



To: The Honorable Bobby L. Rush  
Chairman, House Committee on Energy and Commerce, Subcommittee on Energy  
2188 Rayburn House Office Building  
Washington, DC, 20515-1301

The Honorable Fred Upton  
Ranking Member, House Committee on Energy and Commerce, Subcommittee on  
Energy  
2183 Rayburn House Office Building  
Washington, DC, 20515-2206

From: Dr. Levi Tillemann (VP for Policy and International, Ample, Inc.);  
John Paul Schnapper-Casteras, Schnapper-Casteras PLLC;  
Matt McGovern, CleanTech Law Partners.

cc: Khaled Hassounah, CEO Ample, Inc.;  
John DeSouza, President Ample, Inc.

Date: May 2, 2021

Re: Equity, Technology Neutrality and The CLEAN Future Act

### **Ensuring Equity and Technology Neutrality of The CLEAN Future Act**

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Dear Chairman Rush, Ranking Member Upton, and members of the House Committee on Energy and Commerce, Subcommittee on Energy,

Ample, Inc. strongly supports the efforts of the Energy and Commerce Committee to promote a transition to a clean, equitable, electrified mobility system and we appreciate this opportunity to provide comments to Committee members and staff in advance of the scheduled hearing on "The CLEAN Future Act: Driving Decarbonization of the Transportation Sector."

Ample, Inc. is a San Francisco-based company that is in the process of deploying battery swap-based energy delivery infrastructure for electric vehicles. It is Ample's intention to install, operate and maintain a significant network of battery swap stations within the State of California, throughout the

United States and internationally. Well-designed battery swapping is an important solution to many of the functional and equity-centered challenges surrounding EV charging and ownership today. This is because battery swapping can be a highly cost-effective means of transitioning drivers without access to overnight EV charging to electric vehicles.

Currently, Ample supports a fleet of high-mileage Uber drivers in the Bay Area. All of these drivers have transitioned to Ample's zero emission EV platform from internal combustion engine vehicles. Without Ample's quick refueling, these drivers would not be able to rely on electric cars, and because they drive for a living (all day, every day) they would be a high-intensity source of GHG gases and criteria emissions. Drivers currently utilizing the Ample's platform come from low-income communities that have not been prioritized by many EV-incentives to date and their shift toward electrification translates directly into improved environmental, noise, and air quality outcomes in these communities.

While EV charging will undoubtedly be part of the solution for refueling electric cars, the challenging economics and slow speed at which electric vehicles charge and infrastructure can be deployed means that battery swapping should also be viewed as a primary mode of public EV refueling. This shift is already under way in more developed EV markets like China, which has roughly 16X as many DC fast chargers as the United States. Chinese companies have announced capacity for battery swap stations capable of servicing 40+ million vehicles by 2025. In light of this burgeoning technology trend, Ample urges the Committee to strive to adopt technology-neutral language with regard to electric vehicle supply equipment (EVSE) and EV infrastructure wherever possible. Within this letter, Ample wishes to highlight some elegant examples of technology-neutral language from Representative Tonko's Electric Vehicle Infrastructure Rebate Act of 2021 (introduced April 30, 2021), urge broader use of such technology neutral language, underline the benefits of incentivizing energy storage and load-balancing devices linked to both EV charging and battery swapping infrastructure, and offer some suggestions for how to further improve economics and equity outcomes related to EV charging policy.

### **Electric Vehicle Infrastructure Rebate Act of 2021 and the definition of electric vehicle supply equipment**

The current definition of Electric Vehicle Supply Equipment (EVSE) found in the CLEAN Future Act, the NO EXHAUST Act, and the Electric Vehicles for Underserved Communities Act of 2021 is:

(1) ELECTRIC VEHICLE SUPPLY EQUIPMENT.— The term “electric vehicle supply equipment” means any conductors, including ungrounded, grounded, and equipment grounding conductors, electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatuses installed specifically for the purpose of delivering energy to an electric vehicle.<sup>i</sup>

(Emphasis added). This definition could inadvertently exclude EV battery swapping stations and other innovative alternatives to EV charging because it requires the delivery of energy directly to a vehicle. However, there are real systemic benefits to systems like Ample's which deliver energy to batteries that are separate from the vehicle, and can thus recharge while a vehicle is not present, store renewable energy, reinforce the grid and provide other grid services that will strengthen America's electricity transmission capabilities.

Ample requests that this Subcommittee and the Energy and Commerce Committee as a whole, use the definition of EVSE from the Electric Vehicle Infrastructure Act of 2021. This bill defines EVSE as

“any conductors, including ungrounded, grounded, and equipment grounding conductors, electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, electrical equipment, or apparatuses installed specifically for the purpose of delivering energy to an electric vehicle or to a battery intended to be used in an electric vehicle.”

(Emphasis added). This definition is more technology-neutral because it would encompass battery swapping and other alternatives to existing EV charging technology.

There are a number other provisions of the Electric Vehicle Infrastructure Rebate Act of 2021 that Ample strongly supports and would prefer to see adopted in Chairman Rush’s NO EXHAUST Act and other EV infrastructure legislation under consideration by the Energy and Commerce Committee. For instance:

#### SECTION 2(c) DEFINITIONS

(3) ELECTRIC VEHICLE SUPPLY EQUIPMENT. -- Based on our interpretation, this definition is wide enough to cover battery swap infrastructure, charging, and alternative means of delivering fuel to electric vehicles.

#### SECTION 2(b)(2) -- ELIGIBLE EQUIPMENT AND LOCATIONS

(D) LOCATION REQUIREMENT. -- Based on our interpretation, the “*workplace*” provision encompasses infrastructure required to fuel fleet vehicles. This is important, as fleet vehicles have utilization factors that are three times higher than privately owned vehicles. They will be a critical lever for addressing climate change and many low-income workers drive for fleets. For the elimination of any doubt, however, we suggest that the bills expressly include fleet vehicles and shared vehicles, e.g., whether driving in their operating territory, pausing in between rides but still engaging in work, or participating in other distributive work or alternative work arrangements, within the definition of “workplace.”

#### SECTION 2(c)(1) -- COVERED EXPENSES

(E) *The cost of an on-site energy storage system that supports electrical load balancing or otherwise improves the performance of such electric vehicle supply equipment.* Based on our interpretation, this provision covers onsite storage broadly enough to support EV chargers with onsite backup as well as battery swap stations. We appreciate the thoughtfulness, fairness and technology neutrality of this approach.

#### SECTION 2(b) -- REBATE PROGRAM REQUIREMENTS

(9) NETWORKED DIRECT CURRENT FAST CHARGING. -- We strongly support efforts to endow the Secretary of Energy with a degree of administrative flexibility with regard to these programs. We would, however, encourage the Committee to include clear metrics and guidelines (e.g. cost, performance, and GHG reductions) by which the Secretary of Energy is required to make such an evaluation.

## **Potential areas for improvement in the Electric Vehicle Infrastructure Rebate Act of 2021**

We appreciate the work done by the staff of the House Energy and Commerce Committee to ensure that the Electric Vehicle Infrastructure Rebate Act of 2021 is technology neutral and responsive to changes in America's evolving EV industry. And while Ample is broadly supportive of the current version of the bill as it is designed to support the growth of America's EV market and adapt to emerging market trends and realities, we also see a few areas where the current version of the bill could potentially be strengthened.

### SECTION 2(c) Definitions.

There are systemic benefits to low power systems that can gradually store energy but quickly refuel a vehicle. In general, we would encourage the Committee to substitute language focused on the speed of energy delivery to a vehicle, rather than the power rating. For instance:

*(6) NETWORKED DIRECT CURRENT FAST CHARGING EQUIPMENT. —The term “networked direct current fast charging equipment” means electric vehicle supply equipment that is capable of refueling a 50 kilowatt hour electric vehicle battery pack to at least 80% capacity in less than an hour and is enabled to connect to a network to facilitate data collection and access.*

This would include all stations operating at 50kw or above while also incentivizing low-power (e.g. 20kw) battery swapping that utilizes lower power levels but can quickly recharge an EV. If the Committee adopts such language, it may also wish to include a minimum power threshold (e.g. 20kw). However, to maximize system flexibility and resilience, and support energy storage and arbitrage we recommend that threshold be no higher than 30kw.

### SECTION 2(b) REBATE PROGRAM REQUIREMENTS. --

#### (9) NETWORKED DIRECT CURRENT FAST CHARGING. –

In order to ensure that promising technologies are not arbitrarily excluded from EV infrastructure programs, we recommend an explicit prohibition on excluding emerging technologies and business models on the basis of low levels of market penetration. Performance metrics could address any concerns regarding utilization.

### SECTION 2(b)(6) DISBURSEMENT OF REBATE

We recommend including a provision allowing the Department of Energy to issue regulations to claw back funding for any equipment that is not functional at least 90% of the time. We also recommend 50% of the credit be dispensed in the form of performance-based incentives (e.g. utilization).

## **Additional potential areas for improvement in the NO EXHAUST Act of 2021**

### TITLE I—ELECTRIC VEHICLE INFRASTRUCTURE

Sec. 102(b)(6) MULTI-PORT CHARGERS.— We recommend substituting performance-based incentives (e.g., electricity dispensed) in place of the incentive for additional chargers.

Sec. 105(a)(22)(A) Electric vehicle charging programs. In general.— We recommend omitting proposals for states to reexamine the rate-basing EVSE infrastructure. Rate-basing infrastructure without corresponding utilization requirements (i.e., performance-based metrics) could result in perverse incentives for the industry to overbuild costly EV chargers that are not adequately utilized.

### TITLE III—PROMOTING DOMESTIC ADVANCED VEHICLE MANUFACTURING

Sec. 711(c)(1) Cost Share and Guarantee of Operation— We see the requirement that facilities continue to manufacture goods for at least 10 years after completion of construction to be both onerous, imprecise, subject to gaming and potentially misaligned with the dynamic nature of the modern EV economy.

## **Conclusion**

Overall we are strongly supportive of the new definition of EVSE and the other updated language in the Electric Vehicle Infrastructure Rebate Act of 2021. We would urge the Energy and Commerce Committee to adopt these thoughtful and technology neutral definitions more broadly in forthcoming EV infrastructure-related bills. In general, Ample supports performance-based metrics and robust reporting requirements for EV charging infrastructure that is built with taxpayer dollars. We also support provisions that allow for regulatory flexibility for executive agencies to take advantage of improved technologies and evolving market conditions. Ample looks forward to supporting the Committee as it continues to develop this and other EV charging infrastructure legislation.

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<sup>i</sup> See generally H.R. 1512, CLEAN Future Act, Title IV, Subtitle D, Section 431(1), pp. 398-99; H.R. 2852, NO EXHAUST Act of 2021, Title I, Section 101(1), p. 2; H.R. 1221, Electric Vehicles for Underserved Communities Act of 2021, Section 6(1), p. 14.