

December 20, 2018

Case No. 18-2660-IN

Ms. Judith C. Whitney, Clerk
Vermont Public Utility Commission
112 State Street
Montpelier, VT 05620-2701

Re: Siemens Model Language for Supporting Open Standards for EV Charging Hardware and Software Interoperability

Dear Ms. Whitney,

Siemens submits the following model/draft language regarding hardware/software open standards and interoperability, in support of/and to augment Greenlots' response submitted to the Commission on December 14, 2018.

Siemens is a global leader in eMobility® and is the first corporation of our size to commit to being carbon-neutral by 2030. Siemens's offering in eMobility encompasses what we refer to as the *Plug to Grid™* EV charging hardware and software ecosystem – and includes light, medium, and heavy-duty vehicle segments as well as off road solutions. We believe an open standards-based EV charging infrastructure promotes a competitive EV charging market that drives adoption among the public.

Open Standards for Supporting EV Charging Hardware and Software Interoperability and Advanced EV Load Management

Siemens supports the language submitted by Greenlots in this section of their comments. We make the following additions:

- Open standards and interoperable hardware/software in EVSE infrastructure drive cost efficiencies' in the use of public funds by eliminating opaque expenses involved in proprietary solutions. Open standards enable increased competition among technology providers, thereby driving additional cost benefits.
- Open standards give customers the choice to switch between technology providers and business models without being "locked" into a single solution that proprietary networks entail. In other words, a customer who has deployed an OCCP-compliant charger (for example) could easily switch their existing network provider (EVSP) to another provider – including choosing an alternate method of managing the charger in terms of business operations from options that may be available in the market. Importantly, for this choice to exist, OCCP needs to be implemented between the charger and the cloud.

Draft Regulatory Text Pertaining to Open Standards and Interoperability

Siemens makes the following additions (highlighted in **bold**) to Greenlots' proposed language below:

1. When utilizing ratepayer or taxpayer funding to deploy **or incentivize** electric vehicle charging infrastructure, regulated entities shall deploy **chargers** that support leading open protocols to ensure interoperability and future flexibility between **charger** hardware and software management systems. **Open standards should exist between the charger and the cloud.**
2. When utilizing ratepayer or taxpayer funding to deploy **or incentivize** electric vehicle charging infrastructure, regulated entities shall ensure that deployed infrastructure is capable of the communication of demand response **signals** and related information with utility systems via a relevant leading open communication standard **such as Open ADR.**
3. When utilizing ratepayer or taxpayer funding to deploy **or incentivize** electric vehicle charging infrastructure, regulated entities shall seek to maximize access to publicly available **chargers** by minimizing barriers such as requiring membership or non-point of sale payment functionality. **Open payment standards should include credit cards as a minimum.**
4. For 1 and 2 above, these standards may include OCPP and OpenADR.
5. **An Open Standard is one that has been developed in a transparent manner with industry participation via a process open to any interested stakeholder and is free of charge to use.**

We thank the Commission for the opportunity to submit this support letter and the language additions and for its kind consideration of the same.

Thank you.



Chris King
Chief Policy Officer
Siemens Digital Grid