BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Consider Alternative-Fueled Vehicle Programs, Tariffs and Policies.	Rulemaking 13-11-007 (Filed November 14, 2013)

CHARGEPOINT, INC. PHASE 1 COMMENTS ON PROPOSED GUIDING PRINCIPLES AND CURRENT PROGRAM ISSUES

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In accordance with the California Public Utilities Commission ("Commission") Rules of Practice and Procedure and the July 16, 2014 Assigned Commissioner's Scoping Memo and Ruling ("Scoping Ruling"), ChargePoint, Inc. ("ChargePoint") submits the following Phase 1 Comments on Proposed Guiding Principles and Current Program Issues.

ChargePoint provides specific answers to the Commission's questions below. With respect to the key question of defining an increased utility role in deployment of PEV infrastructure, ChargePoint supports such a role, subject to the following criteria:

1) Utility involvement should in no way reduce or limit customer choice in terms of the PEV charging hardware, network services, or vehicle. The charging market should remain a competitive marketplace.
2) Utility involvement should provide benefits to ratepayers. Ratepayer benefits should be measured inclusively, including consideration of impacts on grid reliability, grid efficiency, Low-Carbon Fuel Standard ("LCFS") credits, and support for preferred resources and greenhouse gas reduction goals.
3) Utility involvement should address an identified need, help to stimulate the market for PEVs and reduce the "chicken and the egg" challenge of PEVs (i.e., consumers need confidence that a charging network is sufficiently robust to address range anxiety).
4) Finally, utility involvement must draw on the core competencies of the utility.

Applying these criteria in the context of California's current PEV charging infrastructure needs, ChargePoint recommends that the Commission specifically:

- Consider an increased role for the utilities in PEV infrastructure deployment. That role should be defined by reference to the five criteria proposed by Chargepoint, and for the present confined to expanding the availability of make ready infrastructure.
- Find that there is no "market failure"
- Authorize the utilities to develop programs for installing make ready facilities.

I. Introduction

By way of background, the comments and recommendations below come from the perspective of a company that has invested significant effort, resources, and private capital in meeting the fast-growing demand of Californians for networked plug-in electric vehicle ("EV" or "PEV") charging infrastructure. Since this phase of the proceeding focuses specifically on the respective roles that industry and the utilities will play in building out California's EV charging market and infrastructure, we provide some background below on ChargePoint and the California market.

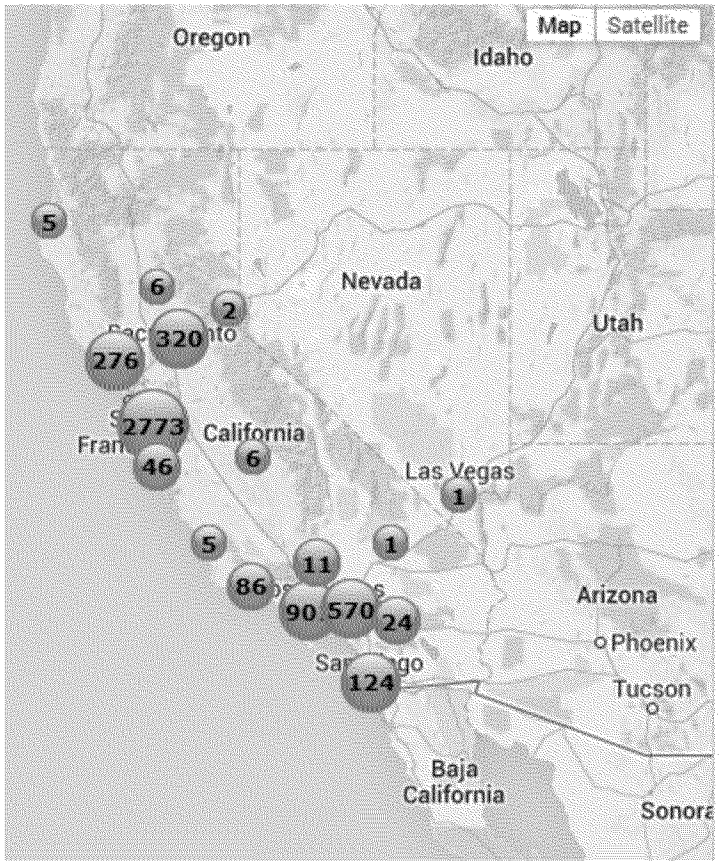
A. ChargePoint

ChargePoint provides the largest and most open charging network in the country, with more than 18,500 charging spots and more than 5.9 million charges delivered over the ChargePoint network. ChargePoint makes advanced hardware and best-in-class cloud-based software. ChargePoint's open network is utilized by many leading EV hardware makers. Every eight seconds, a driver connects to a ChargePoint station. ChargePoint drivers have driven more than 117 million electric miles and have avoided more than 5.1 million gallons of gasoline and 36 million pounds of CO_2 emissions.

ChargePoint was founded in 2007. Based in Campbell, California, ChargePoint has steadily contributed to job growth and economic development in the state and around the country. ChargePoint has grown in employees from two people in 2007 to 195 – with a job increase of close to 20% in the first quarter of this year alone.

ChargePoint has been a market leader in EV infrastructure deployment in California. To date, ChargePoint has deployed more than 5,000 charging stations in this state. The distribution of ChargePoint's stations is shown in the figure below.

Figure 1. ChargePoint Stations in California



ChargePoint has also worked with the California Energy Commission and the U.S. Department of Energy to support public-private partnerships in the California market. Most importantly, ChargePoint has have brought significant private investment to the California EV charging market.

In addition, ChargePoint has sponsored and supported important policy initiatives to promote EV adoption and address market barriers, including Assembly Bill ("AB") 631, which codified the Commission's decision to exempt EV charging services from utility regulation; Senate Bill ("SB") 454 (Chapter 418, section 44268, Div. 26 of California Health and Safety Code) the "Electric Vehicle Charging Station Open Access Act," and recently AB 2565, which removes lease restriction for tenants paying to install EV charging.

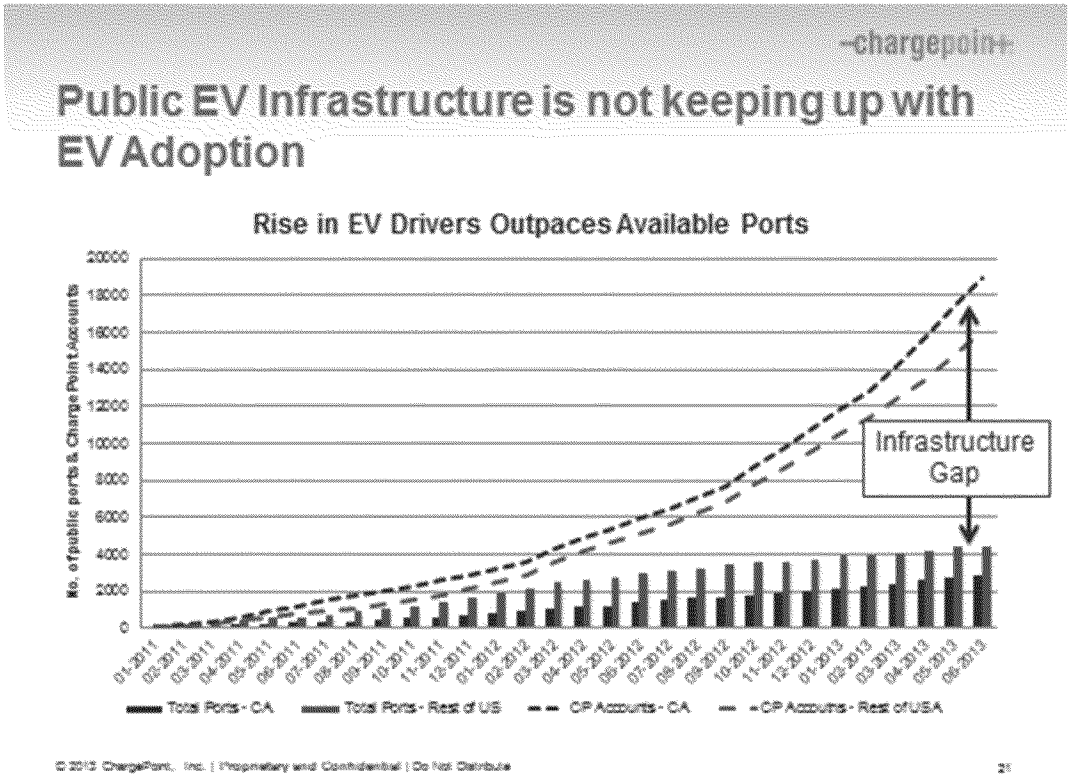
B. California's EV Market

ChargePoint recently testified at the California Air Resources Board ("CARB") and the California Energy Commission ("CEC") to provide an "assessment" of EV Infrastructure in California. (Testimony of Richard Lowenthal, California Air Resources Board, May 2014). Based on our knowledge of the California market, we shared the following:

- Infrastructure investment stimulates EV adoption. Case studies of workplace customers demonstrate this with overwhelming evidence -- when charging infrastructure is in place and available, employees' investment in EV cars increases and ports are used every day. Setting prices on EV infrastructure increases utilization overall and the efficiency of utilization.
- Utilization characteristics of our leading customers are indicative of future potential.
- Location drives utilization. Poorly located ports distort utilization trends.

ChargePoint also has provided data to quantify the challenges California faces in developing the EV charging infrastructure needed to support the phenomenal growth of electric vehicles today, and to achieve the Governor's goal of 1.5 million cars by 2025. Unfortunately the planning and development of public EV infrastructure is not keeping up with EV adoption in California.

Figure 2. EV Drivers Compared to Available Charging Ports



ChargePoint appreciates the opportunity to participate in this proceeding, which is focused on a "mid-stream" review of EV charging infrastructure market development in California.[1] The Commission has been a leader in developing precedent-setting policies to support California's position as a global leader in EV adoption.

This effort has been guided by mandate of the California Legislature, which in 2009 recognized that timely action by the Commission and the utilities under its jurisdiction is needed to accelerate the deployment of necessary infrastructure:

> *The commission, in consultation with the Energy Commission, State Air Resources Board, electrical corporations, and the motor vehicle industry, shall*

[1] OIR at 3.

evaluate policies to develop infrastructure sufficient to overcome any barriers to the widespread deployment and use of plug-in hybrid and electric vehicles.[2]

The policies set in this proceeding will help move California forward to the next stage of EV market expansion and ensure that the state's network of EV charging infrastructure meets the state's ambitious policy goals for transportation electrification.

II. Comments on Proposed Guiding Principles

The Scoping Ruling proposes four draft Guiding Principles to use as direction when considering policy, rules, regulations and tariff design throughout all phases of this proceeding.[3] These proposed Guiding Principles are:

- Promote the deployment of safe and reliable AFV grid infrastructure designed to meet transportation and energy service needs while maximizing ratepayer benefits and minimizing costs to all utility customers.
- Target near-term solutions that complement the use of preferred energy resources and utilize the grid efficiently.
- Incorporate and enhance policies from other, related Commission proceedings to promote efficient program implementation and use of ratepayer funding.
- Enable and incorporate the full range of values from VGI in a new program as part of the Commission's overall AFV efforts while remaining technology neutral and allowing for business model innovation.

The Commission requests comment on whether it should adopt these Guiding Principles, and whether they should be modified. ChargePoint agrees that adoption of guiding principles to direct and focus policy development is a very important first step in this proceeding. ChargePoint supports the Commission's draft Guiding Principles, but encourages the Commission to add three additional Principle(s):

- Align planning for AFV grid infrastructure with related California state policy goals including the California Global Warming Solutions Act (AB 32), the AB 2514 Energy Storage Procurement Framework and Design Program, the Governor's goal of 1.5 million ZEVs by 2025, and the ZEV Memorandum of Understanding.

[2] California Public Utilities Code §740.2.
[3] Scoping Ruling at 6.

- Adopt policies that optimize customer choice and support continued innovation in the development of EVSE and grid-integrated metering and network services.
- Enable smart AFV grid infrastructure that maximizes ratepayer benefits through networked communication and demand response.

III. Comments on Phase 1 Current Program Issues

The Commission requests comment on Questions 2-5 from the Phase 1 Statement of Issues. ChargePoint responds to and discusses each question below.

A. Utility Role

The Commission asks if it should "consider an increased role for the utilities in PEV infrastructure deployment and, if so, what should that role be?" ChargePoint supports an increased role for the utilities in PEV infrastructure deployment. The crucial question is what that role should be.

Building and deploying AFV grid infrastructure widely and in a timely manner will be critical to supporting the growth of electric vehicles in California and in particular to support Governor Brown's goal of 1.5 million zero-emission vehicles on California roadways by 2025. The scale and speed of AFV grid infrastructure deployment could grow rapidly with the involvement of the utilities. However, the utilities' role should be clearly defined and draw on utilities' core strengths and competencies.

The Commission begins by asking if there is a *role* for the utilities and then goes on to ask if the Commission should consider *utility ownership* of PEV charging infrastructure. A "role" for utilities should not be defined only in terms of "ownership"; the utilities can play a "role" that may include ownership but is also broader than just ownership. The Commission should be clear on this distinction in future discussions. ChargePoint believes that utility ownership should be limited to only installation and "make ready" infrastructure; the charging

hardware and network services should remain a competitive marketplace. This section discusses in more detail how the Commission should consider an expanded role for the utilities.

B. PEV Infrastructure Overview

The PEV market brings together many different but complementary competencies from a wide range of companies, including automobile manufacturers, battery manufacturers, software developers, service-oriented companies, charging hardware manufacturers and suppliers, and the distribution-level infrastructure of the utilities. Of all these types of companies, the utilities are best suited to plan for and manage the volume of interaction with the utility distribution grid that will occur with large-scale adoption of PEVs.

In considering what role the utilities should play in PEV infrastructure deployment, it is necessary to first reach a common understanding of the term "PEV infrastructure." The term "PEV infrastructure" generally includes two related, but distinct, elements: the "make ready" infrastructure, and the charging hardware and network services. For purposes of this discussion, we define the "make ready" infrastructure as including one or more service panels and junction boxes, together with the electrical conduit, transformers, metering, and electrical wiring capable of supporting at least one VGI-enabled EVSE (including DC charge stations), including any sub-surface remediation if and when required, all associated engineering, installation labor, and finishing work and landscaping to complete the installation. Make ready infrastructure could include a new service drop as an alternative to retrofit facilities.

C. Evaluating "Underserved Markets" and "Market Failure"

Decision 11-07-029 specified that the Commission would revisit the prohibition on utility ownership of electric vehicle service equipment ("EVSE") should utilities present evidence "of

underserved markets or market failure."[4] In this rulemaking, the Commission asks parties to comment on how the Commission should evaluate "underserved markets" or "market failure" pursuant to Decision 11-07-029.

In evaluating whether "market failure" has occurred in the PEV infrastructure market, the Commission should ask if all the critical elements necessary for PEVs to access electricity exist and are available to PEV owners. Those critical elements are an electric distribution system with sufficient capacity to deliver the electricity, the generation capacity sufficient to meet the loads associated with PEVs, and the charging hardware and services that enable the delivery of the electricity. Each of these elements exist and are available in California. Moreover, competition for end-use customers exists in the third area, charging hardware and services.

A task force on ZEV implementation in California and seven other states found that the fueling infrastructure for PEVs is expanding. The task force noted "there is a significant commitment from both the public and private sectors to quickly build-out the charging infrastructure."[5] California has multiple companies offering a range of charging hardware and service offerings. As of July 2014, ChargePoint has deployed more than 5,000 charging stations throughout California. According to a study released by the California Energy Commission, California accounted for nearly 70 percent of global investment in PEV-related sectors in the first half of 2011.[6] The PEV market has expanded from virtually zero PEVs in use in 2009 to approximately 100,000 PEVs in use today in California. Car manufacturers continue to roll out new models to meet the variety of consumer needs and preferences, and EVSE manufacturers

[4] D.11-07-029 in R.09-08-009, p. 50.
[5] ZEV Program Implementation Task Force, Mulit-State ZEV Action Plan, May 2014, page 8.
[6] Melaina, Marc, Michael Helwig. (National Renewable Energy Laboratory). 2014. *California Statewide Plug-In Electric Vehicle Infrastructure Assessment.* California Energy Commission. Publication Number: CEC-600-2014-003.

and network service providers are providing diverse and innovative products that EV owners can use to charge their cars and access managed charging networks. It is clear that there is currently no "market failure" in the PEV infrastructure market.

The Commission also asks how to evaluate "under-served" markets. ChargePoint does not believe that the term "under-served markets" is particularly useful, but instead recommends that the Commission ask whether there is an identified need for utility involvement in providing infrastructure that will help meet the state's ambitious ZEV goals and focus utility activity on areas within their particular competency while protecting customer choice and competitive markets.

As a first step, ChargePoint recommends that the Commission assess the level of PEV charging penetration in California. One metric the Commission could use to assess penetration levels is the attach rate. This metric is defined as the ratio of non-single-family ports to cumulative EV vehicles. The metric is a useful barometer for analyzing whether the charging infrastructure is sufficiently robust to support EV ownership. Based on ChargePoint ports deployed in California and the current number of plug-in vehicles in the state, ChargePoint estimates an attach rate of 5%. This number indicates growth in the overall market, but shows that infrastructure deployment is not keeping pace with vehicle sales enough to act as a stimulus to the market.

In particular, there are certain market "segments" (e.g., multi-unit dwellings, public locations) that are yet to see widespread deployment of PEV charging infrastructure as a result of the high upfront investment required for the basic "make ready" infrastructure. The low penetration of charging units in multi-unit dwellings is rooted in the same split-incentive problem that hampers energy efficiency in this market segment: the infrastructure is paid for by

the owner, but the primary benefit accrues to the tenants, and it is difficult for the owner to recover the infrastructure cost from benefiting tenants.

ChargePoint recently completed the ChargePoint America grant program, and our experience in the program is instructive for this discussion. The ChargePoint America Program was a $15 million dollar matching grant funded by the American Recovery and Reinvestment Act through the Transportation Electrification initiative administered by the Department of Energy. In all, 4,600 charging ports were installed in single-family homes, multi-family housing, commercial and public locations to support more than 2,000 program vehicles. Ten regions in the United States received EV charging stations: Austin/San Antonio, Texas; Boston; Los Angeles; New York; Orlando/Tampa; Sacramento, Calif.; San Jose/San Francisco Bay Area; Redmond/Bellevue, Wash.; Washington DC/Baltimore; and Southern Michigan (including Grand Rapids, Lansing, Ann Arbor and Detroit). The grant was awarded in May of 2010 and the program was completed in June of 2013.

At the end of the ChargePoint America grant program, the attach rate of non-residential charge ports (i.e., the number of non-residential charge ports per PEV) was 20% meaning that there was one charge port installed for every five PEVs. This level of attach rate is believed to have spurred tremendous growth in vehicle sales by increasing public awareness and providing confidence to potential PEV owners that they would be able to locate an available charging spot at work, at a public parking garage, at a retail space, or other public location.

The ChargePoint America Program achieved this level of attach rate by splitting the charging infrastructure costs with the charge host. Specifically, ChargePoint America paid for the EV charging hardware, and the host paid for the installation, or about 50% of the total cost. Following the end of the grant period, with the full cost of the charging infrastructure now borne

by the host and at the same time, a vast increase in PEV car sales, ChargePoint has seen the attach rate move from 20% down to 8% and stay steady, which is the equivalent of about 12 PEVs per non-residential charging port. In ChargePoint's experience, this level of attach rate is too low to sustain a viable PEV fleet in the state over time. It is also far below the standard industry attach rate goal of 25%.

It is important to note that attach rates will vary across charging segments (i.e., workplaces, retail, multi-unit dwellings, parking, and DC fast charging). Moreover, the optimal attach rate – a level at which EV ownership is not constrained by inadequate charging ports – will also vary by segment. As a first step in exploring the question of "underserved markets" the Commission should consider studying further the optimal attach rates, and determine whether this is a useful metric for gauging the robustness of market segments.

D. Evaluating the Proper Utility Role

As discussed above, there is evidence that California is facing a PEV infrastructure gap. In some market segments, investment in needed PEV infrastructure is lagging, which has resulted in stable but low attach rate. The challenge of meeting Governor Brown's ZEV goal will require an "all hands on deck" approach to analyze and address this need. ChargePoint believes that utility involvement will be beneficial to increasing the deployment of PEV infrastructure. But the Commission should consider how and when the utilities' involvement will be most beneficial. Specifically, ChargePoint recommends that any utility application for deployment of AFV grid infrastructure, such as SDG&E's recent application (A.14-04-014), should be evaluated with the following criteria in mind:

1) First and foremost, utility involvement should in no way reduce or limit customer choice in terms of the PEV charging hardware, network services, or vehicle. The charging market should remain a competitive marketplace.
2) Utility involvement must provide benefits to ratepayers. Ratepayer benefits should be measured inclusively, including consideration of impacts on grid reliability, grid efficiency, Low-Carbon Fuel Standard ("LCFS") credits, and support for preferred resources and greenhouse gas reduction goals.
3) Utility involvement should address an identified need, help to stimulate the market for PEVs and reduce the "chicken and the egg" challenge of PEVs (i.e., consumers need confidence that a charging network is sufficiently robust to address range anxiety).
4) Finally, utility involvement must draw on the core competencies of the utility.

ChargePoint supports utility financing for make-ready and installation of EVSE. As discussed above, the key gap in the PEV infrastructure market is not in the provision of charging services, but in the installation costs and the development of electrical make ready infrastructure to support these services. Together, make-ready and installation account for nearly 50% of the cost of deploying an EV charging station. This is particularly the case with respect to multi-unit dwellings and in public places, where the additional load from the charging stations may necessitate a new subpanel and other expensive electrical upgrades. High upfront investment costs can be a substantial hurdle to widespread deployment of PEV infrastructure in certain segments. Financing mechanisms to reduce these up-front costs would provide ratepayer and system benefits.

ChargePoint recommends that the Commission consider allowing utility installation, financing, and ownership of installation and make ready infrastructure. Utilities would include the make ready infrastructure costs in their rate base and share the cost of the infrastructure among all ratepayers (or all ratepayers in a specific customer class). Charging hosts would provide private investment for the cost of the smart charging hardware and network services. Utility financing and ownership would reduce substantially hosts' overall costs, and therefore increase the incentive for host investment in smart charging infrastructure.

The need for immediate effort in the expansion of make ready and installation facilities is clear. The utilities' involvement in this area is appropriate because: 1) it would not undermine or otherwise effect customer choice or the competitive market in EV charging equipment and network services, 2) it would provide ratepayer benefits, 3) it would address an immediate identified need for infrastructure enabling the installation of smart charging facilities to serve the expanding EV market, and 4) it would draw on the utilities' core competencies and expertise.

ChargePoint notes that a utility make ready program would complement the Commission's Interim Policy for Residential Upgrades or Extensions in Excess of Utility Allowances, as adopted in Decision 11-07-029 and extended in Decision 13-06-014. In the latter decision, the Commission found that the potential that high costs for the utility extension and interconnection could have a negative impact on the growth of PEV adoption.[7] The Commission has also recognized the value of supporting investment in infrastructure:

> …to create an environment to facilitate customers' positive initial experiences with Electric Vehicles and, as a result, greatly improve the likelihood that Electric Vehicles will become a permanent feature of California's vehicle fleet.[8]

[7] D.13-06-014 at 12.
[8] Id., citing D.11-07-029 at 54.

Utility supported investment in make readies will also provide an incentive to charging point hosts to install smart EV chargers. Managed or "smart" charging of electric vehicles provides a grid benefit while also forestalling grid reliability deficits that would otherwise be triggered by mass deployment of basic (i.e., not smart) charging systems. In a basic charging system, the EV is charged when it is plugged in or according to a timer set in the vehicle. In a smart charging system, the vehicle's charging pattern is set in a coordinated manner with other nearby chargers and in response to utility signals and user inputs. This coordination of charging offers a number of grid benefits. First, it reduces the cumulative demand from charging activity by staggering (or cycling) the charges, forestalling the need for distribution upgrades that may have been necessitated if the charging was done simultaneously. Second, it also allows for charging to be deferred from high-cost periods (i.e., when electricity rates are high) to low-cost periods in response to real-time price signals from the utilities. Third, it enables PEV loads to absorb renewable over-generation and to moderate the rapid ramp-down in net demand that is anticipated in the mornings and early afternoons with continued solar deployment and the ramp-up in late afternoon and early evenings. Finally, it enables PEV loads to participate in demand response ("DR") programs and tariff offerings.

When smart charging is used, widespread PEV deployment provides direct support to the utility grid while also enabling wider societal benefits from reduced greenhouse gas emissions, and direct economic benefits to ratepayers from LCFS credits.[9] It also replaces customer

[9] These credits accrue to the utility for each residential customer with at-home charging and can be monetized by selling them to entities that are subject to Low-Carbon Fuel Standard requirements. Title 17, California Code of Regulations, Section 95484(a)(6). http://www.arb.ca.gov/fuels/lcfs/CleanFinalRegOrder112612.pdf. The Commission is currently in the process of deciding in R.11-03-012 how the utilities should meet their obligation to use LCFS revenues for the benefit of PEV drivers. Third party providers of EV charging services also have a right to "opt-in" as a regulated party and generate additional LCFS credit revenue for the benefit of public charging customers. 17 CCR 17 CCR §95480.1(b).

consumption of fossil fuels with increases electricity sales, which benefits all ratepayers by spreading a utility's fixed cost responsibility across a broader sales base. Promoting the higher attach rates needed to sustain continued PEV growth by supporting the development of smart charging therefore provides ratepayer benefits, and stimulates the market for PEVs to reduce the "chicken and egg" challenge, particularly when utility assistance is focused on the multi-unit dwelling segment.

ChargePoint does not support utility ownership of charging hardware, software, or network services, except as used for utility employees and fleet vehicles. Any construct permitting utilities to purchase large volumes of charging stations from a select set of vendors is inherently problematic for market growth and consumer choice. If a utility decides to only own one type of hardware, or equipment with select features or characteristics, it would effectively be undermining technological innovation since no other hardware producer could possibly compete in that market for a customer without the same ability to rate base the cost of their unit and installation. Customers should have the option of choosing whichever EV charging products, features and network services they need for their situation.

Utilities should do what they know best while allowing other players in the market to do what they already do well. For example, in the EVSE space, ChargePoint and other providers have years of experience in developing and perfecting the software and network communications behind the hardware. Providing charging services is a multi-functional job that encompasses billing software, smartphone apps, driver and station customer care, monitoring, and remote maintenance, among other services. ChargePoint estimates that it would take as many as 27 software engineers up to 10 years to duplicate its network software. There is neither the time in

terms of achieving state policy goals nor the need for utilities to try to develop this expertise in-house.

In addition to being an inefficient allocation of resources and core competency, utility ownership in this particular space would threaten technological innovation. Charging stations are designed and built with a certain feature set that is a fundamental part of each company's business model. This feature set is designed into the products' hardware and software and in turn is part of the cost basis of the unit. There is no option to remove features if a utility deems any to be unnecessary. Therefore, in a utility-ownership scenario, manufacturers could be penalized for incorporating innovative features that they feel are vital to their business and the market. If the utility were granted Commission approval to expend ratepayer funds for charging hardware, software, or network services, cost rather than features could become the main factor in the selection of equipment. The impact would likely be to slow or stop innovation.

In addition, customer interoperability across different utility territories would be difficult to achieve. In a utility-owned and operated charging scenario, charging stations would be not be accessible by users that visit from outside the utility service territory. ChargePoint has commented on this concern in its response to SDG&E's Pilot Proposal.[10] There is clearly a public benefit in optimizing accessibility. This is reflected in SB 454, which establishes customer authentication requirements, requires EV charging service providers to provide mapping and payment information that helps enable EV users to identify public charging facilities, and sets foundational requirements for integrating national roaming standards in California.

[10] ChargePoint, Inc. Response to Application of San Diego Gas and Electric Company for Authority to Implement a Pilot Program for Electric Vehicle-Grid Integration at 4-6.

The utility's involvement or role should therefore focus on the installation and make-ready for the charging stations. It is vital that the utility role not interfere with customer choice. As previously defined above, make-readies encompass electric utility infrastructure that is well within the core competencies of the utilities. They are also technology neutral, leaving to the customer the choice of charging technology and technology provider. For all of the reasons discussed above, ChargePoint urges the Commission not only to authorize the utilities to deploy make ready facilities, but also to instruct the utilities to prepare a proposal to move this important initiative forward.

IV. Education and Outreach

The Commission has asked "what education and outreach activities must the utilities provide to support further customer PEV adoption?" and "what existing resources are available for these activities and what additional resources are needed?" ChargePoint supports the role of the utilities to pursue customer education and outreach to increase awareness. Utilities have a large and attentive audience with their customers and thus are well-positioned to educate potential PEV customers on the economic, environmental, and energy security benefits of these vehicles.

The utility should be allowed to educate customers as to the benefits of using electricity for their transportation fuel and to encourage charging during off-peak hours on rates that maximize savings. Utilities should focus on the economic benefits to consumers, and the environmental benefits to society, of PEV adoption. While there are some generic resources available now, potential adopters lack direct economic comparisons of what utility customers would pay for fuel versus a fossil fuel powered automobile. This information should be highlighted by the utility, perhaps through bill inserts or other advertising.

Utilities interface with customers and can provide valuable information to inform PEV infrastructure planning. IOUs have customer contact and data that could be useful in identifying and having a broader discussion about planning for long-term charging network needs. ChargePoint also agrees with automakers that have advocated for making it "simple" for drivers to convert to electricity for fuel. The utility can and should assist in providing targeted information on alternative rate structures that the customer could elect to use. Currently, no electric vehicle rate information is provided to EV customers at the point of sale.

Customer outreach need not be limited to existing electricity customers. It could also include outreach to new home builders, commercial and residential developers, property managers, parking lot owners and operators. Utilities could also work with PEV dealerships to make information about rate choices and the benefits of owning a PEV available to customers.

ChargePoint recommends that the Commission add a sub-track to this proceeding to focus on education and outreach efforts pertaining to PEVs. This sub-track should review the effectiveness of IOU proposals on education and outreach and identify potential improvements. Also importantly, this sub-track should consider ways in which third parties could leverage ratepayer investments to further expand education and outreach efforts. ChargePoint has worked with Clean Cities Coalitions and partnered with regional readiness teams such as the EV Alliance that are well positioned to engage in these efforts.

V. Demand Charges

The Commission has asked parties to comment on "How should the Commission mitigate the impact of demand charges, if at all, on entities pursuing transportation electrification?" ChargePoint appreciates the Commission's ongoing concern for EV drivers and fleet operators. The Commission should support reasonable policies to mitigate the impact of demand charges on

entities pursuing transportation electrification. ChargePoint recommends the following three actions:

1) Support demand response programs that compensate to offset demand charges;
2) Promote smart EV charging through a managed network that allows the administer to curtail load during critical peak events;
3) Require utilities to consider available third party data from smart EV charging to support rate making and changes to demand charges in the future. Utilities can make use of data available from smart charging stations, provided by networked EVSE operators, to make well-informed decisions for evaluating rate structures and demand charges that support EV adoption.

VI. Integrating "best practices" and "lessons learned" from current pilots.

The Commission has requested comments on how the Commission should "identify and consider in this proceeding best practices achieved and lessons learned from current AFV pilot project results." The Scoping Ruling notes that there are many activities currently underway that relate to the questions examined in this proceeding, and that the Commission will explore how to identify and capture the best practices developed and lessons learned from the results of the AFV pilot programs currently underway.[11]

ChargePoint is pleased that the Commission has identified this important question as a threshold priority. This proceeding was initiated to "address issues relating to the expanding use of AFVs in California."[12] That effort overlaps with proceedings addressing demand response, utility rates, energy storage, distributed generation and customer interconnections. It also

[11] Scoping Ruling at 7.
[12] OIR at 2.

coincides with numerous AFV pilot programs currently underway and proposed in the utility and CEC 2015-2017 Electric Program Investment Charge ("EPIC") plans.

It is important that all parties to this proceeding have access to pilot data, analysis and results, and an opportunity to discuss best practices and lessons learned from AFV pilots. Commission staff working on AFV issues, the utilities, ratepayer and environmental advocates, and industry stakeholders all bring unique expertise to this proceeding. The Commission can leverage this expertise by establishing a mechanism to enable the systematic sharing of pilot results with participants in this proceeding, and a mechanism for soliciting input on how best to interpret and incorporate information gained from pilots going forward.

ChargePoint has two initial suggestions. First, the Commission should establish a standing requirement that the sponsor of any current AFV-related pilot provide any reports prepared during or at the conclusion of the pilot to all stakeholders on the service list of this proceeding. For pilot programs that directly relate to an issue under consideration in this proceeding, it may also be useful to schedule a workshop for the sharing of pilot results and discussion of how they relate to the Commission's ongoing efforts.

The second suggestion is to require that utilities periodically (perhaps quarterly) update the Joint Statement of Related Proceedings, and to specifically list, identify and discuss the status of any pilots or proposals underway or pending that may have immediate implications for the work underway in this proceeding. This will help the ALJ manage this proceeding and efficiently integrate the efforts underway elsewhere as needed. It will also make participation easier for parties that do not have the resources to actively track the many proceedings and pilot efforts underway outside of this rulemaking.

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VII. Conclusion

ChargePoint appreciates this opportunity to submit comments and recommendation on the questions identified by the Commission. We look forward to working with the Commission to meet the state's ambitious goals to expand the EV market.

Dated: August 29, 2014

Respectfully submitted,

By: /s/

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