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July 24, 2013

Mark D. Marini, Secretary
Department of Public Utilities
One South Station – 5th Floor
Boston, MA 02110

RE: D.P.U. 12-76, Investigation by the Department of Public Utilities on its own Motion into Modernization of the Electric Grid

Dear Secretary Marini:

ChargePoint appreciates the opportunity to comment on the “Report to the Department of Public Utilities from the Grid Modernization Steering Committee,” filed on July 2, 2013, in the Investigation by the Department of Public Utilities on its own Motion into Modernization of the Electric Grid, D.P.U. 12-76.

We commend the Department for opening an inquiry to identify potential grid modernization strategies that can enhance the reliability of electricity service, reduce electricity costs, and empower customers to adopt new electricity technologies and better manage their use of electricity. The Department, in its Order opening this investigation, identified a key component of this inquiry relating to electric vehicles, *i.e.*, to “facilitate the integration of ...new technologies, such as ... electric vehicles.”¹

ChargePoint was honored to have been asked to serve on the Steering Committee and participated fully in the discussions and working group meetings. ChargePoint joined with the New England Clean Energy Council to drive consensus on key topics regarding the optimization of electric vehicles in the planning for grid modernization in the State of Massachusetts. In addition, we have participated in the DOER recent Stakeholder Workshop on electric vehicles as well as the Georgetown Climate Initiative Planning for New England funded by the Department of Energy.

¹ See Department of Public Utilities, D.P.U. 12-76, Vote and Order Opening Investigation: Investigation by the Department of Public Utilities on its own Motion into Modernization of the Electric Grid (October 2, 2012) at 3-4.



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Background on ChargePoint

ChargePoint was established by Silicon Valley entrepreneurs with the sole mission to ensure consumers do not hesitate to purchase electric vehicles because they could not find a place to charge them. The company is credited with delivering the first networked “smart” charging station in the U.S. market, and is building a global EV community and the network that connects it. Recognized by Pike Research in 2012 and 2011 as the top ranking manufacturer and provider of EV charging services, the Pike report cited ChargePoint’s strategy, implementation and product innovation as the market drivers.²

ChargePoint has developed the largest network of independently owned charging stations in the World with in excess of 10,000 charging spots. ChargePoint stations currently dispense more than 812 megawatt hours (MWh) of electric fuel each month, the annual equivalent of 2,000,000 gallons of gasoline avoided and 30 million lbs. of CO2 emissions prevented. Electric Vehicle (“EV”) drivers plug into a ChargePoint Station more than 4,100 times every day with 50% of all EV drivers using a ChargePoint card and 45,000 mobile applications downloaded. Coulomb currently operates in 14 countries and in 50 states in the United States.

ChargePoint in Massachusetts

In January of 2010 ChargePoint was selected by the Department of Energy to participate in the Electrification of Transportation program funded by the “Recovery Act.” This public/private partnership entitled “ChargePoint America” has deployed charging infrastructure in twelve American cities, including the Boston area. We recently announced that we have allocated all of the public stations in the program with 5,600 installed stations.

The map below indicates the location of the ChargePoint Network in the State of Massachusetts.



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In a partnership with the Massachusetts Department of Energy Resources we successfully leveraged the Department of Energy investment in Massachusetts and worked with cities and local stakeholders to plan and install the infrastructure. Municipalities include– Boston, Newton, Brookline, Cambridge, Tyngsboro, Worcester, Lexington.

In addition to grant funding, a significant number of stations have also been privately funded in Massachusetts. We have worked with developers and business owners to support a business model to encourage private investment in this infrastructure. ² Our partnership with National Grid represents the most comprehensive deployment of an Investor Owned Utility in the United States with the Utility deploying 34 Stations in their pilot program.

² Municipalities Retail Outlets/ Malls: Big Y, The Green Stop, Galleria Mall, Hanover Mall; Airports: Logan;MBTA Stations: Alewife, Braintree, Quincy, Route 128, Woodland, Forest Hills;Universities – MIT, Harvard, WPI, Clark;Hospitals : BU Medical Center, Harvard Medical School; Restaurants : 99 Restaurant, Chillis; Parking Lots – John Hancock Tower, Prudential Center, Pilgrim Parking, Pilgrim Street Garage; Apartments: Emerson Place Apartments, West end Apartments, Boston Properties; Workplace:Perkin-Elmer, Astra Zeneca, National Grid, Harvard Pilgrim Health Care, John Hancock Life Insurance, People’s Bank, Century Bank; Hotels: Element Hotel, Indigo Hotel, Seaport Hotel;Utilities – National Grid, Littleton Municipal Utility



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Smart Charging and Grid Modernization

ChargePoint Founder and CTO Richard Lowenthal presented “The Importance of a Modern Grid to Electric Vehicles” before the Grid Modernization Steering Committee. The purpose was to outline the technology provided by EVSE as “smart charging” and how this can benefit the Massachusetts Grid. Key points included:

- With policies that encourage off peak pricing all ratepayers can benefit from Electric Vehicles
- Electric Vehicle drivers and hosts must be able to participate in ancillary services such as demand response, frequency regulation and capacity management that would result in significant cost savings to drivers and overall ratepayer benefits with grid efficiency
- Technology must be enabled to allow third parties to provide cloud to cloud interface with utilities to optimize consumer participation and lower costs
- Submetering capability in EVSE should be anticipated and back office billing supported by utilities to enable EV Rates, consumer choice and lower costs

Electric Vehicles provide an opportunity to provide a new asset for Massachusetts electricity grid enabling demand response, load management and other services to enable cost-effective renewables integration into the grid.

EV Principles and Recommendations

Recognizing the broad scope of the investigation and short timeline, ChargePoint worked with Environment North East ³ and the Clean Energy Caucus to ensure that recommendations in the final report are consistent with removing barriers to PEV adoption and will help guide the Department’s future approach to EV related investment in plug-in electric vehicle charging infrastructure necessary to facilitate the widespread use of electricity as a transportation

We strongly endorse the recommendation that the DPU ⁴open a separate proceeding targeted to Electric Vehicles to address specific issues to support consumer use and adoption of plug-in electric vehicles in Massachusetts.

³ See Environment North East letter of April 18, 2013

⁴ Recommendation 8.4 page 96,



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The recommendation follows:

“The Department should open a separate proceeding to consider the range of issues associated with the deployment of electric vehicles and their effect on the grid. The proceeding should address the barriers to Electric Vehicle Adoption including, but not limited to:

Uncertainty as to the jurisdiction of the Department of Public Utilities over persons or corporations owning, controlling, operating, or managing facilities to provide supply electricity to the public to charge plug-in electric vehicles poses a barrier to private investment in plug-in electric vehicle charging infrastructure necessary to facilitate the widespread use of electricity as a transportation.

To obtain the benefits that electric vehicles can bring to the grid the DPU must address the proper role for regulated utilities in removing barriers to the widespread deployment of plug-in electric vehicles, minimizing adverse impacts associated with vehicle charging, and maximizing the environmental and system benefits of the use of electricity as a transportation fuel.

The proceeding should also consider the following principles and issues:

1. Support a strategy that addresses an open market approach for a variety of business models relating to charging system ownership and payment operations. The strategy needs to encompass current and future technology and interconnection issues as well as private/public sector barriers.
2. Incentivize off-peak charging of electric vehicles and avoid adverse grid impacts associated with vehicle charging.
3. Develop a transparent customer billing process that is fair to all customers, helps develop the electric vehicle market and identifies best practices for charging them to avoid demand pricing.
4. Encourage utilities to support short term and forward looking issues related to integrating electric vehicles into the grid to increase asset utilization and load management such as demand response as well as into the house or commercial property for emergency power.
5. Encourage utilities to develop information sharing capacity to educate consumers and commercial entities about the benefits of EVs and develop partnerships with stakeholders to further advance outreach efforts. Utilities should develop communication plans to



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identify EV owners in their districts to control local impacts and enhance reliability of electricity services.

6. Utilities should be provided with timely notification about plug-in electric vehicle purchases and charging equipment installations to facilitate strategic system-wide planning and ensure adequate and strategic distribution system upgrades. “

Massachusetts and Electric Vehicles

Massachusetts has a history of leadership in sustainability and clean technology adoption. Electric Vehicles have the potential to support both sustainability and technology goals of the State. Other States are putting in policies to remove barriers and encourage adoption for job generation as well. This is a competitive issue and needs to be addressed immediately.

Thank you very much for the opportunity to participate in the Steering Committee and further comment on the “Report to the Department of Public Utilities from the Grid Modernization Steering Committee”.

Sincerely,

A handwritten signature in black ink that reads "Colleen Quinn".

Colleen Quinn
Vice President Government Relations and Public Policy