BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

Docket No. 20-035-34

Application of Rocky Mountain Power for Approval of Electric Vehicle Infrastructure Program

---

DIRECT TESTIMONY OF JUSTIN D. WILSON ON BEHALF OF CHARGEPOINT, INC.

October 19, 2021

Table of Contents

I. Introduction and Summary of Recommendations

Q: Please state your name.

A: My name is Justin D. Wilson.

Q: By whom are you employed and in what position?

A: I am a Director of Public Policy at ChargePoint, Inc (ChargePoint).

Q: Please describe your qualifications, including your background, experience, and expertise.

A: In my current role, I direct ChargePoint's regulatory efforts in twenty-two states, including Utah. I engage on behalf of ChargePoint at utility regulatory commissions, state legislatures, and other state agencies to promote public policies that expand electric vehicle infrastructure and advance best practices within the electric vehicle charging industry.

My relevant professional experience appears in my CV, which is attached as Attachment JDW-1.

Q: Please describe ChargePoint.

A: ChargePoint is a world leading electric vehicle (EV) charging network, providing scalable solutions for every charging scenario from home and multifamily to workplace, parking, hospitality, retail and transport fleets of all types. Today, one ChargePoint account provides access to hundreds of thousands of places to charge in North America and Europe, including more than 2,000 across Utah. To date, more than 98 million charging sessions have been delivered, with drivers plugging into the ChargePoint network every two seconds or less. Additionally, ChargePoint has worked closely with the State of Utah, the Utah Department of Administrative Services, and Rocky Mountain Power, to install 121

Level-2 dual-port ChargePoint charging stations across twenty-three state-owned facilities.[1]

ChargePoint's cloud subscription platform and software-defined charging hardware is designed to enable businesses to support drivers, add the latest software features and expand fleet needs with minimal disruption to overall business. ChargePoint's hardware offerings include Level 2 (L2) and DC fast charging (DCFC) products, and ChargePoint provides a range of options across those charging levels for specific use cases including light duty, medium duty, and transit fleets, multi-unit dwellings, residential (multi-family and single family), destination, workplace, and more. ChargePoint's software and cloud services enable EV charging station site hosts to manage charging onsite with features like Waitlist, access control, charging analytics, and real-time availability. With modular design to help minimize downtime and make maintenance and repair more seamless, all products are also UL-listed and CE (EU) certified, and Level 2 solutions are ENERGY STAR® certified.

ChargePoint's primary business model consists of selling smart charging solutions directly to businesses and organizations while offering tools that empower station owners to deploy EV charging designed for their individual application and use case. ChargePoint provides charging network services and data-driven, cloud-enabled capabilities that enable site hosts to better manage their charging assets and optimize services. For example, with those network capabilities, site hosts can view data on charging station utilization,

[1] https://govops.utah.gov/wp-content/uploads/State-of-Utah-EV-Master-Plan_Version2_FINAL.pdf, See p. 8.

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.

Q: What is the purpose of your Initial Testimony?

A: My testimony addresses PacifiCorp's, dba Rocky Mountain Power (RMP or the Company), application for approval (Application) of its proposed Electric Vehicle Infrastructure Program (EVIP). I make recommendations to the Commission that will improve the success of EV charging infrastructure deployment in RMP's service territory based on ChargePoint's substantial experience in other states.

Q. Are you sponsoring any Exhibits?

A. Yes, I have attached four exhibits, labeled Attachments JDW-1, JDW-2, JDW-3, and JDW-4.

Q: Please summarize your recommendations to the Commission.

A: I recommend that the Commission approve RMP's EVIP proposal with the following modifications to improve the proposed program and ensure that the EVIP meets the statutory requirement that the program enables competition, innovation, and customer choice:

<u>Make-ready:</u>

- Increase the budget for make-ready infrastructure to support third party-owned EV charging stations, as detailed below;
- Establish a separate budget for the innovative projects and partnerships by reducing the Company-owned Charger budget;
- Include make-ready investments on the customer side of the meter as a standard practice rather than in "some circumstances," to further incentivize investment in EV Charging stations from the competitive market;

Schedule 120 Incentives

- Increase the incentives for residential AC Level 2 chargers to $500 per charger, and allow the incentives to be applied to all aspects of the charger installation, including costs for necessary panel upgrades in addition to the cost of the charging equipment;
- Adopt a requirement for all chargers funded through Schedule 120 incentives to be "smart" or networked, and ENERGY STAR certified;

Company-Owned Chargers

- Reallocate the capital spending budget so that the total capital spend for Company-owned Chargers (including charging equipment and make-ready infrastructure needed to support Company-owned Chargers) is equal to the capital spend for the make-ready infrastructure program;
- Establish a parity rebate that covers the total cost of EV charging equipment, maintenance, and network fees to ensure that the value a site host choosing to own and operate their own charging stations is equivalent to the value provided by the Company-owned Charger proposal.

- As an alternative to a parity rebate, the Commission can ensure that the competitive market has the opportunity to deploy charging stations with support from the make-ready infrastructure program before RMP deploys its Company-owned Charger by:
  - Requiring RMP to begin offering the make-ready infrastructure program for a full two years from launch of the EVIP before deploying any Company-owned Chargers, and
  - Directing RMP to identify specific locations where it intends to deploy Company-owned Chargers and share that information publicly with the Commission and any stakeholder that asks to receive such information. Developers should be given an opportunity for one year from the date RMP identifies a given location to provide notice to RMP that they intend to deploy chargers at that location, after which the developer should have 18 months to begin development;

- Reject RMP's pricing proposal and direct RMP to develop charging prices as follows:
  - Annually survey the prices of public EV charging in its service territory and set the price for DC fast charging at the median rate for DCFCs in its service territory and set the price for Level 2 charging at the median rate for Level 2 charging in its service territory;
  - Establish a $0.05/kWh surcharge during on-peak hours;

- Any discount for RMP customers should be not exceed ten percent and should decline by one percentage point each year to allow RMP to transition to cost-based prices over a reasonable period of time;

- Require RMP to allow site hosts on whose property Company-owned Chargers will be deployed the option of becoming the utility customer-of-record and establishing prices to drivers;
- Require RMP to offer site hosts on whose property Company-owned Chargers will be deployed at least two choices of EV charging equipment vendors and at least two choices of network service providers.

Innovative Projects and Partnerships

- Require RMP to create clear delineations between the funding set aside for the various components of the EVIP, including the Innovation and Partnerships component to provide certainty that funds set aside for make-ready infrastructure investments will be protected from being greatly diminished by directing them towards other programs;

Extension of Schedule No. 2E

- Approve RMP's proposal to extend Schedule No. 2E until June 30, 2022, and require RMP to develop a formal stakeholder process to allow parties to collaboratively review the final report and discuss the future of the program;

Programmatic Design, Reporting Requirements, and Stakeholder Processes

- Require RMP to submit annual reports for Commission and stakeholder review containing the specific information listed in my testimony.

- Provide an opportunity for stakeholders to provide comments regarding the program performance and propose potential modifications as a part of the annual reporting process.

II. Current Market for Electric Vehicle Charging in Utah

Q: How many EVs are registered in the state of Utah?

A: According to the Utah Tax Commission, as of February 15, 2021, there were 10,789 electric vehicles registered in Utah.[2]

Q: How is the Utah market for EVs growing?

A: There has been tremendous growth over the last 6 years in the number of electric vehicles registered in Utah. In 2015, there were only 1,129 electric vehicles registered in the state, and now Utah has nearly more than 10 times that amount.

Q: How many public EV charging stations are operating in Utah?

A: According to the Department of Energy's Alternative Fuels Data Center ("AFDC"), across Utah, there are 1,368 public charging ports utilizing a standard connector that enable charging of any model of EV. Each port can charge a single vehicle, and some stations have two ports. Of those 1,386 ports, there are 96 DCFC and 1,272 Level 2 charging ports.[3] It is important to note that the AFDC total does not include essential, non-public charging locations, such as workplace and residential, which are often cornerstones of successful utility EVSE programs.

[2] https://tax.utah.gov/econstats/mv/registrations.
[3] U.S. DoE Alternative Fuel Data Center; filtered by Utah, Electric Fuel, Level 2 and DC Fast, Standard Connectors J1772/CCS/CHAdeMO; Accessed October 15th, 2021. https://afdc.energy.gov/stations/widget#/analyze?region=US-NJ&fuel=ELEC.

Q. Are public EV charging stations representative of the whole market of charging available in Utah?

A. No. There are many more private charging ports that are not included in AFDC's total figure, which may have limited access to the public or have exclusive use permissions, such as a fleet charging station. I have also omitted Tesla charging stations, which provide charging for Tesla drivers through a proprietary connector.

Q. How many networks of charging stations are available to all EV drivers in Utah's market?

A. According to AFDC, there are six charging networks utilizing standard connectors operating in Utah: ChargePoint, Electrify America, EVgo, Greenlots, OpConnect, and Volta.

Q. Would you describe the market for EV charging infrastructure in Utah as competitive?

A. Yes. In the current market for EV charging infrastructure, charging station providers approach site hosts[4] 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.

[4] "site host" refers to the owner or lessor of the property on which an EV charging station is located. Site hosts include residential customers; owners of multifamily housing units (MFH); commercial customers that offer charging to the public, their customers, and/or their employees; fleet owners; and government entities.

Q. Is there currently active private investment in charging stations in Utah?

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

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

A. The EV charging market is growing and dynamic, and there is not a single static business case for the electric vehicle supply equipment ("EVSE") industry or for EV charging site hosts. The business case, or value proposition, for various entities to install and operate charging stations incorporates many different value streams and varies across use cases.

Our customers find that the provision of EV charging services can align with and augment their existing operations and core business goals. 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 EV charging as an amenity to attract and retain employees, attract new customers and have them stay for longer periods of time for businesses, and appeal to new tenants for multifamily properties. In addition, EV charging can help local governments and businesses meet their sustainability goals. Residential customers acquire L2 EVSEs at their homes for greater convenience and to meet their individual vehicle charging needs within an overnight time frame.

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

A. ChargePoint and multiple other EVSE vendors are currently providing turnkey solutions for site hosts in Utah that do not wish to own the EVSE but still want to provide charging services for their customers or tenants. In these cases, utility ownership is not the only solution. The private sector offers many different business models and products to provide turnkey solutions for site hosts, including the coordinating of all aspects of the charging experience from installation to operation and maintenance. This includes solutions for site hosts that are not seeking to own or operate their own charging equipment. For example, ChargePoint offers customers a subscription solution for EV charging, "ChargePoint as a Service" ("CPaaS"), which is an easy way for customers that do not want to own EV charging stations to provide charging solutions. It is similar to "Software as a Service" ("SaaS") models, which offer access to smart solutions at a reduced cost through subscription pricing. Under the CPaaS option, site hosts remain the customer of record with the utility and operates the station, including setting charging parameters (e.g., access and pricing,), while ChargePoint retains ownership of the station.

Site hosts should be engaged in the provision of these services, as they are with many other aspects of their business. It is desirable for them to have some "skin in the game" to drive efficiency and utilization of installed EV charging infrastructure.

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

A. "Smart" EV charging stations is a broad term that generally refers to the EVSE having connectivity and the ability to measure electricity passing through the unit, providing data and load management capabilities and scheduled charging features, providing for point of

use payment and access control, and incorporating two-way communication from the EVSE to the driver through an app or other means. These capabilities can be of significant importance to a site-host to enable charging services at their facilities, as well as to their utility since the smart station provides a wealth of information related to charging behaviors and load profiles that can enable various demand side management programs. Those programs could include demand response or even a TOU rate specific to EV charging in the home through utilization of the embedded meter. The associated communication and cloud-based technology platform can also be leveraged to provide enhanced station management features like reservations or notifications for charge completion for an improved driver experience through greater visibility and interaction.

Q. Would you describe the EV charging market in Utah as a "market failure"?

A. No. This is an emerging market defined by natural demand and private investment across a diversity of communities. As evidenced by the motions to intervene in this proceeding, multiple providers of EV charging equipment and services, in addition to ChargePoint, have been doing business with customers in Utah over the last few years and are interested in increasing their presence in Utah's competitive market. As EV adoption continues to grow and become more widespread in Utah, we will continue to see greater and increasing demand for EV charging solutions in new areas.

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

A. Yes. Federal, state, local, and utility-funded incentives have been highly effective in increasing site host interest in charging infrastructure investments, and thereby increasing

competition among multiple providers of EV charging equipment and services. For example, RMP's states that its existing STEP program has been "popular and effective",[5] providing incentives to 103 commercial customers in 2020 alone.[6]

Further, there is a strong likelihood that Congress will soon authorize a significant amount of federal funding for EV charging stations. Reporting has identified the potential for $7.5 billion in federal funding for EVSE within the infrastructure bill, not considering the potential for additional funding through the upcoming reconciliation package. If the reported amount of federal funding is included in a final agreement, Utah would expect to receive $36 million in new federal formula funding over five years for investments to support EV charging infrastructure. Additionally, Utah would also have the opportunity to apply grant funding for EV infrastructure from a $2.5 billion program in the bill dedicated to zero emission vehicle fueling infrastructure.[7]

Q. What utility investments in EV charging infrastructure further market development?

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

[5] Campbell Exhibit 1, p.8.
[6] See Rocky Mountain Power's response to DPU data request 1.6.
[7] https://www.whitehouse.gov/wp-content/uploads/2021/08/UTAH_Infrastructure-Investment-and-Jobs-Act-State-Fact-Sheet.pdf.

- **Utility Make-Ready**: A utility installs, owns, and maintains the supporting electrical infrastructure necessary for installation of charging hardware.[8] By conducting this work, a utility prepares a site for installation of the charging station itself, which is purchased and operated by a site host. It is important to note that the make-ready costs are significant for the customer, typically comprising a majority of the total project costs, and the deployment of make-ready infrastructure aligns with the utility's key competency of installing and maintaining distribution assets.
- **Customer Rebates**: A utility provides rebate incentives to their customers to install and operate charging stations, which are used to offset the construction and installation and/or the purchase of qualifying electric vehicle charging stations. Qualification standards for EV charging stations can be determined to ensure capabilities that will enable grid benefits.[9]
- **Ownership:** A utility procures, deploys, and owns charging infrastructure while providing site host choice in charging station hardware and networks, and the ability to set pricing to drivers.

The investment models used by utilities have taken many forms, and some have included a portfolio of investment approaches. In ChargePoint's experience, the most successful programs combine make-ready investments by the utility along with rebates

[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.

toward the EV charging stations or rebates toward both installation and construction costs in addition to the EV charging station. [10]

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

1) The ability for site hosts to choose among multiple, qualified vendors of charging equipment and networks;
2) Site host operational control of EV charging infrastructure located on their properties, including control over pricing of the charging service provided to drivers; and
3) Private investment in EV charging infrastructure in the form of shared costs with incentive or supplemental project financing. (*i.e.* "skin-in-the-game").

[10] *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 New York State Energy Research and Development Authority).

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

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

III. Summary of RMP's Proposed EVIP program

Q: Please briefly describe the enabling legislation for RMP's EVIP proposal.

A: Utah House Bill 396 (2020), now codified in Utah Code Section 54-4-41, directed the Public Service Commission of Utah (the Commission) to authorize RMP to offer programs up to $50 million related to the deployment EV charging infrastructure. Specifically, funding was authorized for programs that:

(1) include the deployment of utility-owned vehicle charging infrastructure and utility vehicle charging service provided by the utility;

(2) create a new customer class with a transitional EV charging rate structure that is in the public interest, allowing the utility to recover the cost of service for the charging infrastructure, and may allow different rates for utility customers; and

(3) includes a transportation plan that promotes deployment of utility-owned charging infrastructure and the availability of utility vehicle charging service.[11]

[11] Utah Code Subsection 54-4-41(2).

Q. Are there factors that the Commission must consider when approving programs under Section 54-4-41?

A. Yes. Section 54-4-41(4) provides that the Commission shall find a proposed program to be in the public interest if the program:

(1) increases the availability of EV battery charging services in the state;

(2) enables significant deployment of infrastructure supporting EV charging services and utility-owned chargers in a manner expected to increase EV adoption;

(3) includes an evaluation of investments in areas of authority in jurisdictional land, and the point of mountain state land;

(4) enables competition, innovation, and customer choice in EV charging services, while promoting low-cost EV charging; and

(5) provides ongoing coordination with the DOT.[12]

Q: Please briefly summarize RMP's EVIP Proposal.

A: RMP is proposing its EVIP which would be administered over a 10-year period with investments made over the first five years of the program, and then reassessed over the remaining years.[13] RMP's stated goals for the proposed program are to: (1) increase EV adoption in the state of Utah, and (2) operate a low-cost, efficient infrastructure program that adds revenue to the system.[14] The program includes four components:

[12] Utah Code Subsection 54-4-41(4).
[13] Campbell Exhibit 1, p. 14.
[14] Initial Application for approval of EVIP, p. 5.

- **Company-Owned Chargers**: RMP proposes to install DCFC stations at 20-25 locations in its service territory, with two to six DCFCs at each location comprised of a mix of 50 kW, 150 kW, and 350 kW chargers and an expected capacity of 700 kW at each location.[15] The Company also states that some L2 chargers may be included for "specific circumstances."[16] The Company states that it will issue a request for proposal (RFP) to select an operator to establish the network, and it expects to hire a third party to operate the network of chargers, including maintenance and software services. The Company also is proposing Schedule 60, which establishes a transitional rate structure for EV drivers charging at company-owned stations; the proposed rates include a $1.00 session fee, distinct rates for RMP customers and non-RMP customers, and would include a $0.05 per kWh discount for off-peak charging.
- **Make-Ready Infrastructure**: The Company proposes to provide make-ready incentives to support the deployment of third-party owned charging stations. RMP states that make-ready applications will be evaluated and prioritized based on satisfaction of the program goals.[17]
- **Incentives**: The Company proposes to continue providing incentives for EV charging stations, which cover a portion of the cost for the equipment but not any of the make-ready infrastructure, using the same process that is presently in place; these incentives

[15] Initial Application for approval of EVIP, p. 5.
[16] Campbell Exhibit 1, p. 6.
[17] Campbell Exhibit 1, p. 7.

are currently available through the Sustainable Transportation and Energy Plan ("STEP") program, provided through Schedule 120.[18]

- **Innovative Projects and Partnerships**: The Company proposes to participate in various studies and projects, explore technology developed from the Intermodal Hub project, and stay informed on emerging technological advances.[19] Additionally, the Company states that this program, will be funded from the proposed budget of the make-ready program.[20]

Q: Will RMP's proposed EVIP contribute to overcoming barriers to deploying EV charging infrastructure?

A: Yes, with modifications. If ChargePoint's recommendations are incorporated into RMP's proposed EVIP, the Program will help overcome barriers to deploying EV charging infrastructure while minimizing potential adverse impacts to the competitive market by reducing the total cost of charging stations and installation through a combination of utility-owned make-ready investments, customer rebates for charging stations, and limited utility ownership and operation.

Q: Will RMP's EVIP only create value for participating customers?

A: No. The program has the potential to create value for all customers in RMP's service territory, including those who do not participate in the program. Increased deployment of EV charging infrastructure can create sufficient new load to reduce unit energy costs,

[18] Campbell Exhibit 1, p. 8.
[19] Campbell Exhibit 1, pp. 8-9.
[20] Campbell Exhibit 1, p. 13.

resulting in lower electricity rates and net benefits for all ratepayers, irrespective of EV ownership.[21] For example, a state-wide cost-benefit analysis of EV adoption in Michigan conducted by MJ Bradley and Associates found that net benefits (in the form of reduced electricity bills) to ratepayers would be $2.6 billion by 2050 if EV sales reach over 55% of new vehicle sales.[22] Furthermore, a cost-effectiveness analysis of EV charging investments proposed by four utilities in Maryland found that the proposed investments would generate net benefits to all ratepayers due to increased load.[23]

In addition, several studies highlight that the expected long-term electric sales from incremental EV load exceeds the marginal cost of grid infrastructure to support that load.[24] According to a NARUC report published in October 2019, EV load that charges during off-peak hours can provide positive net revenue flowing back to all customers due to the efficient use of the existing electric grid.[25] Further, a study by Synapse Energy Economics

[21] *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.

[22] 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.

[23] 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).

[24] *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.

[25] 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,"

found that in the territories of Pacific Gas & Electric and Southern California Edison, the incremental electrical sales enabled by EV programs exceeded the costs to the electric system by more than 3 to 1.[26] The addition of new dispersed load during off-peak hours can result in the wider distribution of fixed costs, leading to lower rates for all customers.[27] In effect, prudent investments in EV charging infrastructure result in increases in electric use, exerting downward pressure on retail rates that can benefit all utility customers regardless of EV ownership.

IV. Evaluation of RMP's EVIP Proposal

Q: Do you recommend the Commission approve RMP's EVIP as proposed?

A: No. ChargePoint supports achieving the goals of House Bill 396. However, we believe modifications are necessary to improve RMP's program to more effectively expand deployment of EV infrastructure in RMP's service territory and throughout Utah.

Q: How have you organized this section of your testimony?

A: The first two subsections below address RMP's proposal to invest in make-ready infrastructure to support customer-owned EV charging stations and RMP's proposal to continue its Schedule 120 incentives for EV charging stations. ChargePoint largely supports these proposals and provides several recommendations to improve their

Lawrence Berkeley National Laboratory (2018), at http://eta-publications.lbl.gov/sites/default/files/feur_10_transportation_electrification_final_20180813.pdf).

[26] 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.

[27] NARUC EV White Paper at 21.

effectiveness. Next, I will address RMP's proposal to develop Company-owned Chargers. ChargePoint has serious concerns with the manner in which RMP has structured this proposal and will recommend modifications that are necessary to ensure the proposal supports the competitive market in a manner that benefits EV drivers and that complies with Section 54-4-41. Finally, I will address RMP's Innovative Projects and Partnerships proposal and RMP's proposal to extend its Residential Time-of-Use (TOU) proposal, both of which ChargePoint largely supports.

A. Make-Ready Infrastructure

Q: What will you address in this section of your testimony?

A: In this section of my testimony, I will discuss RMP's proposal to include "make-ready" infrastructure investments as a part of the EVIP and ChargePoint's recommendations for improving it.

Q: What has the Company proposed with respect to make-ready infrastructure?

A: The Company proposes to provide make-ready incentives through an application process to support the deployment of third-party owned charging stations. RMP states that make-ready applications will be evaluated and prioritized based on satisfaction of the program goals. In this case RMP defines "make-ready" as "all necessary electrical infrastructure between the utility grid interconnection and the chargers, including stepdown transformers, electric service panels, conduit, conductors (wire), switchgear and power conditioning units, mounting pads or brackets, trenching, boring, and other such elements." RMP states

that it will include make-ready investments on the customer side of the meter as a part of the EVIP in "some circumstances". [28]

Q: What is make-ready infrastructure?

A: Generally, make-ready infrastructure includes all the electrical and civil construction work needed to provide power to charging stations, including wiring, conduit, paneling, and trenching. Make-ready infrastructure includes infrastructure on both the utility's side of the electric meter (front-of-the-meter) and the customer's side of the electric meter (behind-the-meter). Though I am not an attorney, it is my understanding that Section 54-4-41 authorizes RMP to invest in make-ready infrastructure to support both customer-owned EV charging stations and utility-owned charging stations.

Q: Does ChargePoint believe it is appropriate for RMP to provide incentives to cover customer-side make-ready investments?

A: Yes. I recognize that behind-the-meter assets are traditionally the responsibility of customers and that utilities typically do not own anything on the customer side of the meter. However, as far as I am aware, treating the customer meter as the point of demarcation of responsibility is a result of tradition and not of any particular law. Importantly, Utah statute specifically envisions utility investment in "utility-owned vehicle charging infrastructure,"[29] which is defined as "all facilities, equipment, and electrical systems owned and installed by a large-scale electric utility on the *customer's side* or the large-scale electric utility's side of the electricity metering equipment."[30]

[28] Campbell Exhibit 1, p. 7.
[29] Utah Code Subsection 54-4-41(2)(a)(i).
[30] Utah Code Subsection 54-2-1(36).

Q: Please explain ChargePoint's position on utility investments in make-ready infrastructure for customer-owned EV chargers versus utility investments in utility-owned EV chargers.

A: While ChargePoint is not opposed in principle to utilities owning and operating EV chargers in certain circumstances that support rather than compete with the existing competitive market ChargePoint believes that the additional costs to ratepayers associated with utility-owned charging infrastructure, including expenditures to a third-party to establish the charging network, and ongoing operation and maintenance (O&M) expenses of the hardware and network services, is often not the most cost-effective or efficient programmatic design, and is not in the best interest of ratepayers. Additionally, programs that include a utility-owned and operated EV charging network should be carefully designed with parameters in place to ensure that the utility's participation complements, rather than competes with, the competitive market. If utility participation in the competitive market crowds out other competitive providers, it could have long-term negative impacts on EV drivers and the Company's customers in the form of fewer choices and higher prices for EV charging services. Utility participation under the right parameters, however, can support the competitive market to encourage EV charger deployment and EV adoption.

By contrast, utility investments in make-ready infrastructure can spur private investment in EV charging stations by reducing, or eliminating, the cost of the associated make-ready infrastructure necessary to deploy a charging station. In comparison with utility-owned and operated EV charging networks, make-ready programs also avoid placing the burden of ongoing O&M, including costs associated with operating an EV

charging network, and the cost to procure charging stations, on utility ratepayers. This effectively lowers the cost to the utility and its ratepayers to deploy an EV charging station which can result in greater deployment of EV charging infrastructure without the need to increase the program's budget; and as an additional benefit could lead to significantly more energy being sold through a higher number of deployed EV charging stations resulting in downward pressure on utility rates to the benefit of all utility ratepayers, rather than just those that are EV drivers. Additionally, these programs can streamline the installation process of EV charging equipment for site hosts and support the existing competitive market for EV charging station hardware and network services.

Utility investment in make-ready infrastructure is one of the most effective ways a utility can support charging station deployment in their service territory. Investing in make-ready infrastructure is an excellent example of a utility playing a role that only it, as the monopoly utility, can play because it reduces one of the largest cost barriers to charging station deployment for site hosts – namely, the wiring, conduit, paneling, and civil construction work needed to provide power to charging stations. Crucially, utility support for make-ready is an effective way to enable "competition, innovation, and customer choice in electric vehicle battery charging services" as the statute requires,[31] because site hosts can choose the EV charging equipment and services that they will offer on their property. Investments in make-ready also benefit the utility because they can be treated as rate base assets on which the utility earns its authorized rate of return. Finally, make-ready

[31] Section 54-4-41(4)(d).

incentives can support a greater number of charger deployments with the same budget because site hosts share in the cost of the charging stations.

Q: Has the importance of utility investments in make-ready infrastructure been recognized in other jurisdictions?

A: Yes. Make ready programs account for the majority of state commission-approved programs across the country. Attachment JDW-2 to my testimony contains a list (compiled under my direction and supervision) of utility EV programs in other states that are make ready models, which enable site host choice of charging infrastructure, site host control of charging infrastructure, and site host private investment in charging infrastructure.

For example, the New York Public Service Commission (NYPSC) authorized the State's utilities to invest over $700 million in make-ready infrastructure (utility and customer side of the meter) to support the state's environmental and transportation electrification goals.[32] Additionally, California has authorized several successful make ready programs for each of its utilities (see attachment JDW-2). Based on the overwhelming success of the programs, the California Public Utilities Commission (CPUC) recently approved EV Infrastructure Rules for each of the state's investor-owned utilities authorizing each utility to design and deploy all electrical distribution infrastructure on the utility side of the customer's meter for all customers installing separately metered infrastructure to support EV charging stations.[33] These EV

[32] Order Establishing Electric Vehicle Infrastructure Make-Ready Program and Other Programs. NYPSC Case 18-E-0138. (July 16, 2020)
[33] Resolution E-5167, Pacific Gas & Electric, Southern California Edison, and San Diego Gas & Electric request approval to establish new Electric Vehicle (EV) Infrastructure Rules and associated Memorandum Accounts, pursuant to Assembly Bill 841.

Infrastructure Rules provide the foundation for California's utilities to continue offering successful transportation electrification programs.

These are just a few examples that demonstrate the growing recognition that utility investment in make-ready infrastructure can reduce the cost of EV infrastructure for customers, enable utilities to generate additional kWh sales through increased charging station deployment, encourage EV adoption, and stimulate competition by leveraging the competitive market for EV charging hardware and services, rather than directly competing at a higher cost to ratepayers, allowing customers to choose the charging equipment and network services that best fit their needs.

Q: Does ChargePoint have any recommendations to improve the make-ready component of the EVIP?

A: Yes. As I will discuss in more detail later in my testimony, I recommend that the Commission direct RMP to shift some of its proposed capital spending from the Company-owned Charger proposal to the make-ready infrastructure budget. Because the make-ready infrastructure proposal supports site hosts and allows them to choose their preferred EV charging solution, it is both consistent with the statutory requirement to enable competition, innovation, and customer choice and does not raise the competitive concerns that the Company-owned Charger proposal creates.

Additionally, the Company states that some of investments in the innovative projects and partnerships component of the EVIP, including contributions to the Freight Logistics Electrification Demonstration project will be funded from the budget for make-ready infrastructure investments, diminishing the funds available for other make-ready

infrastructure investments.[34] I recommend that the Commission direct RMP to establish a separate budget for the innovative projects and partnerships and reduce the Company-owned Charger budget to do so.

Further, RMP states it may include make-ready investments on the customer side of the meter in "some circumstances",[35] but does not elaborate on what specific circumstances these investments would occur under. ChargePoint is awaiting a response to a data request that may provide additional detail on this issue. I recommend that the Commission direct RMP to include make-ready investments on the customer side of the meter as a standard practice rather than in "some circumstances," to further incentivize investment in EV Charging stations from the competitive market.

B. Continuation of Schedule 120 Incentives

Q: What will you address in this section of your testimony?

A: In this section of my testimony, I will address RMP's proposal to continue providing incentives for EV charging stations through the STEP program (Schedule 120) for the 10-year duration of the EVIP.

Q: Please describe the incentives provided through Schedule 120 of the STEP program and the Company's proposal to continue offering the program through the EVIP.

A: RMP's Electric Service Schedule 120, provided through the STEP program, provides the terms for its Plug-in Electric Vehicle Incentive Program. The program consists of the following incentives: 1) an incentive for residential AC Level 2 Chargers up to $200 per

[34] Campbell Exhibit 1, p. 13.
[35] Campbell Exhibit 1, p. 7.

charger or 75% of the total charger and/or installation cost, 2) an incentive for non-residential and multi-family AC Level 2 Chargers up to $4,000 per charger or 75% of the total charger cost for single-port chargers and up to $7,000 per charger or 75% of the total cost for multi-port chargers, 3) an incentive for non-residential and multi-family DC Fast Chargers up to $45,000 per charger or 75% of the total charger and installation costs for single port DCFCs and up to $63,000 per charger or 75% of total charger and installation costs for multi-port chargers, 4) a custom incentive program for non-residential and multi-family grant-based custom projects and partnerships.[36] Currently, these incentives are scheduled to end on December 21, 2021, with the conclusion of the STEP program. However, as a part of its EVIP Application the Company proposes to continue offering the Schedule 120 incentives, using the same process that is currently in place, for the duration of the 10-year EVIP.[37]

Q: Does ChargePoint support RMP's proposal to continue offering the Schedule 120 incentives?

A: Yes. ChargePoint is generally supportive of the Company's proposal to continue providing the Schedule 120 incentives. Mr. Campbell states in his testimony that the incentives have been "popular and effective"[38] and ChargePoint believes these incentives will continue to facilitate the growth of EVs and EV charging in the Company's service territory. Schedule 120 incentives will complement RMP's make-ready investments and will likely lead to a significant amount of EV charging station deployment by non-utility site hosts in RMP's

[36] Meredith Exhibit 1, pp. 4-6
[37] Campbell Exhibit 1, p. 8.
[38] Campbell Direct Testimony, p. 4.

service territory, provided that the Commission modifies the Company-owned Charger proposal to ensure that it does not discourage non-utility development.

Q: Do you recommend any modifications to the proposal to continue providing incentives through RMP's Schedule 120?

A: Yes. I recommend the Commission direct RMP to increase the incentives for residential AC Level 2 chargers to $500 per charger, and allow the incentives to be applied to all aspects of the charger installation, including costs for necessary panel upgrades in addition to the cost of the charging equipment; this proposal is of particular significance due to the proposed make-ready infrastructure investment only being available to commercial customers.[39] Additionally, ChargePoint recommends the Commission direct the Company to adopt a requirement for all chargers funded through Schedule 120 incentives to be "smart" or networked, and ENERGY STAR certified.

Q: What is the basis for your recommendation to increase the rebates for residential Level 2 chargers?

A: Addressing residential charging is an important step to advance the adoption of electric vehicles. In fact, more than 80% of EV charging takes place at home and helping customers overcome the upfront cost and other barriers to installing chargers at home is one of the most effective ways to encourage EV adoption.[40] Further, EVs that are parked for long periods of time – such as at customers' homes – are ideal participants in managed charging programs.

[39] See Rocky Mountain Power's response to Utah Clean Energy's data request 1.13.
[40] https://www.nrel.gov/docs/fy19osti/73303.pdf, See slide 10.

ChargePoint commends RMP for recognizing the importance of residential EV charging by providing incentives for residential chargers through the STEP program since 2017. However, ChargePoint believes that due to the important role residential charging will play in furthering transportation electrification, the incentive levels provided for residential chargers should be updated to reflect the current EV charging market and be commensurate with other utility incentive programs. For example, Pacific Power's recently approved Residential Charging Pilot Program,[41] Portland General Electric's home EV charging rebates,[42] and the Public Service Company of New Mexico's recent TEP Application[43] include incentives for residential chargers of up to $500. Additionally, by increasing the rebates for residential chargers the Company would be incentivizing the purchase of chargers that support additional functionality such as networked chargers with demand response and managed charging capabilities.

Q: Are there currently any technical requirements that EV chargers must meet to be eligible for RMP's Schedule 120 incentives?

A: Yes. To be eligible for EV charging station incentives under Schedule 120, the EV chargers must be new equipment and Underwriters Laboratories (UL) or equivalent certified by a national recognized testing laboratory.[44]

[41] Public Utility Commission of Oregon Docket No. ADV 1288. ChargePoint notes that Pacific Power is an affiliate of Rocky Mountain Power, both being operated under PacifiCorp, a Berkshire Hathaway Energy subsidiary.
[42] https://portlandgeneral.com/energy-choices/electric-vehicles-charging/charging-your-ev/ev-charging-pilot-program-home
[43] New Mexico Public Regulation Commission Case No. 20-00237-UT
[44] See technical requirements listed on Rocky Mountain Power's applications for incentives for EV charging equipment. https://www.rockymountainpower.net/savings-energy-choices/electric-vehicles/utah-incentives.html

Q: Do you recommend any additional technical requirements for EV chargers to be eligible for Schedule 120 rebates?

A: Yes. I recommend that Commission direct the Company to adopt a requirement for all chargers funded through Schedule 120 incentives to be "smart" or networked. This requirement would guarantee that all chargers funded through the program have the ability to connect to the internet and manage the charging of the electric vehicle. As electric vehicle adoption increases, the Company may seek to offer additional programs or incentives (e.g., demand response or managed charging programs) for EV drivers and charging station site hosts that leverage the capability of smart chargers. Encouraging the installation of smart chargers is a way to ensure site hosts will be able to participate in such programs in the future.

Second, I recommend that all Level 2 charging equipment should be ENERGY STAR certified. The US Environmental Protection Agency awards ENERGY STAR certification to EV charging equipment that meets specific efficiency standards in standby mode, meaning that a charger conserves energy when not actively charging. ENERGY STAR certified chargers can use up to 40% less energy than standard chargers while not in active use. To fully achieve the benefits of electrifying the transportation sector, the Commission should require that all charging equipment that is installed using Company-owned EV supply infrastructure be ENERGY STAR certified.

608 **C. Company-Owned Chargers**

609 **Q: What will you address in this section of your testimony?**

610 A: In this section of my testimony, I will address RMP's proposal to install Company-owned
611 DCFCs at 20-25 locations in its service territory, with two to six DCFCs at each location
612 and accompanying L2 chargers in some circumstances, including RMP's proposed prices
613 for charging at its Company-owned Chargers.

614 **Q: How did ChargePoint evaluate RMP's proposal to own and operate DCFCs?**

615 A: Section 54-4-41 authorizes RMP, among other things, to provide EV charging services and
616 to deploy make-ready infrastructure to support both customer-owned EV charging stations
617 and utility-owned charging stations. Effectively, the statute authorizes RMP to compete
618 with non-utilities that offer EV charging services to the public, including dedicated EV
619 charging service providers, as well as its own customers who have invested or will invest
620 their own capital to offer EV charging as an ancillary service to support their primary
621 business operations such as fueling centers, restaurants, shopping centers, and hotels.

622 However, Section 54-4-41 also specified several criteria that the Commission must
623 use to evaluate RMP's EVIP proposals, including RMP's proposal to own and operate
624 DCFCs across 20-25 locations. Of specific interest to ChargePoint, the Commission must
625 consider whether each of RMP's proposals "enables competition, innovation, and customer
626 choice in electric vehicle battery charging services, while promoting low-cost services for
627 electric vehicle battery charging customers."[45] ChargePoint does not believe RMP's

[45] Utah Code Subsection 54-4-41(4)(d).

Company-owned Charger proposal satisfies this criterion and recommends several programmatic design changes in order to better enable competition, innovation, and customer choice.

Though Section 54-4-41 authorizes RMP to own and operate EV chargers, ChargePoint encourages the Commission to be mindful of the many built-in competitive advantages that RMP has by virtue of being the monopoly utility. As I will discuss, RMP's Company-owned Charger proposal exploits these competitive advantages for RMP's own benefit to the detriment of the competitive EV charging market and, ultimately, EV drivers and RMP's ratepayers. RMP should use its unique position as the monopoly utility to *support* the competitive market, rather than simply compete in the competitive market. The programmatic modifications I will recommend will allow RMP to play a significant role in the market for EV charging services in its territory, but to play a role that only it can play. In this way, RMP's competitive advantages can be directed to provide more benefits to all relevant stakeholders, including RMP, competitive market players, EV drivers, and RMP's customers.

Q: Please summarize your concerns with RMP's Company-owned Charger proposal.

A: At a high level, my concerns with the Company-owned Charger proposal are as follows:

- RMP's capital budget overemphasizes the Company-owned Charger proposal over make-ready infrastructure investments, which will be much more effective at enabling competition and customer choice and will lead to a larger number of charging station deployments with the same budget.

- RMP's proposal for pricing at Company-owned Chargers undercuts prices the competitive market is able to offer and, in some cases, undercuts the retail price of electricity, creating an incentive for EV drivers to charge at Company-owned Chargers instead of at home or other locations where grid benefits can be maximized by parking and charging for long periods of time.
- RMP's proposal to select a single charging equipment vendor and a single network service provider would distort the competitive market for EV charging services in its service territory.

I will address each of these concerns in turn and will recommend programmatic modifications that will allow RMP's Customer-owned Charger proposal to enable competition, innovation, and customer choice, as well as meet the other statutory criteria.

i. RMP's proposed capital spending for the Company-owned Charger proposal.

Q: Please describe your first concern with RMP's Company-owned Charger proposal regarding RMP's proposed budget for capital spending.

A: My first concern is the imbalance in RMP's proposed capital spending between its Company-owned Charger proposal and its make-ready infrastructure investments. Though ChargePoint was denied access to RMP's proposed capital spending by specific cost category, which was deemed confidential, the public version of RMP's EVIP Program Plan states that "the 'make-ready' infrastructure expenditures assume a 1/3 ratio to the capital spend for Company-owned chargers and infrastructure." [46] I understand this statement to

[46] EVIP Program Plan, p. 19.

mean that RMP's proposed capital spending for its Company-owned Chargers will be twice its proposed capital spending for make-ready infrastructure for third party-owned charging stations.

ChargePoint believes that RMP's proposed budget improperly favors Company-owned Chargers over site host-owned chargers. The proposal sends a signal to prospective site hosts and charging station developers that Utah prefers utility-owned charging stations over privately owned stations. ChargePoint is concerned that heavily weighting the capital budget to Company-owned Chargers will discourage non-utilities from participating in the competitive charging market in Utah. Additionally, ChargePoint is concerned that the proposed 1/3 ratio of investments for make ready to company-owned chargers "does not have any underlying formulaic support" and was simply determined based upon the "Company's judgement."[47]

For the reasons I discussed in the prior subsection, utility investment in make-ready infrastructure is one of the most effective ways a utility can support charging station deployment in their service territory and does not raise the competitive concerns that direct utility ownership in EV charging stations creates. While RMP's Company-owned Charger proposal as designed will primarily benefit RMP, RMP's make-ready investments will benefit both RMP and the competitive charging market and will support a greater number of charging stations for the same amount of capital spending, providing greater benefits to EV drivers and RMP customers. ChargePoint believes that EV drivers, RMP's customers,

[47] See Rocky Mountain Powers response to DPU data request 1.18.

the competitive market, and RMP itself would all be better served by RMP dedicating more resources to its make-ready proposal rather than its Company-owned Charger proposal.

Q: Is it essential for RMP to invest directly in Company-owned Chargers at this time?

A: No. As previously discussed, there is a strong likelihood that Congress will soon authorize a significant amount of federal funding for EV charging stations. In evaluating RMP's proposal, the Commission should take these ongoing federal infrastructure negotiations into consideration, even though Congress has not yet voted on a final infrastructure package. The forthcoming federal funding will support EV charging infrastructure deployment in the same market segment that the Company is proposing to invest in with ratepayer funds. This could have significant impacts on the EV charging market and should therefore be considered in the Commission's evaluation of the EVIP proposal.

As currently drafted, the federal infrastructure bills[48] before Congress would provide funding to offset the cost of charging equipment but not necessarily the make-ready infrastructure. If these bills pass, there will be even less need for RMP's ratepayers to fund deployment of EV chargers, but the need for utility make-ready investments will remain. ChargePoint urges the Commission to ensure that RMP's investments complement, rather than duplicate, expected federal funding.

[48] Includes the bipartisan Infrastructure Investment and Jobs Act (IIJA) and upcoming reconciliation package.

Q: Given these concerns with RMP's Company-owned Charger proposal, what do you recommend?

A: ChargePoint recommends that the Commission direct RMP to dedicate at least half of its capital spending to make-ready infrastructure to support third party-owned EV charging stations. Dividing the capital budget evenly between make-ready infrastructure for third party site hosts and RMP's Company-owned chargers will go a long way toward leveling the playing field between RMP, with all of its built-in competitive advantages, and the competitive market. It will also send a strong signal that the Commission values investments from the competitive market, which will encourage private investment in Utah. ChargePoint believes that increasing the capital budget for make-ready investments is the most effective way for the Commission to ensure that RMP's program "enables competition, innovation, and customer choice" as the statute requires because it will increase opportunities for non-utilities to deploy charging stations instead of favoring RMP's Company-owned Chargers.[49]

Q: In addition to reallocating the capital spending budget as you recommend, are there other effective ways to help level the playing field between RMP and the competitive market?

A: Yes. ChargePoint is not opposed to RMP's Company-Owned Charger proposal provided the Commission requires RMP to modify the EVIP Plan to ensure there is a level playing field between the utility-ownership and third-party ownership elements of the program. As

[49] Utah Code Subsection 54-4-41(4)(d).

currently proposed, under the Company-owned Charger proposal, RMP would select, procure, install and maintain Company-owned chargers at locations throughout its service territory. Site hosts on whose property RMP installs Company-owned Chargers would receive the charging stations, 100% of the make ready, *plus* free maintenance and free network services for the life of the charging station.

By contrast, a site host that chooses to own their EV chargers and participate in RMP's proposed make-ready infrastructure program and Schedule 120 incentives would receive only partial make-ready incentives and a partial rebate for the charging station. That site host would be required to pay for any additional cost above the rebate amount of the charging equipment and its installation, including the full cost of maintenance and network fees. This tilted playing field strongly favors RMP's proposed Company-owned Charger program and will significantly undermine the overall success of the EVIP because the Company-owned Charger program and make-ready programs will be competing with one another, rather than complementing one another.

The difference in value to the site host between RMP's proposed utility ownership of Company-owned Chargers and site host ownership "options" is not negligible. RMP's testimony does not identify its estimated cost of O&M on a per port basis, or if it does, it has been deemed confidential and ChargePoint has been denied access to analyze it. Confronted with this difference in value between RMP's proposed utility ownership and customer ownership options, it is reasonable to assume that the majority of site hosts will pick utility ownership as the rational economic choice, regardless of whether or not they actually need or prefer utility ownership of their charging stations.

Q: Have other commissions recognized the importance of putting utility-ownership programs on equal footing with site host ownership programs in the context of utility transportation electrification efforts?

A: Yes. In its recent decision in authorizing SCE to offer a utility ownership option for eligible MUD sites in the Charge Ready 2 program, the California Public Utilities Commission (CPUC) approved a rebate covering maintenance and network services for MUD site hosts opting for customer ownership, reasoning that:

> Because the value of the package of products and services provided would differ significantly depending on whether they chose utility or site host ownership, we find it reasonable to establish financial parity between ownership options given the directive in [California Public Utilities Code] §740.12(a)(1)(F).[50]

Similarly, in approving the Schools and Parks Transportation Electrification program, the CPUC found it was reasonable to authorize a utility ownership option for school sites, but only if the utility offered participants choosing site-host ownership "a rebate that should be equal to the cost of the charger, maintenance, and network fees for L2 and DCFC only."[51] Again, the CPUC's reasoning was that a rebate was needed to keep the ownership options equivalent and avoid a structure that "discriminates against both participants that prefer the site-host ownership option as well as suppliers (EVSPs) seeking to supply those site-host owners."[52]

[50] D.20-08-045 at 75-76. See also Conclusion of Law 15 ("It is reasonable to establish financial parity between ownership options given the directive in § 740.12(a)(1)(F) to stimulate competition and customer charging option choices.").
[51] D.19-11-017 at 46.
[52] Id. See also Conclusion of Law 13 ("PG&E, SCE and SDG&E should offer participants choosing site-host ownership a rebate that ensures an equal playing field for non-utility enterprises, including the cost of the charger, maintenance and network fees.").

Q: Based on the disparity between the Company-owned Charger proposal and the site host ownership options, what does ChargePoint recommend?

A: If the Commission approves RMP's Company-owned Charger proposal, it should require RMP to include a parity rebate to cover the cost of EV charging stations, maintenance costs, and network fees. This parity rebate will ensure neutrality between the utility-ownership option and site-host ownership elements of the EVIP. For the reasons discussed, a parity rebate ensures that there will not be a built-in bias in favor of utility ownership. Just as importantly, including a parity rebate covering the cost of maintenance and network fees will help site hosts who wish to own the EVSE themselves to pay for the additional costs that might otherwise prevent them from participating altogether. Finally, from a ratepayer perspective, this approach should be a net benefit because more site hosts may opt to deploy and own charging stations if their operations and maintenance costs are covered, avoiding the additional costs associated with rate basing capital assets.

Q: Are there any other ways that the Commission can mitigate RMP's built-in competitive advantages to support competition?

A: Further, as previously discussed in my testimony, RMP's proposed make-ready investments have the potential to encourage a significant amount of charging station development, but this development may be stifled if the existence of RMP's Company-owned Charger proposal unfairly skews customer interest toward utility owned charging stations. RMP's pricing proposal, which I will discuss next, makes this concern even more acute because very few, if any, non-utility site hosts will be able to compete with RMP's Company-owned Chargers on price. ChargePoint's recommendation for a parity rebate is

792 the most direct and effective way to ensure that RMP does not enjoy and unfair competitive
793 advantage in the competitive market for deploying public DCFCs in its service territory.
794 However, should the Commission decline to adopt ChargePoint's parity rebates
795 proposal, ChargePoint recommends the Commission direct RMP to offer its proposed
796 make-ready infrastructure investments for at least two years before it begins developing
797 Company-owned Chargers. Requiring a two-year "waiting period" will help level the
798 playing field (absent parity rebates) between RMP and non-utility site hosts and ensure that
799 the competitive market has sufficient time to meet customer needs.
800 Additionally, the Commission should direct RMP to identify the specific locations
801 where it intends to deploy Company-owned Chargers and share that information publicly
802 with the Commission and any stakeholder that asks to receive such information, to provide
803 an opportunity for the competitive market to deploy a charging station at the locations. To
804 accomplish this, developers should be given one year from the date RMP identifies a given
805 location to provide notice to RMP that they intend to deploy chargers at that location, after
806 which they should be given 18 months to begin development. RMP should only be
807 permitted to deploy chargers if no developers state an intention to do so at the identified
808 location within one year or if a developer fails to begin development within 18 months of
809 providing notice of their intention to develop at that location. Similar to the two-year
810 "waiting period" proposal I described above, this process will ensure that RMP is not
811 deploying charging stations at locations the competitive market is ready to serve and
812 instead focuses on complementing private market development by filling travel corridor
813 gaps and other underserved areas.

Q: Have the processes you recommend been implemented in other jurisdictions?

A: Yes. For example, in response to National Grid's proposal to own and operate public charging stations, the Rhode Island Public Utility Commission (RI PUC) required National Grid to first pursue non-ownership incentives (i.e., make ready and rebate) for at least one year before returning to the RI PUC with a proposal to own and operate charging stations. Requiring a "waiting period" was an important factor in ensuring the prudency of ratepayer investments.[53] Notably, National Grid identified in its first annual filing that it would defer consideration of ownership for an additional year.

Additionally, the New Jersey Board of Public Utilities (Board) adopted a similar "waiting period" approach to utility ownership of EV chargers that also included a requirement for utilities to publicly advertise the locations of proposed utility-owned chargers and offer private EVSE owners with the opportunity to own the charger, once utilities had begun construction on the make-ready for the proposed utility-owned charger.[54] The Board found that "In areas where installation of publicly-accessible EV chargers has not yet materialized, EDCs may then, and only then, own and operate EV Chargers and EVSE as a "Last Resort." Areas of Last Resort are locations that have not generated private investment interest for a minimum of 12 months after the EDC program has begun, for overburdened communities, or 18 months for other areas."[55] The Board

[53] 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.
[54] See the New Jersey Board of Public Utilities' October 20, 2020, Order in Docket No. QO20050357.
[55] Id.

further ordered any utility "seeking to own and operate EV Chargers and EVSE as a "Last Resort" to gain Board approval before any work is conducted."[56]

Similarly, the Public Utility Regulatory Authority of Connecticut recently established a statewide EV charging program in which it determined that "the Authority will monitor the DCFC deployments throughout the first Program Cycle. If at the conclusion of the first three-year program the deployment targets are not yet fully realized, the Authority will evaluate whether a program modification to enable the EDCs to own and operate a percentage of DCFCs – especially if installed in LMI and other underserved communities – is necessary."[57]

ii. RMP's pricing proposal.

Q: Please describe your concerns with RMP's pricing proposal.

A: Simply put, ChargePoint expects that the prices RMP has proposed for RMP customers to charge at Company-owned charging stations will drastically undercut the competitive market and make it virtually impossible for any non-utility site host to compete with RMP on price.

Q: Before elaborating on these concerns, please describe RMP's pricing proposal.

A: As described by RMP witness Mr. Meredith, RMP is proposing a $0.40/kWh plus a $1.00 session fee for charging at Company-owned Chargers based on Electrify America's current $0.43/kWh charging price.[58] RMP then proposes that RMP customers "receive a 75 percent discount on the proportion of the cost for DC fast charging service that is above the utility's

[56] Id. at 26.
[57] CT PURA Docket No. 17-12-03RE04 at 28. Order dated July 14, 2021.
[58] Direct Testimony of Meredith, pp. 5-6.

marginal cost of service," resulting in a $0.15/kWh charge for DC fast charging for RMP customers.[59] For Level 2 charging, RMP does not differentiate between RMP customers and non-customers and proposes a $0.08/kWh charge for all EV drivers.[60] All EV drivers will also receive a $0.05/kWh credit for charging during off-peak hours,[61] which means that all EV drivers will pay only $0.03/kWh for Level 2 charging during off-peak hours and that RMP customers will pay only $0.10/kWh for DC fast charging during off-peak hours. RMP proposes to define on-peak periods as 3 PM to 8 PM on non-holiday weekdays all year, plus 8 AM to 10 AM on non-holiday weekdays from October through May.

Q: What does Section 54-4-41 state regarding the prices RMP charges EV drivers for charging at Company-owned Chargers?

A: Section 54-4-41(2)(b) authorizes a new customer class for EV charging services. I am not an attorney, but Section 54-4-41(2)(b) appears to contain two provisions that seem to work in different directions. Subsection (ii) requires that RMP's prices for EV charging services must eventually transition to prices that allow RMP to recover its full costs of providing EV charging services. On the other hand, subsection (iii) allows for "different rates [RMP] customers to reflect contributions to investment," which I understand to mean that RMP may propose to charge RMP customers and non-RMP customers different prices for EV charging services. The Commission must balance these two provisions because the steeper the discount RMP provides to RMP customers, the more difficult it will be for RMP to eventually transition to prices that reflect RMP's full cost of service. I note also that the

[59] *Id*.
[60] *Id*. At p. 7.
[61] Proposed Schedule 60.

statute requires that RMP's charging prices be "expected" to allow RMP to transition to cost-based prices, whereas the discount for RMP customers is allowed but not required.

Q: Please elaborate on ChargePoint's concern with RMP's pricing proposals.

A: ChargePoint's concerns fall into two categories: competitive concerns and grid-related concerns. I will address the competitive concerns first.

Though the statute authorizes RMP to propose different charging prices for RMP customers and non-RMP customers, RMP provides no justification for the steep discount it has proposed, and alarmingly states that "No particular analysis was completed" to determine the proposed discount.[62] RMP's convoluted pricing proposal begins with a benchmark to Electrify America's current prices. While a benchmark analysis is a good place to start, it is not appropriate to use a sample size of 1. RMP's Company-owned Chargers will be competing with all public chargers in its service territory, not just Electrify America's. RMP should survey DCFC prices from multiple providers in its service territory, including providers that offer DCFCs with charging capacities less than 100 kW, which is the most common capacity size at the current stage of the market.

RMP proposes a $0.40/kWh charge plus a $1.00 session fee because it estimates that such a pricing scheme is roughly equivalent to Electrify America's current $0.43/kWh prices. It then proposes a 75 percent discount on the difference between its proposed $0.40/kWh price and its marginal cost of service. RMP provides no explanation or justification for why this formula is an appropriate way to calculate charging prices for

[62] See Rocky Mountain Power's response to DPU data request 1.32.

RMP customers or why 75 percent is an appropriate discount. Additionally, while ChargePoint does not oppose the concept of charging different prices during on-peak versus off-peak time periods, RMP does not explain or justify its proposal to offer a $0.05/kWh credit for charging during off-peak hours, which comprise approximately 85 percent of the hours in a year.[63]

ChargePoint is greatly concerned that few if any site hosts will be able to compete with RMP on price if RMP offers DC fast charging for $0.15/kWh, much less for $0.10/kWh during the majority of the year. Unless a site host offers DC fast charging as a "loss leader," these prices will be impossible for site hosts to compete with.

Q: How do you know site hosts will not be able to compete with RMP's proposed prices?

A: Non-utility site hosts in RMP's service territory will likely take electricity service from RMP on Schedule 6A, which was approved in RMP's most recent rate case, Docket No. 20-035-04. In that docket, Mr. Meredith provided a graph showing the effective $/kWh rate that Schedule 6A customers would pay at different load factors, which I have attached to my testimony as Attachment JDW-3. As can be seen in the figure, a site host on Schedule 6A would pay an effective rate of about $0.225/kWh at low load factors. The site host's effective rate would not reach $0.15/kWh (RMP's proposed on-peak charging price for RMP customers) until the site host's load factor was well above 10 percent and would not reach $0.10/kWh (RMP's proposed off-peak charging price for RMP customers) until the

[63] In the four months of June through September, there are five on-peak hours per weekday, for a total of 400 on-peak hours during the summer (not including holidays). In the eight months of October through May, there are seven on-peak hours per weekday, for a total of 1,120 on-peak hours during the non-summer months (not including holidays). Again, before accounting for holidays, there is a total of 1,520 on-peak hours per year, which is ~15 percent of 8760 hours/year.

site host's load factor reached 30 percent. In other words, a site host would not even be able to purchase electricity from RMP at the prices RMP proposes for its customers to charge their EVs at Company-owned Chargers, unless the site host has a load factor over 30 percent (which very few site hosts have achieved).

Electricity is only one of many costs that non-utility site hosts must pay to provide DC fast charging to EV drivers. Even if RMP covers the entire cost of make-ready infrastructure and a portion of the charging equipment cost for a site host, the site host will still incur costs to purchase the chargers themselves, as well as costs for network services, signage, site maintenance, and parking enforcement. Most site hosts will also seek to recover the cost of their investment plus a reasonable return in order to justify the investment in the first place. Given that any site host with a load factor below 30 percent will pay more for electricity than RMP proposes to charge RMP customers for charging, any site host that seeks to recover its costs of providing DC fast charging through the prices it charges to drivers will be undercut by RMP's proposed prices.

Q: How will RMP's pricing proposal affect the competitive market for charging services in its service territory?

RMP's proposal to offer DC fast charging service at prices well below the prices that competitive providers will be able to offer will have significant negative impacts on competition for DC fast charging in Utah. Though EV drivers may appreciate having access to very cheap fast charging at Company-owned Chargers if they have convenient access to them, the long-term effects of RMP undercutting the market will be detrimental to EV drivers and RMP's customers. If the Commission approves RMP's pricing proposal,

it is reasonable to expect that the only site hosts that will offer public DC fast charging in RMP's service territory are those that can afford to do so at a loss to support other revenue streams. The result will be many fewer DCFCs in RMP's service territory than there would be if there were a level playing field, which is a suboptimal outcome for EV drivers.

Q: Please explain your grid-related concerns.

A: The prices that RMP proposes to charge at its Company-owned DCFCs are comparable to the rates that residential customers pay for electricity at their homes and the prices RMP proposes to charge at Company-owned Level 2 chargers are significantly less than the rates residential customers pay at their homes. Specifically:

- RMP's proposed Level 2 charging rates for RMP customers of $0.08/kWh during on-peak and $0.03/kWh during off-peak hours are significantly less than RMP's standard residential rates (Schedule No. 1[64]).
- RMP's proposed off-peak DCFC rate for RMP customers of $0.10/kWh is less than RMP's standard residential rate (Schedule No. 1) for any residential customer that uses more than 400 kWh in a month.
- RMP's proposed on-peak DCFC rate for RMP customers of $0.15/kWh is comparable to RMP's standard residential rate after accounting for riders that apply to Schedule No. 1.

[64] Available at: https://www.rockymountainpower.net/content/dam/pcorp/documents/en/rockymountainpower/rates-regulation/utah/rates/001_Residential_Service.pdf

- RMP's proposed off-peak Level 2 charging rate for RMP customers of $0.03 is less than RMP's currently effective off-peak EV TOU pilot (Schedule No. 2E[65]).

Q: Why is this a concern?

A: Any EV driver who lives or works within reasonable proximity to RMP's Customer-owned Chargers will have a financial incentive to charge at a Company-owned Charger instead of charging where their vehicle would typically be parked for long periods of time, such as at home or work. While this result might be good for RMP's utilization rates at its Company-owned Chargers, it reduces the ability of EV charging load to provide benefits to all RMP customers.

As discussed earlier, when EV charging load increases electricity sales during times that the grid is underutilized, such as during the middle of the night and early morning hours, it can put downward pressure on electricity rates by spreading the utility's fixed costs over a greater number of kWh sales. As a result, EV charging load provides the most benefits when it occurs during these periods, which are sometimes referred to as "super off-peak" hours. Further, since many EV drivers are plugged in all night but only need a few hours of actual charging (using a Level 2 charger) to complete their charging, residential charging also provides opportunities for managed charging, which allows the utility to smooth charging load shapes and avoid "timer peaks," in which a significant amount of new load comes online at the beginning of off-peak hours. Though RMP's proposed charging prices at its Company-owned Chargers will discourage customers from

[65] Available at: https://www.rockymountainpower.net/content/dam/pcorp/documents/en/rockymountainpower/rates-regulation/utah/rates/002E_Residential_Service_Electric_Vehicle_Time_of_Use_Pilot_Option_Temporary.pdf

charging during on-peak hours, they will not actually encourage customers to shift charging to periods of significant underutilization, such as overnight. Instead, RMP's low charging prices will encourage customers to visit its own stations instead of charging where they park. By undercutting the cost EV drivers would pay to charge at their homes, RMP's proposed charging prices will increase utilization at its Company-owned Chargers but will greatly reduce the benefits that new EV charging load can provide to all customers and reduce opportunities for managed charging in the future.

Q: What program modifications does ChargePoint recommend to address the pricing concerns that you have described?

A: I recommend that the Commission direct RMP to survey prices for public EV charging services in its service territory annually, perhaps as a part of the annual reporting process proposed later in my testimony. This survey will allow RMP to benchmark its prices to all public chargers (including Level 2 chargers and DCFCs 50 kW and larger), instead of benchmarking to a single DCFC provider as RMP did in developing its proposal. RMP should set its DCFC prices at the median price for DC fast charging available in its service territory.

While ChargePoint generally supports time-varying utility *rates* for site hosts, time-varying prices for EV charging services can be problematic, especially for public DCFCs. Because EV drivers typically use DCFCs when they want to get back on the road quickly, higher on-peak prices at DCFCs generally do not encourage EV drivers to shift their charging behavior to off-peak hours. In other words, demand for DC fast charging is fairly inelastic in that changes in price do not encourage changes in customer behavior to the

same extent that time-varying prices can effectively encourage off-peak charging in other contexts where EVs are parked for long periods of time, such as at home.

However, if the Commission adopts ChargePoint's recommendation (discussed more below) to allow site hosts to become the utility customer-of-record and set charging prices, then ChargePoint would not oppose allowing RMP to establish time-varying prices for those site hosts that do not exercise the option to set pricing themselves. However, RMP's time-varying prices should encourage EV drivers to charge during off-peak hours through a surcharge during on-peak hours instead of a $0.05/kWh credit during off-peak hours. As discussed, RMP's off-peak credit proposal has the effect of undercutting the competitive market and, in many cases, the retail rate of electricity. An on-peak surcharge, instead of an off-peak credit, would avoid these anticompetitive effects.

ChargePoint acknowledges that Section 54-4-41(2)(b)(iii) allows RMP to set different charging prices for RMP customers. As discussed above, this permissive provision works against the requirement that RMP eventually recover its full cost of providing EV charging service through the prices paid by EV drivers. Accordingly, if the Commission approves a discount for RMP customers, the discount should be modest – both to ensure that RMP does not undercut the competitive market and to allow it to eventually transition to cost-based rates. To strike this balance, ChargePoint recommends that the Commission not approve a discount for RMP customers of more than ten percent. A ten percent discount would allow RMP to transition to cost-based rates over a ten-year period by reducing the discount by one percentage point each year.

As I will discuss in the next subsection, the Commission should also require RMP to give site hosts on whose property RMP deploys Customer-owned Chargers the option to set the prices paid by EV drivers.

iii. RMP's procurement proposal.

Q: Please explain ChargePoint's concerns with RMP's proposal to select a single network service provider and a single EV charging equipment provider for the Company-owned Charger proposal.

A: RMP intends to select a single network service provider to operate the Company-owned Chargers through a Request for Proposals (RFP) process.[66] Though ChargePoint is currently awaiting discovery responses to confirm, my understanding is that RMP also intends to select a single vendor for EV charging equipment for its Company-owned Charger proposal through the RFP.[67] RMP's proposal to select a single network service provider and a single equipment provider is inconsistent with Section 54-4-41(4)(d)'s requirement that RMP's proposal enable "competition, innovation, and customer choice in electric vehicle battery charging services."

Q: Why does RMP's proposal to conduct an RFP to select a single network service provider and a single equipment provider fail to enable competition, innovation, and customer choice?

A: In the competitive marketplace for EV charging services, site hosts select the technologies they prefer through the open market, invest their own capital, seek any incentives available

[66] Campbell Exhibit 1, p. 4.
[67] Campbell Exhibit 1, p. 7.

through public agencies or utilities, and, in the case of commercial stations, offer competitive charging services to attract drivers and recoup necessary expenses. For their part, charging hardware, software, and service providers innovate new hardware, software, and service offerings to enable site hosts to choose the products and services that will best meet their needs. These providers compete to offer site hosts the best products to meet their needs at reasonable cost. In competitive markets, utilities and government agencies can support site hosts and charging hardware, software, and service providers by developing programs that make it less costly and easier for site hosts to install charging equipment and provide charging services. By encouraging competition in the market, charging providers will develop innovative hardware, software, and services solutions to provide to site hosts.

Utility ownership and operation of public-facing charging equipment can be in conflict with the competitive marketplace. Using ratepayer dollars and utility resources to identify potential locations, procure charging equipment, and market charging locations to EV drivers can provide a competitive advantage to public-facing utility-owned and operated charging stations. Other charging station site hosts simply may not have the resources to compete with the utility.

While there may be competition among vendors within a utility RFP process, this is not the type of competition that occurs in the competitive marketplace, in which charging companies compete for site hosts that want to offer EV charging services on their property. An RFP process also does not involve any customer choice; rather, an RFP process results in a "one-size, fits-all" solution that the utility will deploy at all locations (again, assuming my understanding is correct that RMP intends to select only one network service provider

and only one equipment provider). Finally, because an RFP process does not involve customer choice, it also offers no opportunities for innovation because there is a single procurement event – the RFP. Site hosts that participate in RMP's Company-owned Charger program will be locked into the solution RMP selects in the RFP and have no opportunity to select more innovative solutions.

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

A. Yes. And there are many examples of utility programs in other jurisdictions that have site host choice of both network and hardware. For example, Consumers Energy's PowerMIDrive EV charging rebate program allows participating site hosts to choose their preferred hardware and network software solution that meets certain functional requirements, which the Michigan Public Service Commission noted would enable the utility to utilize EV charging data to better understand impacts to the grid and trends of charging on- and off-peak.[68] Additional examples of programs that provide site hosts with choices within utility ownership programs include San Diego Gas & Electric "Power Your Drive," Pacific Gas & Electric's EV Charge Network, and Southern California Edison's "Charge Ready 2" in California.[69] San Diego Gas & Electric has owned EV charging stations that operate on different charging networks for years.

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

[69] 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).

Q: Is it necessary for RMP to use a single network service provider given that it will own all of the EV charging stations in the Company-owned Charger program?

A: No, there is no reason that RMP needs to select a single vendor to provide network services for the Company-owned Charger program and RMP has not argued that it is. All of the EV charging networks, including ChargePoint, have entered into roaming agreements that allow EV drivers to conveniently pay for charging sessions on charging stations that operate on another network.[70] For example, any EV driver that has signed up for the ChargePoint network can use the ChargePoint app or their ChargePoint RFID card to initiate a charging session at a station operated by another network and seamlessly pay for their charging session using their ChargePoint account, and vice versa. Thanks to roaming agreements, EV drivers would have a consistent experience across Company-owned Chargers even if the chargers are operated by different networks. To ensure that the Company-owned Charger program "enables competition, innovation, and customer choice in electric vehicle battery charging services," site host choice in network service provider is essential.

[70] See: https://www.chargepoint.com/products/network/

Q. If the Commission requires RMP to allow site hosts to choose the network service provider for the charging stations deployed on their property, are there IT-based solutions that can help RMP manage EV charging load on multiple EV charging networks?

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

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

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

In addition, Distributed Energy Resource Management Systems (DERMS) are also becoming a popular platform for utilities to implement programs for technologies on the customer side of the meter. These systems help connect various technologies (e.g. smart

thermostats, hot water heaters, and EV charging stations) from multiple vendors into a single platform and interface from which a utility can obtain a unified view of data and issue demand response events. This provides the utility the value of charging data and demand response from the largest selection of solution providers without limiting the site host's choice to an unnecessarily restricted set of options.

Q: Is it necessary for RMP to use an EV charging hardware provider given that it will own all of the EV charging stations in the Company-owned Charger program?

A: No. Just as there is no reason to select a single network provider, there is no reason that RMP needs to select a single vendor to provide EV charging stations for the Company-owned Charger program and RMP has not argued that it is. Just as site hosts can choose their preferred EV charging equipment in the competitive market in the absence of a utility program, they should be permitted to do so in the context of the Company-owned Charger program.

Q: What do you recommend to ensure that RMP's Company-owned Charger proposal enables competition, innovation, and customer choice with respect to procurement of EV charging equipment and network service provider?

A: First, I recommend that site hosts that allow RMP to deploy Company-owned Chargers on their property be provided a choice in the charging equipment and network services utilized on their property. As cited above, there are numerous examples of programs from other states in which utilities own the charging stations and allow site hosts to choose their preferred hardware and their preferred network services provider. This can be done by a utility setting minimum technical requirements and allowing the site host to choose among

vendors on a pre-qualified list who can meet those qualifications. ChargePoint believes that at minimum there should be two hardware and network service provider options. Providing site hosts with choices in both charging hardware and network service provider is very common in utility transportation electrification programs around the country, including in both utility-ownership programs and other utility incentive programs. Attachment JDW-4 provides a list (compiled under my supervision) of many such programs that provide site host choice in both hardware provider and network service provider.

Second, I recommend that any program that assists site hosts with installing Company-owned EV charging services should provide site hosts with a choice of either 1) allowing RMP to charge its tariffed prices for EV charging (subject to the recommendations I made in the previous subsection) or 2) establishing the price of charging services themselves in a manner that aligns with their onsite operations. This can be easily achieved through a utility's normal tariff structure. A site host would become the utility customer of record and responsible for paying the regular bills associated with the electricity used for charging services through standard tariffs. This ensures the utility remains whole for any costs related to the energy used by the charging stations, while allowing the site host flexibility to price the charging services in a way that supports their own goals. Some site hosts may seek a small profit, while some may offer a discount which could be offset by increased sales from other products, for example.

Q: Are there any other reasons the Commission should adopt ChargePoint's recommendations to require RMP to provide site hosts with a choice in EV charging equipment and network services and to allow site hosts to set the price for EV charging services?

A: Yes. These two modifications will put the Company-owned Charger program on a more equal footing with RMP's make-ready infrastructure proposal. As I have discussed, RMP has structured its Company-owned Charger program to use its built-in competitive advantages – particularly its ability to offer EV charging services at prices that are comparable or cheaper than the retail cost of electricity – for its own benefit. In large part because RMP would offer such cheap charging prices, prospective site hosts considering offering DC fast charging to the public would have a strong incentive to allow RMP to install Company-owned Chargers on their property instead of participating in the make-ready infrastructure program and Schedule 120 incentive program. ChargePoint does not object to the concept of RMP offering a "turn-key" solution in principle, but RMP should not be permitted to offer a turn-key solution with advantages that only RMP can offer, such as pricing that is comparable to or less than the price of electricity. The utility's turn-key solution should also not distort the competitive market by favoring a single vendor (the winner of the RFP) over all others. The two modifications I recommend above – site host choice in equipment and network service providers and site host control over pricing – will ensure that RMP's Company-owned Chargers proposal will enable competition, innovation, and customer choice without impeding RMP's ability to offer an effective program.

Q: Please summarize your recommendations regarding RMP's proposed Company-owned Charger program.

A: I recommend that the Commission find that RMP's proposal requires modification in order to meet the statutory requirement that the EVIP Program enables competition, innovation, and customer choice. To ensure that the Company-owned Charger programs meets the statutory criteria, I recommend that the Commission modify the program as follows:

- Reallocate the capital spending budget so that the total capital spend for Company-owned Chargers (including charging equipment and make-ready infrastructure needed to support Company-owned Chargers) is equal to the capital spend for the make-ready infrastructure program;
- Establish a parity rebate that covers the total cost of EV charging equipment, maintenance, and network fees to ensure that the value a site host choosing to own and operate their own charging stations is equivalent to the value provided by the Company-owned Charger proposal.
    - As an alternative to a parity rebate, the Commission can ensure that the competitive market has the opportunity to deploy charging stations with support from the make-ready infrastructure program before RMP deploys its Company-owned Charger by:
        - Requiring RMP to begin offering the make-ready infrastructure program for a full two years from launch of the EVIP before deploying any Company-owned Chargers, and

1200 ▪ Directing RMP to identify specific locations where it intends to deploy
1201 Company-owned Chargers and share that information publicly with the
1202 Commission and any stakeholder that asks to receive such information.
1203 Developers should be given an opportunity for one year from the date
1204 RMP identifies a given location to provide notice to RMP that they
1205 intend to deploy chargers at that location, after which the developer
1206 should have 18 months to begin development;

1207 • Reject RMP's pricing proposal and direct RMP to develop charging prices as follows:
1208 o Annually survey the prices of public EV charging in its service territory and set
1209 the price for DC fast charging at the median rate for DCFCs in its service
1210 territory and set the price for Level 2 charging at the median rate for Level 2
1211 charging in its service territory.
1212 o Establish a $0.05/kWh surcharge during on-peak hours.
1213 o Any discount for RMP customers should be not exceed ten percent and should
1214 decline by one percentage point each year to allow RMP to transition to cost-
1215 based prices over a reasonable period of time.
1216 • Require RMP to offer site hosts on whose property Company-owned Chargers will be
1217 deployed at least two choices of EV charging equipment vendors and at least two
1218 choices of network service providers.
1219
1220
1221

D. Innovative Projects and Partnerships

Q: What will you address in this section of your testimony?

A: In this section of my testimony, I will address RMP's proposal to include an Innovative Projects and Partnerships component within the EVIP.

Q: Does ChargePoint support RMP's proposal to include an Innovation and Partnerships component within the EVIP?

A: Yes, with modifications. ChargePoint is generally supportive of the proposed Innovation and Partnership component of the EVIP, and understands the value of collaborative EV charging efforts, as well as utilities staying informed on emerging technology related to transportation electrification.

Q: What modifications does ChargePoint recommend?

A: While ChargePoint does not have access to the estimated EVIP program expenditures, the Company states that some of investments in the innovative projects and partnerships component of the EVIP, including contributions to the Freight Logistics Electrification Demonstration project will be funded through the make-ready infrastructure program budget.[71] As stated earlier in my testimony, ChargePoint is concerned that including the Innovation and Partnerships projects within funding set aside for make-ready infrastructure further diminishes the funds available for make-ready infrastructure investments, which is already a relatively small component of the proposed EVIP program in comparison with the funding dedicated to the Company-owned charger program.[72] To reiterate, ChargePoint

[71] Campbell Exhibit 1, p. 13.
[72] Campbell Exhibit 1, p. 13.

1242 believes that investment in make-ready infrastructure can provide a more efficient and cost-
1243 effective path towards realizing the stated goals of the EVIP program to increase EV
1244 adoption in the state of Utah, and operate a low-cost, efficient infrastructure program that
1245 adds revenue to the system.[73] For these reasons, I recommend that in addition to increasing
1246 the funds available for the make-ready component of the proposed EVIP, the Commission
1247 direct RMP to create clear delineations between the funding set aside for the various
1248 components of the EVIP, including the Innovation and Partnerships component. This
1249 would provide certainty that funds set aside for make-ready infrastructure investments will
1250 be protected from being greatly diminished by directing them towards other programs.

1251 **E. <u>Extension of Schedule No. 2E (Residential EV TOU Pilot)</u>**

1252 **Q: What will you address in this section of your testimony?**

1253 A: In this section of my testimony, I will address RMP's proposal to extend the termination
1254 date for its Electric Service Schedule No. 2E - Residential EV Time-of-Use Pilot Option –
1255 from December 31, 2021, to June 30, 2022. The Company is proposing to extend the
1256 termination date to allow interested parties time to review and provide comments regarding
1257 its final report on Schedule No. 2E to evaluate whether the program should continue or
1258 terminate on June 30, 2022.

1259

1260

[73] Initial Application for approval of EVIP, p. 5.

Q: Does ChargePoint support RMP's proposal to extend Schedule No. 2E until June 30, 2022?

A: Yes. I agree that it is appropriate to allow interested stakeholders time to review the final report and provide comments on the program prior to the program's termination. This would allow time for meaningful stakeholder review and discussion to determine whether the program should continue in its current form, continue with modifications, or terminate at the end of the extended June 30, 2022, termination date. I further recommend that the Commission and RMP develop a formal stakeholder process to allow parties to collaboratively review the final report and discuss the future of the program.

F. Programmatic Design, Reporting Requirements, and Stakeholder Processes

Q: What will you address in this section of your testimony?

A: In this section on my testimony, I will discuss ChargePoint's recommendations regarding the general programmatic design, reporting requirements and associated stakeholder processes related to the EVIP program.

Q: Please describe the general programmatic design, reporting requirements and stakeholder processes RMP is proposing as a part of the EVIP.

A: The Company proposes to administer the EVIP over a 10-year period, from 2022 through the end of 2031, with initial investments being made during the first five years of the program. Further, the Company states that after this initial five-year period it will re-evaluate the EVIP to determine the effectiveness of the various program components,

assess the state of the national and state-wide EV market, and make any necessary modifications to the EVIP.[74]

Aside from the proposed five-year re-evaluation, the EVIP does not consider any other formal review or reporting requirements to be submitted to the commission;[75] and while the Company states that is will accept feedback from relevant stakeholders,[76] it is unclear under what process the five-year review would take place and which stakeholders would be considered ”relevant.” Additionally, the EVIP proposal does not contemplate any collaborative stakeholder review processes, other than ongoing coordination with the Utah Department of Transportation (UDOT) to coordinate the planning and deployment of the company-owned EV charging network.[77]

Q: Please describe the benefits of regular reporting to the Commission and stakeholder review of utility transportation electrification programs.

A: Regular reporting to the Commission and stakeholders can provide valuable updates on how transportation electrification plans are performing, and the opportunity to evaluate potential modifications to increase the effectiveness of the programs going forward. This is especially important for the EVIP proposal considering the length of the proposed program being a 10-year period, with a single review after five years. The EV market is rapidly evolving which makes it appropriate to regularly review program performance and

[74] Campbell Exhibit 1, p. 14.
[75] ChargePoint notes that per Section 54-4-41(8), Rocky Mountain Power must submit annual reports to the Public Utilities, Energy, and Technology Interim Committee of the Utah Legislature, on or before June 1st of each year. However, these reports are not part of the Commission process.
[76] See Rocky Mountain Power’s response to WRA data request 1.27.
[77] Campbell Exhibit 1, p. 25-26.

consider modifications, prior to five-years into the program. Additionally, it is important that stakeholders are included in these reporting and review processes to contribute market expertise and advocate for the benefit of utility ratepayers and other stakeholders.

Q: Do you have any recommendations regarding reporting requirements and stakeholder processes for the proposed EVIP program?

A: Yes. I recommend that the Commission direct the Company to submit annual reports for Commission and stakeholder review and provide the opportunity for stakeholders to provide comments regarding the program performance and propose potential modifications. I further recommend these reports contain the following:

1) An evaluation of the performance of the Company-owned charger component of the EVIP. This should include the number of charging stations that have been deployed through the program, broken down by charger type, and an evaluation of the utilization of the charging stations, beginning with the first annual report after company-owned chargers become operational;

2) An updated evaluation of L2 and DCFC rates that are being charged by the competitive market in Utah and an update to the rate structure at company-owned chargers to reflect changes in competitive market rates, beginning with the first annual report after company-owned chargers become operational;

3) An evaluation of the performance of the make-ready component of the EVIP. This should include the number of potential site hosts that have applied for incentives, and the total value of incentives that have been distributed through the program;

4) An evaluation of the performance of the Schedule 120 incentives. This should include the number of applications that have been submitted, the total value of incentives that have been distributed, and the number of charging ports that have been deployed for each program offering (e.g., Residential AC Level 2 Chargers, Non-Residential & Multi-family AC Level 2 and DCFC chargers, etc.);

5) An assessment of the impact of each component of the EVIP on the deployment of EV charging stations in Utah, and how the program has enabled competition, innovation, and customer choice in EV charging services, including an updated assessment of remaining gaps in EV charging infrastructure;

6) An update on efforts that have been made through the Innovative Projects and Partnerships components of the EVIP, and a discussion of future efforts planned through the program.

V. Conclusion and Recommendations.

Q: Please summarize your recommendation for the Commission.

A: As stated at the beginning of my testimony, I recommend that the Commission approve RMP's EVIP proposal with the following modifications to improve the proposed program and ensure that the EVIP meets the statutory requirement that the program enables competition, innovation, and customer choice:

Make-ready:

- Increase the budget for make-ready infrastructure to support third party-owned EV charging stations, as detailed below;

- Establish a separate budget for the innovative projects and partnerships by reducing the Company-owned Charger budget;
- Include make-ready investments on the customer side of the meter as a standard practice rather than in "some circumstances," to further incentivize investment in EV Charging stations from the competitive market;

Schedule 120 Incentives

- Increase the incentives for residential AC Level 2 chargers to $500 per charger, and allow the incentives to be applied to all aspects of the charger installation, including costs for necessary panel upgrades in addition to the cost of the charging equipment;
- Adopt a requirement for all chargers funded through Schedule 120 incentives to be "smart" or networked, and ENERGY STAR certified;

Company-Owned Chargers

- Reallocate the capital spending budget so that the total capital spend for Company-owned Chargers (including charging equipment and make-ready infrastructure needed to support Company-owned Chargers) is equal to the capital spend for the make-ready infrastructure program;
- Establish a parity rebate that covers the total cost of EV charging equipment, maintenance, and network fees to ensure that the value a site host choosing to own and operate their own charging stations is equivalent to the value provided by the Company-owned Charger proposal.
    - As an alternative to a parity rebate, the Commission can ensure that the competitive market has the opportunity to deploy charging stations with support

from the make-ready infrastructure program before RMP deploys its Company-owned Charger by:

  - Requiring RMP to begin offering the make-ready infrastructure program for a full two years from launch of the EVIP before deploying any Company-owned Chargers, and
  - Directing RMP to identify specific locations where it intends to deploy Company-owned Chargers and share that information publicly with the Commission and any stakeholder that asks to receive such information. Developers should be given an opportunity for one year from the date RMP identifies a given location to provide notice to RMP that they intend to deploy chargers at that location, after which the developer should have 18 months to begin development;

- Reject RMP's pricing proposal and direct RMP to develop charging prices as follows:
  - Annually survey the prices of public EV charging in its service territory and set the price for DC fast charging at the median rate for DCFCs in its service territory and set the price for Level 2 charging at the median rate for Level 2 charging in its service territory;
  - Establish a $0.05/kWh surcharge during on-peak hours;
  - Any discount for RMP customers should be not exceed ten percent and should decline by one percentage point each year to allow RMP to transition to cost-based prices over a reasonable period of time;

- Require RMP to allow site hosts on whose property Company-owned Chargers will be deployed the option of becoming the utility customer-of-record and establishing prices to drivers;
- Require RMP to offer site hosts on whose property Company-owned Chargers will be deployed at least two choices of EV charging equipment vendors and at least two choices of network service providers.

Innovative Projects and Partnerships

- Require RMP to create clear delineations between the funding set aside for the various components of the EVIP, including the Innovation and Partnerships component to provide certainty that funds set aside for make-ready infrastructure investments will be protected from being greatly diminished by directing them towards other programs;

Extension of Schedule No. 2E

- Approve RMP's proposal to extend Schedule No. 2E until June 30, 2022, and require RMP to develop a formal stakeholder process to allow parties to collaboratively review the final report and discuss the future of the program;

Programmatic Design, Reporting Requirements, and Stakeholder Processes

- Require RMP to submit annual reports for Commission and stakeholder review containing the specific information listed in my testimony.
- Provide an opportunity for stakeholders to provide comments regarding the program performance and propose potential modifications as a part of the annual reporting process.

Q: Does this conclude your testimony at this time?

A: Yes.