California Energy Commission
Dockets Office, MS-4
Re: Docket No. 12-EPIC-01
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California Energy Commission
DOCKETED
12-EPIC-01
TN 72871
APR 02 2014

RE: EPIC Second Investment Plan
Attention: Lorraine.Gonzalez@energy.ca.gov

COMMENTS of CHARGEPOINT, INC.
SECOND TRIENNIAL INVESTMENT PLAN
2015-2017 ELECTRIC PROGRAM INVESTMENT CHARGE (EPIC) PROGRAM

INTRODUCTION and OVERVIEW

ChargePoint, Inc. appreciates this opportunity to provide comments to the California Energy Commission and the California Public Utilities Commission for the Second Triennial Investment Plan for the Electric Program Investment Charge (EPIC) Program. This program provides an opportunity to support the development and deployment of next generation clean energy technologies—specifically in the area of electric vehicle charging and grid integration.

ChargePoint is a Silicon Valley based manufacturer and network operator for electric vehicle charging services. ChargePoint maintains the largest network of independently owned charging stations in the world and has developed a sophisticated software platform for the integration of electric vehicles on the grid.

ChargePoint is the largest and most open electric vehicle (EV) charging network in the industry, with more than 16,000 charging locations and a 70%+ market share. Ranked #1 by leading independent research firm, Navigant Research, ChargePoint makes advanced hardware and best-in-class cloud based software. ChargePoint's open network is utilized by many leading EV hardware makers, and ChargePoint encourages all EVSE manufacturers to join the network.

ChargePoint® stations have dispensed more than 28,327 Megawatt hours (MWh) of electric fuel; the equivalent of 3,555,804 gallons of gas avoided and 24 million lbs of CO2 emissions prevented

Every 10 seconds, a driver connects to a ChargePoint station and by initiating over 4 million charging sessions, ChargePoint drivers have saved over 2.6 million gallons of gasoline and driven 79 million gas free miles.

California has been at the forefront of policies that have embraced and encourage Electric Vehicle deployment and innovation technologies to support EVs by providing strong leadership, regulatory clarity and funding for manufacturing and deployment. California has become and will remain the preeminent market for electric vehicles.

ChargePoint has partnered with the California Energy Commission to successfully deploy EV Charging infrastructure in California under the AB 118 program. We have developed manufacturing capabilities to support the software capabilities of the network in partnership with the Energy Commission under AB118.

In addition, we have engaged with the California Public Utilities Commission since May of 2009 to support the ground breaking policy decisions that have defined the terms of operation and rules of engagement for Electric Vehicle Service Providers in the State of California.

ChargePoint has also been a stakeholder in the Governor's EV Action plan and EV Roadmap planning led by CAISO.

We respectfully submit the following input for funding priorities to address the key market gaps for EV infrastructure grid integration and customer facing programs.

RECOMMENDATIONS

Overall, we support the direction and strategic objectives proposed in the Program Areas that support investment in Electric Vehicle smart charging services. We see the plan as expanding opportunities for EV integration far beyond the first EPIC plan.

Most importantly, we support the addition of the new strategic objective as part of demonstration funding—(S16) "to expand smart charging and vehicle to grid power transfer for EVs**.** " This program represents ChargePoint comments filed in PUC VGI roadmap that the pilot demonstration programs expand beyond fleets to real market opportunities such as multi-family housing.[1]

ChargePoint is concerned that real near-term opportunities could be lost if the EPIC Program funding places a high priority in avoiding "complexity" in developing VGI policy. It is vital to take on aggregation and multi-user use cases *now* because these offer the greatest opportunity for impact and future expansion. Specifically, smart charging facilities at residential and mixed use multi-dwelling unit locations and workplace charging should be a high priority target for VGI, as well as the arguably less "complex" but also less scalable consumer sector of commercial and government fleet operators.

We agree with the background analysis stated on page 74 of the EPIC draft plan: "Although fleet vehicles represent the technical and economic 'low-hanging fruit', the number of fleet PEVs will be very small in comparison to non-fleet PEVs. Therefore, a next step is to develop the more complex but far wider-ranging applications where PEVs in geographically distributed locations are aggregated by a utility or third-party aggregator into resources large enough to participate in utility or independent system operator markets."

[1] Comments of ChargePoint, Inc., Order Instituting Rulemaking to Consider Alternative Fuel Vehicle Progams, Tariffs and Policies, Rulemaking 13-11-007, page 4.

The following Strategic Objectives are targeted to EVs:

- S9 Efficient Integration of Electric Vehicles
- S8.1: Develop systems to manage Demand Response (EVs eligible for funding in this for the first time)
- S16: Expand smart charging and vehicle to grid power transfer for EVs

Below are responses to questions posed by the Commission.

1. **Are critical research initiatives missing?**

   EV Projects must be expanded to include commercial and industrial EV Charging customers. ChargePoint is the market leader in public charging infrastructure including workplace, multi-family housing, retail and municipal applications. We have close to 10,000 charging stations deployed in California in these markets. Too much emphasis has been placed on "low hanging fruit" of fleet applications. Specifically, demand response programs (S8.1) as well as S9 programs should call out these markets for program funding.

   In addition, we believe that the Commission should now take a role in facilitating the rollout of Low Carbon Fuel Standard revenue to EV drivers. Specifically, administrative programs for LCFS need to be established and would be greatly accelerated by Commission funding.

2. **What issues are deserving of significant funding due to their high potential for ratepayer returns?**

   Overall, the funding levels in the first triennial plan for Strategic Objective 9 EV Charging was disappointing at $7M. Since that time, the market for EVs has almost doubled, as has the EV Infrastructure. These programs are critical to both enable EV drivers to lower their bills, promote grid reliability, GHG emissions mitigation and of course support lower emission vehicles.

   We recommend that S16 have funding to successfully engage market deployment participation from commercial customers, municipalities (other than fleet), multi-family housing and workplace markets. $20-$40M

RECOMMENDED FUNDING OPPORTUNITIES FOR SMART EV INFRASTRUCTURE

Project	Challenge/Opportunity	Ratepayer returns	Solution	EPIC Structure
Customer side of the meter load management for commercial/industrial (Multi-family housing, Workplace, and Commercial charging markets)	No utility communication required	Demand charge reduction; bills lowered, greater reliability, societal benefits	Smart Charging integration with Building management systems	S 8.1
Integration of smart charging with utilities (C/I, Res/Multifamily housing markets)	Foster innovation by enabling use of state-of-the-art EVSE and cloud-to-cloud communication infrastructure that is not dependent on older AMI devices and infrastructure	Enable smaller loads to participate in grid integration; grid reliability, lower costs, societal benefits	Enable cloud-to-cloud open ADR; Aggregate EVSE as a manageable load	S16.1
Aggregated C/I, Res/multifamily housing EVSE for CAISO Ancillary services	Today only large loads participate in the market. Enable smaller EV loads to participate in grid integration	Grid reliability, safety, lower consumer costs, societal benefits	CAISO pilot program for EVSE smart charging third party aggregators	S 16.1
LCFS implementation program for third party opt in participation	Third parties eligible to manage LCFS programs for public charging customers/ Enable LCFS markets for EV Public charging customers	Customer revenue of up to $220 a year per vehicle-lower costs, grid reliability, societal benefits	Develop smart charging tools and administrative capabilities for third party participation	S 9.1
Time of use pricing analytics	Customers do not have tools to analyze benefits of TOU pricing for EVs. Opportunity to enlist more participation in TOU programs	Lower costs, Grid safety and reliability, Societal benefits, efficient renewables integration	Provide C/I, res/multi-family housing customers with information to support utilization of TOU pricing	S 9.1

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In conclusion, the opportunity to support projects such as these will provide IOU electric ratepayer benefits, increase competitiveness in the EV market, mitigate electric vehicle negative impacts on the grid and greatly assist technologies “overcome the valley’s of death.” These projects both complement and leverage the policy and funding priorities of the State of California as it related to Electric Vehicles and their capability to be a transformational technology to reduce environmental impacts as well as drive economic development