From: Virginia Bodyfelt < <u>virg@ampup.io</u>>
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Subject: Recommendations for sounder and more sustainable electric vehicle (EV) infrastructure

Good day.

AmpUp is an electric vehicle (EV) software and networking provider. Together with our hardware and installation partners, we deliver reliable, easy-to-use, and affordable charging solutions to help consumers meet their transportation electrification needs and sustainability goals. We have deployed charging stations across the country, from Vermont to California, for private residences, universities, businesses, cities, and utilities.

While the movement for clean energy is gaining momentum, we believe that the necessary regulation ensuring sound public investment and consumer choice in this sector is lacking. We are writing to encourage your agency to adopt and enforce regulation that supports EV hardware and software interoperability and open EV networks, as well as encourages consumer choice and flexibility. It is critical that these measures be adopted and enforced in a timely manner to protect public investments in modern infrastructure so that communities can best meet sustainability and environmental goals.

Interoperability & Open Charge Point Protocol (OCPP)

Similar to consumers' ability to select mobile handsets based on brand or device features, paired with their choice of cellular network provider, EV drivers and charging station site hosts have the ability to select combinations of hardware and software that best meet their needs. This ability is supported through an application standard called Open Charge Point Protocol (OCPP). This protocol allows for communication between charging hardware, software, and consumers. OCPP-compliant chargers ensure seamless and ongoing upgrades for network services, a crucial component to station and operational cost optimization. The most effective way to protect consumers with respect to hard- and software interoperability is to include these requirements in incentive programs managed by public service commissions. Moreover, these requirements should be a component of preferred vendor approval and procurement processes administered by municipal and state systems.

We believe that consumers are empowered by choice and should not be unnecessarily locked to a proprietary network provider if and when dissatisfied with their service. This is especially important where deployments are funded by rate-payers; the public should not, under any condition, find themselves in long-term vendor lock-ins or carry the burden of high costs to replace proprietary stations with truly open-network alternatives. **OCPP protects utility and consumer investments by allowing the flexibility to select and utilize any combination of hardware and software.** It is important that regulators and program administrators verify claims of OCPP compliance since many network providers follow piecemeal aspects of this guideline without achieving actual interoperability. To this end, we encourage regulatory bodies to prioritize funding to chargers certified to be third-party OCPP compliant if purchased with rate-payer or public funds. Hardware and software vendors should provide proof of OCPP interoperability and make it clear to customers if they are purchasing an open or proprietary solution.

Open Networks

Another important concept in protecting consumers and ensuring sound public infrastructure investments is the establishment of open networks. Open EV ecosystems link "smart" stations to a shared network wherein station owners or property managers can utilize software to control station access and functionality. We encourage regulatory bodies to require the use of open networks where and when EV chargers are funded by tax- and rate-payers. Networked chargers not only provide the state and utilities with important information on charging activity and load, but can make for a simpler customer experience. EV drivers use networked stations to schedule, authenticate, and pay for charging sessions in a convenient and familiar way. We cannot understate the importance of this experience as it is critical to increased adoption of electric vehicles. Electric vehicle stations and software are seeing increased over-the-air (OTA) updates for maintenance, scheduling, load throttling, payment, demand response notifications, and more. This is done in large part due to network capabilities, which provide real-time charger health data to operators and site hosts to ensure maintenance can be done quickly and affordably. Real-time charger data via networks ensures grid safety and reliability by allowing utilities and station owners the ability to remotely manage the hardware, which is key to fire and accident prevention. Utilities and third parties need the ability to communicate with charge station infrastructure today and in the future. For this reason, we strongly advocate for regulation that supports these open networks.

Consumer Choice

As a technology-center company, AmpUp understands the value and benefits of innovation. We hold that competitive markets improve innovation and, ultimately, serve consumers better by allowing them choice. Closed networks and the lack of OCPP are not conducive to industry progress and have led to the emergence of network monopolies. Many of the public chargers in your state are operated by a monopoly that increasingly locks consumers into long-term contracts. Our country's economic history demonstrates several examples of the harm monopolies cause for consumers and innovation, often leading to price fixing and a reduction in service quality. By requiring OCPP and open networks, regulatory bodies will facilitate continued innovation through interoperability and station connectivity. We believe these measures lay the foundation for reliable, future-proofed, and sustainable EV infrastructure nationwide and, if enforced now, will allow communities to avoid costly re-deployments or hardware replacements. In addition to consumer choice, we very much respect consumer investment and acknowledge the importance OCPP and open networks play in prudent and well-reasoned public policy.

We hope that our recommendations can help guide decisions made by your agency to protect consumers at this essential juncture in this new and growing industry. If we can provide additional insight or testimony on these issues or if you have questions on the EV industry in general, please do not hesitate to contact us. We thank you for your consideration and service.

Respectfully,

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