee.

New Hampshire Democratic Party, Manchester, NH 2008

Field Organizer

- Responsible for organization and training in Portsmouth, Rye, and Greenland, NH.

Office of State Senator Marian Walsh, Boston, MA 2006 – 2008

Press Secretary

- Developed and executed communications, public strategy, and stakeholder engagement.

UTILITY REGULATION & GOVERNMENT APPOINTMENTS

Utility Regulation Expert Witness

- Massachusetts DPU: Docket No. 18-150
- New Hampshire PUC: Docket No. DE 19-057
- NYPS&C: Case Nos. 19-E-0065 & 19-E-0378
- Rhode Island PUC: Docket Nos. 4770/4780
- New Jersey BPU: Docket No. EO1810111

Statewide Commissions and Working Groups

- Member Representative, New Hampshire Electric Vehicle Charging Infrastructure Commission
- Legislative Chair, Maryland Zero Emission Electric Vehicle Infrastructure Council
- Infrastructure Co-Chair, Massachusetts Zero Emission Vehicle Task Force
- Infrastructure Co-Chair, Drive Electric Pennsylvania
- Infrastructure Expert Member, National Zero Emissions Vehicle Strategy Working Group (Canada)

EDUCATION

Harvard Kennedy School of Government, Cambridge, MA 2011

Master of Public Policy - International Trade and Finance

Tufts University, Medford, MA 2005

Bachelor of Arts (Political Science and Drama), *cum laude*

United Nations International School, NY, NY 2001

International Baccalaureate Diploma

EXHIBIT A

**COMMENTS FILED BY CHARGEPOINT ON JUNE 17, 2020, REGARDING
BOARD STAFF'S STRAW PROPOSAL ON ELECTRIC VEHICLE
INFRASTRUCTURE BUILD OUT (BPU DOCKET NO. QO20050357)**

June 17, 2020

VIA ELECTRONIC FILING

Aida Camacho-Welch
Secretary of the Board
New Jersey Board of Public Utilities
Post Office Box 350
Trenton, NJ 08625-0350

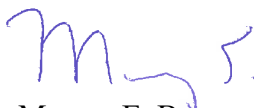
***Re: I/M/O the Straw Proposal on Electric Vehicle Infrastructure Build Out
BPU Docket No. QO20050357***

Dear Secretary Camacho-Welch:

On behalf of ChargePoint, Inc. ("ChargePoint"), we appreciate the opportunity to offer the enclosed comments of ChargePoint in the matter referenced above.

Thank you.

Very truly yours,


Murray E. Bevan

Enclosure

I. Introduction & Background on ChargePoint

A. Introduction

On May 18, 2020, the New Jersey Board of Public Utilities (“BPU”) Staff (“Staff”) released its *New Jersey Electric Vehicles Infrastructure Ecosystem 2020 Straw Proposal* (“Straw Proposal”).

ChargePoint applauds BPU Staff for the proposed EV Ecosystem (“Ecosystem”). We appreciate the opportunity to offer these comments in response to the proposed program design, as well as related issues raised in the Straw Proposal. In addition to our comments below, ChargePoint respectfully requests stakeholders be afforded an opportunity to submit reply comments. ChargePoint recommends reply comments be submitted no later than July 2, 2020.

In summary, our comments are as follows:

- The shared responsibility model proposed in Staff’s Charger Ready Straw Proposal is a key first step to build out New Jersey’s EV infrastructure;
- Customer rebates, combined with make-ready incentives, are among the most effective tools to incentivize EVSE deployment;
- The Straw Proposal should expressly recognize that the EV charging market is growing and dynamic and that there is no one business case for the EVSE industry or for EV charging site hosts;
- The Straw Proposal should be expanded to incentivize transportation electrification across the entire EV Ecosystem to include medium and heavy-duty electric vehicle charging applications and commercial fleets;
- The BPU should establish a Charger Ready Advisory Council to inform program evaluation;
- It is premature to request EDCs submit proposals to establish a process and timeframe for EDCs to provide a “Last Resort” function by owning and operating EV charging stations;
- The Straw Proposal should not restrict the manner in which a site host may price EV charging services to customers;
- The Straw Proposal should allow for EVSE Infrastructure Companies to develop appropriate locations and for independent site hosts to directly participate in the Charger Ready program;
- It is not necessary to create a new process to identify ‘Poor Performing EVSE Infrastructure Companies;’
- The BPU should initiate a separate proceeding to consider EV tariffs that present alternatives to traditional demand-based rate structures; and,
- We recommend certain modifications to Staff’s proposed terminology.

Comments by ChargePoint on BPU Staff Straw Proposal

QO20050357

B. Background on ChargePoint

ChargePoint is the leading electric vehicle (EV) charging network in the world, with scalable solutions for every charging need and for all of the places that EV drivers go: home, work, around town, and on the road. ChargePoint's network offers more than 113,000 places to charge, including more than 1,696 spots in New Jersey, and those numbers continue to grow. With thousands of customers in several verticals including workplaces, cities, retailers, apartments, hospitals, and fleets, ChargePoint provides an integrated experience enabling consistent performance, efficiency and reliability at every touchpoint whether one is using a mobile app, plugging into a charger, managing the station or analyzing charging data. On the network, drivers have completed more than 78 million charging sessions, saved upwards of 93 million gallons of fuel, and driven more than 2.2 billion electric miles.

ChargePoint delivers scalable solutions that enable businesses to support more drivers, add the latest software features and expand their electric vehicle and fleet needs with minimal disruption to overall business. 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 and 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 site hosts to manage charging onsite with features like Waitlist, access control, charging analytics, and real-time availability. All products are UL-listed, ENERGY STAR® and CE (EU) certified, and the modular design minimizes downtime and makes maintenance and repair more seamless.

ChargePoint's primary business model consists of selling its smart charging solutions directly to businesses and organizations while offering tools that empower site hosts and station owners to deploy charging designed for their individual application and use case. ChargePoint provides charging network services and data-driven and 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. Comments on Charger Ready Program Design

- A. The Straw Proposal provides the necessary foundation for building a robust EV Ecosystem in New Jersey, however, ChargePoint recommends several enhancements to Staff's Proposal to ensure its effectiveness

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1. The Shared Responsibility Model proposed in Staff's Charger Ready Straw Proposal is a key first step to build out New Jersey's EV infrastructure

Staff explains that the Charger Ready Straw Proposal is based on a "shared responsibility" model in which, "EDCs invest in (and earn on) the wiring and backbone infrastructure necessary to enable a robust EV Ecosystem and the private sector owns, operates and advertises the EVSE. Even though under normal circumstances, private investors will install, operate, and market the charging stations, making sites across the state Charger Ready represents an extension of EDC responsibility."¹

The shared responsibility model is generally consistent with approaches taken in the majority of utility EV charging programs around the country and plays to the strengths of utilities as well as competitive market site hosts,² vendors, and EV Infrastructure Companies. A cohesive partnership between regulated utilities and competitive market actors will be critical to meeting New Jersey's ambitious energy, environmental, and transportation goals.

However, as discussed further below, while the Charger Ready proposal as currently structured is a key first step to deploying EV infrastructure throughout New Jersey, ChargePoint recommends several enhancements to Staff's proposal.

2. Customer rebates, combined with make-ready incentives, are among the most effective tools to incentivize EVSE deployment

In the Straw Proposal, Staff broadly endorses utility and customer side "make-ready" but proposes, "that charging station infrastructure, or EVSE, costs will be generally borne by private investors, with no recourse to ratepayer funds."³ ChargePoint interprets this statement to eliminate the possibility of customer rebates for EVSE.⁴ However, rebates toward EVSE purchase costs, combined with make-ready incentives, have been utilized by utilities across the country to successfully incentivize deployment of EV infrastructure while minimizing overall program costs.⁵ As discussed further below, the BPU has the authority to authorize rebates for EVSE.

¹ EV Straw Proposal at 7

² Site host means the entity that owns, leases, manages, or otherwise possesses the premises upon which the electric vehicle charging station is or is planned to be located for the purpose of charging an electric vehicle. The site host may also be the utility customer of record and responsible for operation and maintenance of, and paying for the energy delivered to the electric vehicle charging station.

³ EV Straw Proposal at 7.

⁴ It is unclear to ChargePoint if this prohibition would apply to all EV charging use cases, or only public/MUD deployments.

⁵ See, e.g., Alternate Proposed Decision Regarding Southern California Edison Company's Application for Charge Ready and Market Education Programs, CPUC, Docket No. A.14-10-014, (Jan. 16, 2016), available at: <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M157/K682/157682806.PDF>; Petition of the Electric Vehicle Work Group for Implementation of a Statewide Electric Vehicle Portfolio, Case No. 9478, Order No. 88997, (MPSC Jan. 14, 2019), available at: <https://www.psc.state.md.us/wp-content/uploads/Order-No.-88997-Case-No.-9478-EV-Portfolio-Order.pdf>; Decision Directing PG&E to Establish an Electric Vehicle Infrastructure and Education

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Customer rebates should apply to costs associated with private businesses or entities deploying EVSE that meet functional requirements of the utility program to ensure that grid benefits are created. Under this program design, participating EV charging site hosts receive a utility incentive to support the purchase and installation of smart EV charging hardware and software that meet core functional requirements, such as collecting data and providing the ability for load management. Rebate programs have been utilized by investor owned utilities for years supporting energy efficiency programs so there is already an administrative framework making it simple to add EV program incentives without driving up utility costs.

ChargePoint urges the BPU and Staff not to prejudge the ability for utilities to offer customer rebates for EVSE, regardless of use case or market segment. Prematurely eliminating the ability for customer rebates to play a vital role in incentivizing EVSE will impair the State's ability to meet its ambitious transportation electrification goals. Therefore, ChargePoint recommends the Charger Ready proposal be expanded to include customer rebates for EVSE, particularly for priority market segments and Equity Areas. In the alternative, ChargePoint recommends that any rebate program proposed by an EDC be evaluated by the BPU, with input from stakeholders, on a case by case basis through individual utility applications.

ChargePoint recommends that in many cases rebate levels be "partial," meaning something less than the full cost of the EVSE and thus still requiring site host investment ("skin in the game"). These partial rebates should be based on guidelines that are supported by the BPU and Staff with broad stakeholder input and should target residential, workplace and other commercial locations. Higher levels of rebates should be considered for segments that have been traditionally harder to reach due to market barriers, e.g., DCFC or Equity Areas (including LMI communities).

Finally, cost recovery for utility rebates can be approached by treating the rebate as a regulatory asset, thereby allowing both cost recovery and a rate of return on the investment similar to other capital investments.⁶

Program, CPUC, Docket No. 16-12-065 (Dec. 21, 2016); Massachusetts Department of Public Utilities. Docket 17-05. "Order Establishing Eversource's Revenue Requirement." November 30, 2017. (available at <https://eeaonline.eea.state.ma.us/EEA/FileService/V1.4.0/FileService.Api/file/FileRoom/dehehcjj>); New York Public Service Commission. Matter No. 17-00887. "Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Niagara Mohawk Power Corporation d/b/a National Grid for Electric Service." (available at <http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterCaseNo=17-E-0238>) (utility-provided make-ready coupled with EVSE rebates provided by New York State Energy Research and Development Authority).

⁶ See, e.g. In the Matter of the Petition of the EV Work Group for the Implementation of a Statewide EV Portfolio, Case No. 9478, Md PSC (January 14, 2019) (approving rate based rebates for three Maryland investor owned utilities); In the Matter of the Application of Consumers Energy Co for Authority to Increase its Rates, Case No. U-20134, MI PSC (May 19, 2020) (approving rate based rebates for Consumers Energy); In the matter of the Application of DTE Electric Company for Authority to Increase its Rates, Case No. U-20162, MI PSC (May 2, 2019) (approving rate based rebates for DTE); Petition of Virginia Electric & Power Company, For approval of a Plan for

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- a) *The BPU has a long history of authorizing customer rebates to further New Jersey's clean energy goals*

On many prior occasions during the last 30 years, the BPU has exercised its broad regulatory authority to approve similar customer rebate and incentive programs offered by utilities for purchases of equipment that would not be owned by the utilities and has allowed those utilities to recover their associated costs from ratepayers. Several of these BPU orders approving utility rebate and incentive programs pre-dated New Jersey's passage of the Regional Greenhouse Gas Initiative Act ("RGGI Act"), which was enacted in January 2008, the Clean Energy Act ("CEA"), which was enacted in May 2018, and the New Jersey Plug-In Vehicle Act ("PIV Act"), which was enacted in January 2020.

For example, in 1994, five years prior to New Jersey's enactment of the Electric Discount and Energy Competition Act ("EDECA") and long before the RGGI Act, Clean Energy Act, and PIV Act were enacted, the BPU approved utility rebates for the purchase of compressed natural gas-powered vehicles ("NGVs") by utility customers and allowed PSE&G to recover from ratepayers the partial cost of providing these rebates.^{7,8} This NGV incentive program, like the current proposals for electric vehicle charger rebates by utilities, was intended to jump start the market for this transportation technology.

Furthermore, for over a decade the BPU has been approving New Jersey electric utility customer rebate programs for the purchase of energy efficient equipment for residential customers (such as smart thermostats) and incentives for the installation of energy efficient equipment for hospital customers, local government customers, and multi-family building owners.⁹ The BPU also has a long history of approving gas utility customer rebates, including:

Electric Distribution Grid Transformation Projects, Case No. PUR-2019-00154, VA SCC (March 26, 2020) (approving rate based rebates for Dominion).

⁷ *Re Public Service Electric and Gas Company*, 1994 WL 534983 (N.J.B.P.U.), 155 P.U.R. 4th 441 (Sept. 8, 1994).

⁸ *Id.*

⁹ *See, e.g., I/M/O Petition of Public Service Electric and Gas Co. Offering and Energy Efficiency Economic Stimulus Program in Its Service Territory On a Regulated Basis And Associated Cost Recovery Mechanism*, B.P.U. Docket No. EO09010056, (Decision and Order Approving Stipulation, August 1, 2009) ("EEE Program"); *I/M/O Petition of Public Service Electric and Gas Co. for Approval of Its Energy Efficiency 2017 Program and Recovery of Associated Costs*, B.P.U. Docket No. EO17030196 (Order Adopting Stipulation, August 23, 2017) (including Smart Thermostat rebate program). The EEE Program was extended via B.P.U. Docket No. EO11010030 (July 14, 2011) ("EEE Extension I"), and B.P.U. Docket No. EO14080897 (April 15, 2015) ("EEII Program").

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- a 2009 order authorizing South Jersey Gas to implement, among other programs, an enhanced residential heating, ventilation, and air conditioning (“HVAC”) rebate program which was renewed by the BPU several times;¹⁰
- a 2018 order authorizing the New Jersey Natural Gas “SAVEGREEN” program that provides, among other things, rebates to customers for energy efficient products, home energy assessments, and HVAC incentives.¹¹

In addition, the BPU has over multiple years approved PSE&G’s recovery from ratepayers for “Solar Loan” programs that involved the utility’s investment of capital in loans to developers of solar generation facilities that are not owned by the utility.¹²

The BPU’s June 10, 2020, Order Regarding the Establishment of Energy Efficiency and Peak Demand Reduction Programs (“EE Order”) continues its long history of allowing utility rebates and incentives to achieve New Jersey’s energy goals by directing each electric and gas public utility to establish energy efficiency and peak demand reduction programs pursuant to the EE provisions of the Clean Energy Act of 2018, and approving BPU Staff’s recommendations for utility administered rebates and incentive programs for residential, multi-family, and commercial and industrial customers.¹³

As noted by the BPU in its June 10, 2020, EE Order, “[m]any of New Jersey’s electric and gas public utilities offer a variety of EE programs that serve specific markets or customers not explicitly addressed by NJCEP programs or that enhance NJCEP offerings through additional incentives or alternative payback options”, and “[t]he State also administers the Comfort Partners program in conjunction with the utilities, working to offer free energy efficient upgrades to qualified low-income customers”.¹⁴

¹⁰ *I/M/O THE PETITION OF SOUTH JERSEY GAS COMPANY FOR APPROVAL OF AN ENERGY EFFICIENCY PROGRAM (“EEP”) WITH AN ASSOCIATED ENERGY EFFICIENCY TRACKER (“EET”) PURSUANT TO N.J.S.A. 48:3-98.1*, BPU Docket No. GO12050363 (June 21, 2013) (discussing its original approval of the rebate program in its July 24, 2009, order).

¹¹ *I/M/O Petition of New Jersey Natural Gas Company for Approval of Existing and New Energy Efficiency Programs and a Class I Renewable Energy Program and the Associated Cost Recovery Mechanism Pursuant to N.J.S.A. 48:3-98*, BPU Docket No. GO18030355 (September 17, 2018) at 4, ¶ 13.

¹² *I/M/O Petition of Public Service Electric and Gas Co. for Approval of a Solar Loan III Program and Associated Cost Recovery Mechanism*, B.P.U. Docket No. EO12080726 (Decision and Order Approving Stipulation, May 29, 2013) (“Solar Loan III”); *I/M/O Petition of Public Service Electric and Gas Co. for Approval of a Solar Loan II Program and an Associated Cost Recovery Mechanism*, B.P.U. Docket No. EO09030249 (Decision and Order Approving Stipulation, November 10, 2009) (“Solar Loan II”); *I/M/O Petition of Public Service Electric and Gas Co. for Approval of a Solar Energy Program and an Associated Cos Recovery Mechanism*, B.P.U. Docket No. EO07040278 (Decision and Order Approving Settlement, April 8, 2008) (“Solar Loan I”). Notably, the BPU conducted a full evidentiary proceeding regarding the merits of the Solar Loan I program during 2007 (pursuant to the BPU’s general ratemaking authority) prior to the enactment of the RGGI Act.

¹³ *I/M/O the Implementation of P.L. 2018, C. 17 Regarding the Establishment of Energy Efficiency and Peak Demand Reduction Programs*, NJ BPU Docket Nos. QO19010040, QO19060748, QO17091004 (Agenda Item 8D - June 10, 2020) (“EE Order”) at 10, 50, 86.

¹⁴ EE Order at 5-6.

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Moreover, the BPU emphasized in the recent EE Order the long history of utility involvement in demand side management (“DSM”) incentive programs for energy conservation, which the BPU began approving as early as the 1980s.¹⁵

New Jersey law defines “demand side management” as “the management of customer demand for energy service, through the implementation of cost effective energy efficiency technologies, including, but not limited to installed conservation, load management, and energy efficiency measures on and in the residential, commercial, industrial, institutional and governmental premises and facilities in this state.”¹⁶ The PIV Act amended EDECA to include “plug-in vehicles and plug-in electric vehicle charging infrastructure” programs as demand side management programs eligible for funding through the Societal Benefits Charge (“SBC”), which is a charge that appears on ratepayers’ utility bills.¹⁷ Electric vehicle charging infrastructure can serve as a very effective demand side management tool for grid load management if EV charging is incentivized to occur during off peak time periods. New Jersey’s 2019 Energy Master Plan (“EMP”) emphasizes the following demand side management benefits of electric vehicle charging infrastructure:

“Electrified transportation can provide grid benefits such as better utilizing the distribution grid, shaving peak load, and providing power back to the grid. With managed charging, battery EVs can charge when there is excess capacity or reduced demand, better utilizing the distribution grid during off-peak times. Further, as Vehicle-To-Grid technology matures, electrified vehicles on the grid can provide mobile battery storage and load balancing power, which will further reduce or shift energy demand to avoid increased capacity costs.”¹⁸

The NJ 2019 EMP also clarifies that programs designed to increase the use of electric vehicles are energy conservation measures because “[v]ehicle electrification reduces total final energy demand. EVs are more efficient than gasoline-powered vehicles in terms of energy used per mile traveled, and allow New Jersey’s final energy demand to decrease in the Least Cost scenario, even as electricity load increases”.¹⁹ Therefore, in addition to the BPU’s general regulatory authority to approve utility customer rebates and incentives, section 13 of New Jersey’s RGGI Act authorizes the BPU to approve rate recovery for utilities that offer customer rebates for EV charging infrastructure since such infrastructure is an energy conservation measure.²⁰ The RGGI

¹⁵ EE Order at 4 (“The Board began approving utility demand side management (“DSM”) programs for energy conservation in the 1980s and adopted DSM regulations in 1991 that (1) required electric and gas public utilities to offer conservation, EE, and load management programs, known collectively as DSM programs; (2) provided incentives to initiate and implement programs; and (3) permitted cost recovery of the programs and recovery of the fixed cost portion of lost revenues due to the programs.”).

¹⁶ N.J.S.A. § 48:3-51.

¹⁷ N.J.S.A. § 48:3-60(a)(3).

¹⁸ New Jersey 2019 EMP at 62, available at: https://nj.gov/emp/docs/pdf/2020_NJBPU_EMP.pdf.

¹⁹ 2019 EMP at 61.

²⁰ N.J.S.A. § 48:3-98.1(a)(1).

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Act defines “energy efficiency and energy conservation programs” to include both programs that conserve energy and programs for making the use of electricity “more efficient”.²¹

Moreover, the 2019 EMP emphasizes that the importance of developing financing for clean energy projects, including instructing the BPU to “work with utilities, third-party providers, and other industry actors to develop mechanisms to provide rebates at the point of sale. This lessens administrative overhead and lowers barriers to entry for those who otherwise wouldn’t be able to afford waiting for a rebate check.”²² Specifically with respect to electric vehicles, the 2019 EMP repeatedly emphasized the BPU’s authority to facilitate the growth of electric vehicle infrastructure in New Jersey and instructed the Board to explore “both rate-based and non-rate based solutions” to ensure that “utility providers and other stakeholders can offer a significant opportunity for widespread charging deployment across multiple transportation modes and sectors.”²³ The PIV Act should be read in parallel with New Jersey’s 2019 Energy Master Plan because the New Jersey Legislature expressly referenced the Energy Master Plan and its “objectives” as being synonymous with the goals of the PIV Act.²⁴ The PIV Act further states: “The Legislature therefore determines that it is in the public interest to establish goals for the increased use of plug-in electric vehicles in the State, to support the increased use of plug-in electric vehicles by providing incentives for the purchase or lease of such vehicles and for related charging equipment.”²⁵ The PIV sets forth ambitious goals for the development of electric vehicle charging infrastructure in New Jersey, and the New Jersey Legislature expressly provided in the PIV Act that the Board may “pursuant to P.L.2019, c.362 (C.48:25-1 et al.) **and any other existing statutory authority**, adopt policies and programs to accomplish the goals established pursuant to this section.”²⁶ The phrase “any other existing statutory authority” clearly includes the BPU’s general ratemaking and regulatory authority over utilities²⁷ as well as the RGGI Act, Clean Energy Act, and EDECA. As discussed above, the BPU has a long history of exercising its broad authority under all of these statutes to approve utility customer rebates for equipment that will not be owned by the utility. There is absolutely no legal basis or policy justification for the Board to treat utility customer rebates for electric vehicle charging infrastructure differently.

- B. The Straw Proposal should expressly recognize that the EV charging market is growing and dynamic and that there is no one business case for the EVSE industry or for EV charging site hosts

In developing the “shared responsibility” model to deploy EV infrastructure, the Straw Proposal appears to take the position that only EVSE Infrastructure Companies will be site hosts. For

²¹ N.J.S.A. § 48:3-98.1(d).

²² 2019 EMP at 222.

²³ See 2019 EMP at 68.

²⁴ N.J.S.A. § 48:25-1.

²⁵ *Id.*

²⁶ N.J.S.A. § 48:25-3(b) (emphasis added).

²⁷ See, e.g., N.J.S.A. § 48:2-13(a) (“The board shall have general supervision and regulation of and jurisdiction and control over all public utilities...”).

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example, the Straw Proposal states that EVSE Infrastructure Companies would be primarily responsible for, “*Installing, owning, maintaining and marketing the EVSE...*”²⁸ Further, the Straw Proposal assumes that, “*EVSE Infrastructure Companies could charge customers either based on the time of charging or the amount of electricity the customer consum[es].*”²⁹ As discussed below, the Straw Proposal oversimplifies the current market for EV infrastructure.

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. For example, currently charging station providers approach site hosts with their unique products and features, competing with other providers to sell or install charging equipment. Site hosts have an open choice of several options for charging equipment and networks from different providers with different business models. Site hosts also compete for EV drivers in providing charging services and set their pricing and access features in ways that will attract drivers to their sites. In most cases, it is the site host, not the EVSE Infrastructure Company, that owns and operates the charging equipment.

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. As an example, for DCFC, a significant driver of value for site hosts are the ancillary transactions that take place while a driver is charging up an EV. The assumed EVSE Infrastructure Company model in the Straw Proposal only considers a model which primarily depends on driver revenues or subscriptions and are unable to account for other value streams associated with the site host. Site hosts balance costs against the value created by hosting a station, which are often beyond direct revenue that may be generated. Non-financial benefits include providing fringe benefits to attract and retain employees, attracting new customers and have them stay for longer periods of time for businesses, meeting sustainability goals for local governments and businesses, appealing to new tenants, amongst many others. Additionally, the vast majority of EV charging does not take place at public charging stations.³⁰ Residential customers acquire EVSEs for use at home in order to take advantage of faster charging and provide for a connected user interface to support scheduling and tracking of charging at home.

According to the Department of Energy’s Alternative Fuels Data Center (“AFDC”), across New Jersey, there are 791 public charging outlets,³¹ or ports, utilizing a standard connector that enable charging of any model of EV deployed by nine EV charging companies. Of those 791 outlets, there are 122 DC fast ports and 669 Level 2 charging ports. It is important to note that the AFDC total does not include essential, non-public charging locations, such as workplace and residential, that

²⁸ EV Straw Proposal at 9.

²⁹ EV Straw Proposal at 9, FN 4.

³⁰ See, e.g., DoE at, <https://www.energy.gov/eere/electricvehicles/charging-home>, (most plug-in electric vehicle drivers do more than 80% of their charging at home.)

³¹ U.S. DoE Alternative Fuel Data Center; filtered by New Jersey, Electric Fuel, Level 2 and DC Fast, Standard Connectors J1772/CCS/CHAdeMO; Accessed June 8th, 2020. Despite the best efforts of this database to include all public chargers, it is likely this number is undercounting the total numbers simply due to a delay in registering new installations.

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are often cornerstones of successful utility EVSE programs. The vast majority of these public charging stations have been the result of site host investment, in whole or in part. This is an emerging market defined by natural demand and private investment across a diversity of communities. As EV adoption continues to grow and become more widespread in New Jersey, we will continue to see greater and increasing demand for EV charging solutions in new areas. ChargePoint and its competitors will continue to market and sell charging stations to a variety of site hosts in New Jersey, who own and operate those charging stations on their properties. As such, the Straw Proposal's assumption that all charging stations will be owned and operated by an EVSE Infrastructure Company does not accurately reflect the market, and New Jersey's EV Ecosystem should be developed with a recognition of all business models.

The Straw Proposal also assumes there are two methods for site hosts to price charging services. However, networked EV charging stations provide site hosts with the ability to set pricing for EV charging services in many ways. These dynamic pricing tools allow charging station hosts to incentivize driver behavior, which is essential given that EV charging is a combination of vehicle refueling and parking. Flexibility in pricing allows site hosts to tailor pricing to the unique needs of the site, including, but not limited to:

- A free charging session;
- A fixed rate for the session, for which the driver pays a set fee for the entire session;
- An energy rate, for which the driver pays for the energy consumed on a per kilowatt-hour (kWh) basis;
- An hourly rate, for which the driver pays per hour, similar to how a parking meter operates;
- Length-of-Stay pricing, for which one price is charged during the first x hours and another price is charged for every hour afterwards;
- Time-of-Day pricing, for which one price is charged during peak hours and another during off-peak hours.
- A minimum and/or a maximum fee per session;
- A combination of the above, in which, for example, a flat session fee followed by an hourly rate, an hourly rate followed by per kWh pricing, a minimum session fee followed by an hourly rate, or a free period of time followed by per kWh pricing; and
- Driver groups, for which station owners may set unique policies for different classifications of drivers (e.g. employees vs. visitors) using the options above.

ChargePoint recommends the Straw Proposal be revised to not restrict the manner in which a site host may price EV charging services to customers.

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- C. The Straw Proposal should not require DCFC chargers to simultaneously charge two vehicles

The Straw Proposal establishes “*certain performance requirements*”³² that an EVSE Infrastructure Company must accept in order to use an EDC-funded Charger Ready location. One requirement is that an EVSE Infrastructure Company, “*Commits to using chargers capable of handling more than one EV, such as dual-port chargers, wherever technically feasible.*”³³ ChargePoint interprets this requirement to mean that each EV charger deployed under the Charger Ready program must be capable of charging two vehicles *simultaneously*.

ChargePoint recommends that Staff allow site hosts more flexibility in selecting the appropriate charging solution when participating in the Charger Ready program given the wide array of charging solutions provided by the EVSE industry.

For L2 stations, many EVSE manufacturers offer both single and dual-port stations. Dual-port stations allow up to two vehicles to charge simultaneously. This can be supported by dedicated electrical circuits for each connector, or by sharing a single circuit between the two connectors.

For DC fast charging, EVSE manufacturers generally provide multiple ports to allow drivers whose vehicles use different connector standards to plug in. Typically, publicly accessible DCFC provide both an SAE Combo Charging System (CCS) or CHAdeMO connector. Due to the design considerations for DC fast charging, most solutions on the market allow for only one of the connectors to be in use at any time at a given station.

We respectfully recommend that Staff remove the requirement that charging solutions be able to charge two vehicles simultaneously, to allow EVSE Infrastructure Companies to deliver the best charging solution for the site host.

- D. The Straw Proposal should be expanded to incentivize transportation electrification across the entire EV Ecosystem to include medium and heavy-duty EV charging applications and commercial fleets

As recognized in the Straw proposal, “*New Jersey needs to create a comprehensive EV Ecosystem that provides consumers with easy access to electric vehicle charging infrastructure where they work and play.*”³⁴ However, Staff has limited the Charger Ready Straw Proposal to publicly available light duty and MUD charging infrastructure. By only considering a small subset of the EV Ecosystem, Staff may have inadvertently limited the effectiveness of the Charger Ready proposal. The Charger Ready program, as currently constructed, will lead to an over-deployment of EVSE at public locations and under-deployment of EVSE at workplaces. More importantly, this

³² EV Straw Proposal at 10.

³³ EV Straw Proposal at 11.

³⁴ EV Straw Proposal at 1.

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program would fail to account for the significant value for ratepayers and the public created by deploying workplace and residential EVSE.

ChargePoint recommends the Straw Proposal be expanded to incentivize transportation electrification across the entire EV Ecosystem by including public and non-public EVSE locations. Making all charging locations eligible to receive Charger Ready incentives will increase effectiveness of the program and increase benefits for all ratepayers:

- Over 90% of EV charging takes place at home and work.³⁵ The EVSE-related load at residential and workplace locations is flexible and responsive to price signals, as drivers at these locations typically park for extended periods of time.
- Workplace and residential charging load profiles are good matches to support increased volumes of variable energy resources like wind and solar on the grid, because it can be moved to times when variable renewable energy resources are more prevalent.³⁶
- Supporting the deployment of EVSE at workplaces, where availability thereof makes employees six times more likely to buy an EV, would accelerate the achievement of New Jersey's EV goals.³⁷
- Multiple medium and heavy-duty vehicles have been announced and will hit the market within the term of the Charger Ready Program, including: Freightliner eM2 106 (medium duty delivery truck), Peterbilt Motors 220EV (medium duty truck), Navistar eMV (medium duty truck), Freightliner eCascadia (heavy duty highway tractor), Mack Trucks LR BEV (heavy duty refuse truck), Tesla Semi (heavy duty truck), and Volvo VNR (heavy duty regional-haul truck). The Charger Ready Program should be designed to ensure support for operators interested in electrifying their medium and heavy-duty fleets, especially since upfront charging infrastructure is a core barrier in this sector.

States across the country, including Wisconsin,³⁸ Ohio³⁹ and Michigan⁴⁰ are moving forward to incentivize fleet and workplace transportation electrification and we urge the BPU to similarly address these vital transportation segments. New Jersey's 2019 Energy Master Plan supports

³⁵ Smart, John, *Lessons Learned About Workplace Charging in the EV Project*, Idaho National Labs (2015), available at https://www.energy.gov/sites/prod/files/2015/07/f24/vss170_smart_2015_p.pdf.

³⁶ Regulatory Assistance Project, "Beneficial Electrification of Transportation," at 37 (Jan. 2019) ("RAP 2019 Electrification Report"), available at <https://www.raonline.org/wp-content/uploads/2019/01/rap-farnsworth-shipleigh-sliger-lazar-beneficial-electrification-transportation-2019-january-final.pdf>.

³⁷ U.S. DOE, Workplace Charging Challenge, available at: https://www.energy.gov/sites/prod/files/2017/01/f34/WPCC_2016%20Annual%20Progress%20Report.pdf.

³⁸ Application of Northern States Power, as an Electric Utility, for Approval of Electric Vehicle Service Programs, Wisconsin PSC Docket 4220-TE-104 (Proposed).

³⁹ I/M/O the Application of Uke Energy Ohio, Inc. for Authority to Adjust its Power Forward Future Initiatives Rider, Ohio PUC Docket 19-1750-EL-UNC (Proposed).

⁴⁰ I/M/O the Application of Consumers Energy Company for Authority to Increase its Rates for the Generation and Distribution of Electricity and for Other Relief, Michigan PSC Case U-20697 (Proposed).

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ChargePoint's recommendations regarding incentivizing fleet and workplace transportation electrification:

[T]his shared responsibility model ensures that utility providers and other stakeholders can offer a significant opportunity for widespread charging deployment across multiple transportation modes and sectors (i.e., residential, multifamily, **workplace, fleets**, and public DC fast charging), using both rate-based and non-rate-based solutions, and resulting in diminished consumer "range anxiety" and increased EV adoption rates.

....State agencies will work with industry leaders and manufacturers to establish which kinds of vehicles (e.g., buses, refuse trucks, delivery trucks, drayage trucks, jitneys, etc.) should be incentivized as "first adopters" to further drive development and enable the technologies and efficiencies established in the early generations of vehicles to inform future vehicle manufacturing. NJEDA is finalizing a Request for Information aimed at commercial fleet owners, supply chain companies, and other related parties (e.g., truck leasing/financing), and **will offer electric truck purchase incentives beginning in the second half of 2020**. When this nascent market is more fully developed, the state will establish transition goals to EVs for the **medium- and heavy-duty fleet**. Further, the state will work with local industry to create incentives to encourage EV adoption for local delivery to reduce the emissions around warehouses and ports (see Goal 1.3). The strategy adopted should take account of opportunities that may exist for New Jersey to participate in the development of the supply chain for these vehicles by bringing relevant assembly and manufacturing jobs to the state. Finally, the state will also work with school district-owned and commercially-owned school bus fleet operators to incentivize and encourage EV adoption as a means to upgrade fleets and reduce operating costs. Those may include, as an example, incentives for Boards of Education that prioritize contracting with bus companies that utilize EVs.

New Jersey should also consider **truck and bus rebate or grant programs** to reduce the incremental up-front cost of purchasing EVs over their conventional counterparts, or explore a state-wide procurement mechanism wherein the batteries in medium- and heavy-duty EVs are leased, thereby reducing the up-front cost of one comparable to a new diesel vehicle, and allowing the reduced operating costs (e.g., for fuel and maintenance) to cover the battery lease payments over time. In addition, agencies such as NJEDA should work with private lenders and trucking industry participants to develop longer term loan products that can enable the lower projected operating costs for EV trucks and buses to more effectively provide for the payback of the high upfront investment in electric versions of vehicles. The state could also help facilitate financing for bulk purchases to drive down capital procurement costs. New Jersey will work with transportation network companies, as discussed earlier, to advance the

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deployment of public charging infrastructure along busy transportation corridors and within urban areas and to ensure private sector support for an electric fleet transition.

....New construction offers New Jersey the most cost-effective opportunities to incorporate modern technologies into buildings. As discussed earlier in Strategy 1: Reduce Energy Consumption and Emissions from the Transportation Sector, a common barrier to electric vehicle (EV) adoption is the lack of charging opportunities, **particularly at the workplace** and at multi-unit dwellings. The state should consider mechanisms, such as new legislation or incentives, to ensure that new commercial and multi-unit dwelling construction are built to EV-ready standards. Development of these mechanisms should be done in conjunction with stakeholders and local municipalities.⁴¹

E. EV chargers deployed pursuant to the Charger Ready Program should meet minimum specifications

ChargePoint understands that in developing the Straw Proposal, Staff focused largely on the Charger Ready aspects of the Ecosystem, rather than the EV charging infrastructure that will be deployed. However, in doing so, Staff misses an opportunity to set minimum functional requirements that any EVSE installed under the Charger Ready program must meet.

ChargePoint recommends that any EVSE installed under the Charger Ready program shall require advanced charger capabilities in order to future-proof any investments, and reduce Staff's concerns with EVSE obsolescence. Advanced, or smart, chargers will be vital to ensuring that EV charging benefits New Jersey's grid by enabling the EDCs, or third-parties, to have advanced remote load management controls to facilitate off-peak charging and other managed charging strategies.⁴² An advanced charger can also collect interval data to inform usage patterns, and provide enhanced network communication capabilities between the EV driver and the utility, or third-party systems. Specifically, ChargePoint recommends that chargers have the ability to connect to a network, be UL certified, have smart energy management and data storage capabilities, and low standby power consumption (which may be demonstrated by ENERGY STAR certification). By requiring advanced chargers from the outset, the BPU and Staff will enable program administrators, vendors, and customers to reap significant benefits from increased functionality, wider program design options, and ultimately a more successful program deployment. In addition, networked charging would obviate the need for installation of AMI meters in many use cases thereby lowering the overall cost for a customer to install EV charging infrastructure.

⁴¹ NJ 2019 EMP at 68, 74-75, 166 (emphasis added).

⁴² ChargePoint notes that managed charging may be appropriate for residential charging for Level 2 stations but may not be appropriate for public DC fast charging stations, where it is more difficult for drivers to plan their routes or change charging behavior.

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Furthermore, ChargePoint recommends that EDCs should be required to develop a methodology to qualify EVSE equipment and to regularly update the list of qualified charging solutions to keep up with the pace of innovation and allow site hosts to best meet the evolving needs of drivers, site hosts, and grid operators.

F. Establish a Charger Ready Advisory Council to inform program evaluation

The Straw Proposal is silent on program evaluation and reporting guidance. ChargePoint requests that Staff and the BPU consider providing guidance on these topics as part of this proceeding. The Charger Ready program is a complex program with many interrelated activities and market players. Regular review and check-ins on the efficacy of its various elements will ensure it swiftly adapts to technological and market developments and takes advantage of valuable insights from participating stakeholders.

In order to increase program transparency and accountability, we recommend establishing a Charger Ready Advisory Council (“CRAC”) that would meet quarterly to review pertinent metrics and evaluate program options. The CRAC would also inform a formal bi-annual program review by the BPU.

We recommend that the CRAC be comprised of representatives from relevant constituencies, including Staff, municipalities, public agencies and authorities, the EDCs, EV charging industry, environmental justice advocates, labor and installation partners, environmental stakeholders, and the automotive industry.

We further recommend that each EDC, in consultation with the CRAC, be directed to file annual reports detailing the status of its individual program implementation, lessons learned, and potential enhancements to the program to ensure full deployment is achieved. The reports should include, at minimum: number of sites made Charger Ready; number of Charger Ready sites operational; location of each deployment; average time to make locations Charger Ready and, how many Charger Ready sites are in Equity Areas.

III. Comments on Ensuring Equitable Distribution of EVSE

ChargePoint applauds the Straw Proposal’s focus on ensuring, *“equitable geographic diversity, particularly with respect to ensuring a viable EV ecosystem in low-income, urban, environmental justice communities, or rural communities [collectively Equity Areas] ...If the market is not delivering EV services to a particular Equity Area, within a given timeframe, the EDCs would be eligible to act in lieu of an EVSE Infrastructure Company, meaning that it could directly own and operate the EVSE.”*⁴³ The Straw Proposal refers to this as a “Last Resort” function by the EDCs. Staff is seeking stakeholder comment on proper criteria to implement any “Last Resort” function by the EDCs.

⁴³ EV Straw proposal at 11-12.

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A. EDC “Last Resort” function

ChargePoint understands Staff’s concern that the market may not deploy charging equipment when and where desired. However, ChargePoint stresses that the BPU must provide sufficient time for the market to meet customer needs. As stated in the EV Stakeholder Workshop on June 3rd, “a Last Resort must mean last resort”.⁴⁴ As such, ChargePoint believes it is premature to request EDCs submit proposals to establish a process and timeframe for EDCs to provide a “Last Resort” function by owning and operating EV charging stations.⁴⁵ Specifically, combining Charger Ready with EVSE rebates for these “Equity Areas” should first be tested, given these are less costly, less risky for ratepayers, and more flexible alternatives to accelerate the market. Further, ChargePoint argues that it is premature to determine the “Last Resort” function can only be met by an EDC owning and operating EV Charging stations.

Prior to authorizing EDCs to own and operate EV charging stations, ChargePoint encourages the BPU to carefully consider whether and under what circumstances supplemental EVSE incentives can be made available. We recommend that prior to considering utility ownership and operation of EV charging stations, the BPU should establish a stakeholder working group to determine whether additional financial incentives (i.e., rebates covering EVSE and related operating costs) are necessary to support EVSE deployment at (i) strategic locations and (ii) underserved communities. Granting EDCs the flexibility to propose additional incentives in response to unique community needs will support wider and more equitable access to electric transportation. Authorization for additional incentives could be granted temporarily by the BPU and revisited at the bi-annual review.

Should the BPU feel it necessary to determine a timeframe for when the market is not delivering EV services to Equity Areas in this proceeding, ChargePoint recommends a period of not less than 24 months from the commencement of provision of make-ready and EVSE rebate incentives to provide the market appropriate time to respond.

B. EDC ownership of EVSE

ChargePoint believes it is premature to consider EDC ownership and operation of EV charging stations. However, should the Board consider direct ownership of EVSE by utilities in this proceeding, ChargePoint respectfully recommends that the Board identify program requirements associated with such ownership to avoid any unintended market impacts.

For example, the Board should ensure that such utility-owned EVSE include local site host choice of at least two vendors for both hardware and software and choice over whether to flow through the applicable EV rate charged by the utility to the driver or to flow through alternative pricing

⁴⁴ Stephanie Brand, NJ Rate Counsel, EV Workshop, available at: www.njcleanenergy.com/ev, at 1:15:51.

⁴⁵ EV Straw Proposal at 13.

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to the driver (with the site host responsible for the applicable EV rate in both circumstances). In doing so, market forces can still be in play, private market actors will be encouraged to invest their own capital and local site hosts will be able to maximize station utilization and optimize the driver experience. Examples of such programs that include utility ownership with local site host choice and control include San Diego Gas & Electric “Power Your Drive” and Pacific Gas & Electric’s EV Charge Network in California.⁴⁶

In addition, the Board should develop appropriate procedural valves/gates to avoid prematurely authorizing utilities to directly own and operate publicly-available EV charging stations. For example, in response to National Grid’s proposal to own & operate public EVSE, the Rhode Island Public Utility Commission (“RIPUC”) required that the Company first pursue non-ownership incentives (i.e., make ready and rebate) for at least one year before returning to the RIPUC with a proposal to own and operate EVSE. Requiring a “waiting period” was an important factor in ensuring the prudence of ratepayer investments.⁴⁷ Indeed, National Grid identified in its first annual filing that it would defer consideration of ownership for an additional year.

IV. Comments on The Proposed EV Mapping Effort

The Staff Straw proposal establishes a process combining an ‘EV Mapping Effort,’ which refers to an effort, *“to map existing and proposed EV Ecosystem investments, under the lead of the Department of Environmental Protection (“DEP”), in conjunction with the Board and other Agencies,”*⁴⁸ with a ‘Charger Ready Map Proposal,’ which *“is a proposal from an EDC which pre-identifies areas that are suitable for Level Two or DC Fast Charging based on the EV Mapping Effort.”*⁴⁹ ChargePoint understands Staff’s desire to coordinate the deployment of resources to create a robust EV Ecosystem, however the proposal provides few guidelines regarding how the mapping efforts will be conducted, the timeframe in which the efforts will be completed, or who will participate in the mapping efforts.

Utilities and regulatory agencies can, and should, play a central role in supporting the deployment of EVSE in New Jersey. However, ChargePoint is concerned that the proposed process would (a) inadvertently exclude critically important locations and participants and (b) unduly burden utilities with the responsibility of designing comprehensive EV charging networks without the assistance of third-parties with significant industry experience. ChargePoint requests clarification from Staff and the BPU that site hosts and EVSE Infrastructure Companies can request sites be made Charger Ready whether or not the site has been identified via either mapping effort.

⁴⁶ See, Decision Regarding Underlying Vehicle Grid Integration Application and Motion to Adopt Settlement Agreement, CPUC, Docket No. A.14-04-014 (January 28, 2016); Decision Directing PG&E to Establish an Electric Vehicle Infrastructure and Education Program, CPUC, Docket No. 16-12-065 (Dec. 21, 2016);

⁴⁷ In Re: The Narraganset Electric Company d/b/a national Grid Proposed Power Sector Transformation Vision and Implementation Plan, Rhode Island PUC Docket No. 4780. (Order Issued may 5, 2020), Available at: [http://www.ripuc.ri.gov/eventsactions/docket/4770-4780-NGrid-Ord23823%20\(5-5-20\).pdf](http://www.ripuc.ri.gov/eventsactions/docket/4770-4780-NGrid-Ord23823%20(5-5-20).pdf)

⁴⁸ EV Straw Proposal at 5.

⁴⁹ EV Straw Proposal at 4.

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Additionally, a site not being identified during the mapping processes should not impede, in any way, the work necessary to make the location Charger Ready.

A. Encourage site host recruitment without restricting participation

Staff's Straw Proposal establishes that EDCs will, *"Develop hosting maps in conjunction with the EV Mapping Effort that identify where to prioritize making sites Charger Ready...while avoiding lengthy and costly distribution upgrades."*⁵⁰ ChargePoint recommends that the Charger Ready proposal allow for a variety of participants and avoid imposing strict eligibility criteria based on load capacity and/or site host business models.

Load serving capacity data is critically important to inform developers and site hosts and should be an important consideration when deploying EVSE. However, installation and interconnection costs are not the sole consideration. Other key site considerations include, but are not limited to: safe and well-lit access; access to key locations and amenities (workplaces, dining, restrooms, shopping); and wi-fi and cell connectivity.

As stated previously, EV charging stations are not only operated by entities whose sole business is the provision of charging services. The EV charging market is growing and dynamic, and there is not a uniform business model for the 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.

Should Staff prefer to impose strict eligibility criteria, we recommend delaying such implementation until the first bi-annual program review to allow for collaborative development of criteria through the CRAC process.

B. Recruit program participants through multiple channels

We recommend against making utilities bear the sole responsibility for identifying priority Charger Ready locations. Instead, we recommend that the Straw Proposal allow for EVSE Infrastructure Companies to develop appropriate locations and for independent site hosts to directly participate in the Charge Ready program.

Allowing for broad customer engagement by third-party vendors, and by independent site hosts themselves, would be in both customers' and the public interest. There are no one-size-fits-all charging solutions, and EVSE providers often work closely with site hosts to provide customized infrastructure and equipment deployment solutions that meet their specific needs, which reduces the risk of stranded assets.

⁵⁰ EV Straw Proposal at 8-9.

Including third-parties in developing locations and recruiting site hosts would not prevent utility engagement with potential program participants, nor would it delay the program. Utilities should, of course, freely engage with their customers about the Charger Ready program, provided that such utility engagement does not inadvertently limit third-party participation.

V. The Straw Proposal Inappropriately Directs EDCs to Identify “Poor Performing EVSE Infrastructure Companies”

In the Straw Proposal, Staff, “*proposes that the EDCs will jointly establish and file for Board approval criteria for identifying Poor Performing EVSE Infrastructure Companies (i.e., not adequately maintaining operational equipment)*”⁵¹

ChargePoint supports ensuring robust consumer protection mechanisms for EV charging in New Jersey, which are critical to drivers, site hosts, and the general public. However, we are concerned that requiring EDCs to carry out consumer protection functions would be inconsistent with state law and prematurely impose requirements that should otherwise be administered through existing state agency channels.

The New Jersey Legislature recently found that the provision of EV charging is “a service and not a sale of electricity by an electric power supplier or basic generation service provider.”⁵² As the provision of competitive services is outside the BPU’s jurisdiction, it would be more appropriate for related consumer protection issues to be overseen by the Office of Weights and Measures within the New Jersey Division of Consumer Affairs.⁵³ Similar offices around the country have begun to implement the *Tentative Code for Electric Vehicle Fueling Systems*, which is included in Section 3.40 of the National Institute of Standards and Technology’s (NIST) Handbook 44.⁵⁴

To the extent that the Board would seek to ensure ongoing operations and maintenance of stations deployed under the auspices of the Straw Proposal, ChargePoint recommends including a requirement that participants commit to keeping EV charging equipment maintained and operational with a 95% annual uptime guarantee for a minimum term (e.g., five years).

⁵¹ EV Straw Proposal at 11.

⁵² N.J.S.A. § 48:25-1 .

⁵³ NJ Division of Consumer Affairs website, <https://www.njconsumeraffairs.gov/OWM/Pages/default.aspx> (“The New Jersey Office of Weights and Measures tests and inspects all commercially used devices from prescription pharmacy balances to large capacity truck scales. In addition, the office is responsible for testing fuel meters, airplane fuel trucks located in area airports, laser guns and radar tuning forks used for speed enforcement and portable vehicle scales used in highway safety programs. This is just a small sample of the devices tested and inspected annually by the New Jersey Office of Weights and Measures....The New Jersey Office of Weights and Measures core mission is to protect consumers from unscrupulous business practices and maintain equity in the marketplace.”).

⁵⁴ See Appendix A.

VI. Comments on Rate Reforms Designed to Encourage Adoption of Electric Vehicles

A. New Jersey should develop alternatives to traditional, demand-based rates

As Staff correctly notes, *“DC Fast Chargers, have a large instantaneous draw, which can create large demand charges, particularly when such stations are combined into “banks” of chargers. This problem is particularly acute in the early days of EV adoption, where some stations may have relatively few monthly charging sessions over which to recoup a high demand charge.”*⁵⁵

ChargePoint appreciates Staff’s acknowledgement of the burden traditional demand charges place upon DCFC stations and we support the recommendation to consider alternatives to traditional demand-based rates to sensibly address this challenge. However, ChargePoint believes it is premature to limit the potential solutions to, *“either wave demand charges associated with EV charging or develop a rebate methodology that ensures that the effective \$/kW-hour rate (i.e., the demand charge averaged over the number of kW-hours used in a given month added to the standard \$/kW-hour rate) remains below a specified “setpoint.”*”⁵⁶

While short-term subsidies like those identified in the Straw proposal can offset burdensome demand charges, as stated at the workshop, multiple approaches to rate design are necessary because there is not a singular use case for EV charging.⁵⁷ ChargePoint believes that it is critical for the Board to ensure the development of long-term, sustainable, tariff-based solutions that reflect actual costs and benefits to the grid of EV load, rather than short-term subsidies. We urge the BPU 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. Many examples have already successfully been implemented or are currently being developed in other jurisdictions. For example:

- Charging stations can be separately metered with unique “EV Charging” rates, reflective of marginal costs and benefits to serve the EV charging use case in question.⁵⁸
- Replacing or pairing demand charges with higher volumetric pricing to provide greater certainty for charging station operators with low utilization. This rate could be scaled based on utilization or load factor as charging behavior changes over time.⁵⁹

⁵⁵ EV Straw Proposal at 12.

⁵⁶ EV Straw Proposal at 13.

⁵⁷ Adam Benshoff, Edison Energy Institute, EV Workshop, available at: www.njcleanenergy.com/ev, at 4:58:11.

⁵⁸ Alternative rate structures have been recently approved in California by Pacific Gas & Electric (PG&E) and Southern California Edison (SCE) to the California Public Utilities Commission.

⁵⁹ Pacific Power has implemented such a rate in Oregon, providing for a demand charge transition discount of 90% and an on-peak energy charge transition discount of 10%, and reducing the demand charge transition discount gradually each year to 0% while increasing the on-peak energy charge transition discount gradually each year to 100%. See Pacific Power, Oregon Schedule 45, Public DC Fast Charger Optional Transitional Rate Delivery Service at

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- Implement a “rate limiter” as EV adoption increases, in which the average cost equivalent of a customer’s demand charges would be limited to no more than a set cents/kWh value.⁶⁰
- Forgive a portion of billed demand when the customer has a low load factor.⁶¹

B. New Jersey should avoid short-term subsidies, like the set point method, to fix long-term problems

1. The set point subsidy is designed to solve a different problem than that which is faced by DC fast charging site hosts

Traditional, demand-based commercial and industrial electricity rates are misaligned with low load-factor use cases like DC fast charging. 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.

In contrast, the set point method has been described by Atlantic City Electric as a short-term “incentive to offset the customer’s demand charges” in the form of a “monthly rebate to reduce the effective cost of electricity.”⁶² As envisioned in the Straw Proposal, Staff suggest that the “*actual level of the set point would be agreed to by the EDCs, in conjunction with interested stakeholders, and then filed with the Board,*” and would “*be benchmarked so that electric vehicle charging remains below the equivalent cost of diesel or gasoline on a per-mile traveled basis.*”⁶³

ChargePoint is generally supportive of proposals that mitigate the significant cost of demand charges that are borne by EVSE site hosts, be they operators of highway corridor chargers, municipal electric fleets, or state agencies like NJ Transit. We acknowledge that the set point method would likely lower the cost to operate DC fast chargers for customers that are allowed to participate in the program. However, we are concerned that the set point subsidy is an unsustainable and inappropriate method to mitigate unintentional flaws in rate design.

Specifically, the set point subsidy:

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. Approved in Oregon PUC Docket No. 485 on May 16, 2017.

⁶⁰ Ameren implemented such a rate in Illinois, which was designed to limit the average monthly cost for customers who limited their total kWh usage during the four summer billing periods of June through September to 20% or less of their annual kWh consumption. See <https://www.ameren.com/-/media/rates/files/illinois/aiel14rt4.pdf>. (Docket No. 16-0387).

⁶¹ Xcel Minnesota’s general service rate offers an example of this approach, see https://www.xcelenergy.com/staticfiles/xcel/Regulatory/Regulatory%20PDFs/rates/MN/Me_Section_5.pdf.

⁶² Petition by ACE at 18.

⁶³ EV Straw Proposal at 13.

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- **Fails to address geographic variability in DCFC load factor.** DCFC utilization will continue to vary greatly based on a number of different factors beyond light-duty EV adoption. For example, DCFC deployed in a less-traveled corner of an EDC's service territory will consistently experience lower utilization than a high-density corridor deployment, irrespective of statewide EV adoption. It would be short-sighted to assume that the unintended impacts of demand charges will be overcome at the conclusion of a short-term rate subsidy.
- **Pegs the price of electricity to the price of gasoline.** The Straw suggests that set point subsidies would depress the cost of EV charging at a DCFC enrolled in a C&I electricity rates below the market price of gasoline. This would be an inappropriate use of ratepayer funds. Gasoline prices are determined by market prices, not by the Board. In contrast, a site host's electricity costs are based in part on the Company's distribution and transmission costs, both of which have no relation whatsoever to the price of gasoline and fail to appropriately capture the cost to serve DCFC customers.
- **Provides discriminatory relief from demand charges.** Electricity rates are made available to customers on a nondiscriminatory basis, and so subsidies that offset structural problems with C&I should similarly be made available without discrimination. We are concerned that, in practice, this would not take place. For example, ACE proposed to limit set point subsidy eligibility to new customers that participate in an infrastructure make ready program, thereby excluding existing C&I customers and customers that do not elect to participate in an infrastructure deployment program.

We respectfully urge the Board to require utilities to develop alternatives to traditional, demand-based tariffs to provide customers in New Jersey with sustainable, cost-based, long-term solutions reflective of actual marginal net costs to serve EV chargers. Such a long-term sustainable rate design is necessary to attract private capital investment in the long-term.

C. EV TOU rates

ChargePoint supports the Staff straw proposal requirement, *"that each EDC offer a time-of-use rate for EV chargers designed to reward customers who charge during periods where electricity is cheap."*⁶⁴ Incentivizing EV charging to take place during off-peak periods through TOU rates can lead to increased utilization of existing utility assets and avoid the need for additional capacity and grid infrastructure. However, TOU rates may not be a perfect application for public DCFC stations since these stations are often used by EV drivers that cannot adjust their usage to avoid the impact of higher priced TOU time periods. This user group may include drivers traveling longer distances on highways unable to schedule their stops to align with changes in pricing or charger availability caused by higher priced TOU time periods. Therefore, any rates should be

⁶⁴ EV Straw Proposal at 13.

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developed with careful consideration of the needs of both site host utility customers and EV drivers, and with an express goal of avoiding unintended consequences.

VII. Recommended Changes to Charger Ready Terminology

Based on the comments above, ChargePoint recommends the following modifications, deletions and/or additions to Staff's proposed terminology (Section III of the Straw proposal).

- "EVSE Infrastructure Company" refers to an entity that offers EVSE and/or associated software/cloud and other services in support of operating EV charging stations, using private capital to deploy Electric Vehicle Service Equipment (i.e., "charging station infrastructure"). An EVSE Infrastructure Company cannot be an EDC, affiliated with an EDC, or controlled by an EDC, unless otherwise approved by the Board.
- "Operational" means a charging location that an EVSE Infrastructure Company, or site host, would be required to maintain and promptly fix, in accordance with industry standards, in the event of malfunctioning hardware or software that would impede the use of the equipment by a consumer.
- ~~"Poor Performing EVSE Infrastructure Companies" means EVSE Infrastructure Companies that fail to regularly maintain or promptly fix malfunctioning locations in accordance with industry practices, i.e., EVSE Infrastructure Companies that fail to maintain Operational charging locations, as defined above.~~
- "Site Host" means the entity that owns, leases, manages, or otherwise possesses the premises upon which the electric vehicle charging station is or is planned to be located for the purpose of charging an electric vehicle. The site host may also be the utility customer of record and responsible for operation and maintenance of, and paying for the energy delivered to the electric vehicle charging station.

VIII. Conclusion

ChargePoint appreciates the opportunity to provide comment on Staff's Straw Proposal, which would establish a comprehensive statewide EV Ecosystem to support the deployment of EV charging stations throughout New Jersey. Our recommendations would strengthen the proposed EV Ecosystem by accelerating the achievement of New Jersey's statewide energy and environmental goals, minimizing costs and maximizing benefits for ratepayers, and ensuring that New Jersey builds out a robust electric transportation network. ChargePoint reserves its rights to provide additional comments as this process develops, and additional stakeholders weigh in.