Corporate Electric Vehicle Alliance

July 19, 2022

Deputy Administrator Stephanie Pollack
Federal Highway Administration, U.S. Department of Transportation
1200 New Jersey Ave SE
Washington, DC 20590

Cc: [State Departments of Transportation]

Re: Major Fleet Operator Recommendations for State Electric Vehicle Charging Infrastructure Deployment & Design

Dear Deputy Administrator Pollack and State Departments of Transportation**,**

We write on behalf of the Ceres Corporate Electric Vehicle Alliance (the Alliance), led by Ceres – a coalition of 31 major companies and fleet operators that represent over $1.1 trillion in annual revenue and collectively own, lease, or operate more than 2.5 million fleet or networked vehicles in the United States; and NAFA Fleet Management Association (NAFA) – an association of more than 2,000 individual fleet manager members who come from corporations, public safety, education, government agencies (federal, state, municipal), utilities, and any other entity that uses vehicles in its normal conduct of business or moves people or goods from one place to another.

Our Goals

Alliance members share a common goal of electrifying their U.S. transportation, logistics, and networked fleets, as well as reducing their transportation emissions footprint and are actively working to transition to electric vehicles (EVs). In fact, over the next five years Alliance members plan to collectively procure more than 330,000 zero emission vehicles (ZEVs) in the U.S. market alone. NAFA members support the accelerated transition to EVs as a critical part of the strategy for sustainability and the reduction of vehicle emissions. To succeed, however, real-world factors must be addressed to transition fleets toward full electrification. These factors include the availability and cost of charging infrastructure.

What We Need

The availability of strategically placed, cost-effective, and interoperable public EV charging infrastructure is essential for trips that take commercial and other fleet operators substantial distances from their fleet depots or homes. The same Alliance survey cited above found that the majority of vehicle charging will take place at private locations (26% at fleet depots and 42% at employee homes); however, on-road charging will account for the remaining 32% of charging needs and is a critical element of a successful EV transition, in particular for regional and long-haul freight movement, and fleet movement within urban, suburban and rural areas.

As representatives of the Alliance and of NAFA, respectively, we urge you to take the following considerations into account as you continue to build out EV charging infrastructure across the state, including through the National Electric Vehicle Infrastructure Initiative (NEVI) Formula Program.

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While EV charging infrastructure investments made through the NEVI Formula Program are a promising step towards widespread charging availability in the U.S., there is much more to be done to create a cost-effective, equitable, and reliable charging network for commercial and public fleets. As such, we hope the following recommendations will provide critical guidance as you work to invest funding from the NEVI Formula Program and beyond.

Recommendations

Siting

- **Strategic Planning:** EV charging stations should be strategically and equitably sited to support the largest number of commercial vehicles by analyzing commercial traffic/goods movement patterns on segments of the Interstate Highway System that pass through a state's jurisdiction. States should also ensure that sufficient charging is placed near densely populated and/or urban areas. State planning agencies should coordinate with fleets and EV charging corridor partners and initiatives to determine ideal charger placement and ensure data-based planning.

- **Distance between Chargers:**
    - States should ensure that EV charging stations capable of servicing light-duty vehicles (LDVs) are placed at least every 50 miles, and that EV charging stations capable of servicing commercial medium- and heavy-duty vehicles (MHDVs) are strategically and equitably sited based on commercial traffic/goods movement patterns (as described above; and where feasible based on commercial siting restrictions in 23 U.S. Code, Section 111) including in urban and rural areas.
    - States should ensure that when unable to site charging stations on certain segments of an Interstate Highway (pursuant to 23 U.S. Code, Section 111), chargers should be placed as close to the Interstate Right of Way (ROW) as possible, and no more than one mile from the roadway to ensure maximum accessibility.

- **Commercial Charging Sites:** Where charging stations capable of charging LDVs and MHDVs are co-located, separate charging areas should be designated for each vehicle type to ensure accessibility and operational efficiency for commercial vehicles. States should ensure that charging stations are designed cost-effectively to consider future EV market growth and related space and electrical capacity needs. States should also strongly consider additional and complementary EV charging proposals from authorized commercial fleet operators (who operate within or across the state) that enable deployment of EV charging stations for semi-private commercial fleet use.

- **Co-Location with Amenities:** EV charging stations should be sited near existing or new amenities (e.g., travel centers, truck stops) that users can access while charging (e.g., restaurants, bathrooms, indoor convening spaces etc.). Priority amenities should be accessible 24/7.

Accessibility & Interoperability

- **Turning Radius & Parking Design:** Commercial charging sites should be designed to accommodate the turning radius and dimensions of heavy-duty trucks, both within the station and at ingress and egress points. In addition, MHDV charging/parking slots should feature a pull-through design to accommodate tractors pulling trailers (a feature that could also be beneficial for LDVs pulling trailers).

- **Charging Hardware:** To enable maximum vehicle-charger interoperability and a seamless charging experience regardless of vehicle make and model, the Alliance and NAFA support standardized Society of Automotive Engineers (SAE) Combined Charging System (CCS) connectors on all direct-current fast chargers (DCFC). In addition, all electric vehicle supply equipment (EVSE) should offer the longest cord length (no more than 15 feet) supported by the industry and safely approved for high-powered EVSE, ideally in tandem with a pull-through vehicle design. All charging sites and associated EVSE should be compliant with the Americans with Disabilities Act (ADA).

- **Payment Methods:** Charging stations should implement standards that maximize driver access by providing simplified and universal payment methods. While standards such as ISO 15118 (an international EV-to-charger communication standard) allow for simplified payment processes through "Plug & Charge," it is necessary for charging stations to still incorporate ubiquitous payment methods in conjunction with open standards such as Open Charge Point Protocol (OCPP) and Open Charge Point Interface (OCPI) to allow EVs that are not ISO 15118 compliant to initiate and pay for a charging session using other payment methods. Additional standards should support universal payment through fleet cards, credit and debit cards, etc., regardless of network provider subscription or membership status.

- **Roaming Agreements between Networks:** To ensure that public charging sites are accessible to EV drivers regardless of location and network provider subscription or membership status, states should implement standards that enable coordination and data sharing among charging providers. Network-to-network communication is a critical component of "roaming," which allows EV drivers to access and charge at sites managed by different network providers. Additional open charging standards, such as OCPI, ensure that both ISO 15118 compliant and non-compliant EVs can plug & charge - that is to seamlessly authenticate, authorize, and pay for charging sessions.

- **Protective Barriers:** Stations should be designed in such a way that protects charging hardware from user or weather-related maintenance damage (e.g., vehicle or snowplow damage) by installing protective barriers or other construction techniques.

Electrical Capacity & Charging Rates

- **EVSE Power Level:** To support the operational requirements of both passenger and light-duty commercial vehicles, charging stations located on/directly off the Interstate Highway System should offer at least six DCFC ports capable of providing a minimum power level of 150kW to each user simultaneously. Charging stations designated for commercial MHDVs should offer at least four DCFC ports capable of simultaneously

providing at least 350kW of power to each user to ensure charger redundancy. In addition, rather than install additional Level 2 chargers once DCFC port thresholds are met, the Alliance and NAFA recommend that states exclusively deploy DCFC through public funds in order to support efficient charging times and mitigate operational disruptions.

- **Charging Rates:** Where currently supported by state law, charging station hosts/operators should charge users for electricity on a volumetric, kWh basis to ensure that charging costs are equitable, fair, and based on the amount of electricity pulled from the grid. In states where $/kWh pricing is not currently allowed, we urge state policymakers to introduce legislation to permit such pricing methodology. In the meantime, EV charging should be priced on $/minute basis with at least two pricing tiers to accommodate EV models with slower charging rates. The Alliance and NAFA advise against pricing EV charging on a $/mile basis due to the diversity of EV model efficiencies (similar to the reasoning behind why gasoline and diesel is not priced on a $/mile basis). Charging rates should be clearly displayed at charging stations.

- **Demand Charges:** To mitigate the high costs users can often incur at DCFC charging stations as a result of amortized charging network demand charges, electric utilities should work with regulators to develop fleet-oriented programs that reduce demand charges and provide fleets with various options to mitigate costs.

- **Renewable Energy:** As major global and U.S. companies, many Alliance and NAFA members have set specific and ambitious goals for renewable energy use and broad greenhouse gas (GHG) emissions reduction. As such, we encourage states to work with their public utility commission and electric utilities to optimize the share of electricity generated through renewable energy that supplies power to federally-funded EVSE.

Maintenance

- **Uptime Requirements:** States should establish language in station host/operator and maintenance contracts that requires minimum (at least 97%) uptime requirements for all EVSE deployed through public funds. Properly functioning EVSE are critical to reducing range anxiety and ensuring that commercial fleet operations and transit timelines are not disrupted by broken hardware.

- **Station Monitoring:** To support accurate station monitoring and timely maintenance, state transportation and energy departments should collaborate to collect real-time data on maintenance needs, develop universal processes to fix inoperable chargers, and support contracts for 24/7 maintenance lines (with contact information clearly labeled on each charger).

Signage

- **Distance until Next Charger:** States should place clear signage at least one mile ahead of upcoming EV charging station exists or rest stops on the Interstate Highway System to provide advance notice to EV

drivers. Signage should include an icon that clearly represents EV charging and specifies the type of charger (DCFC) with the distance until the next EV charger stated directly below it.

- **Power Level:** Station hosts/operators should be required to install clear signage within each charging station that clearly labels the power level of each EV charger (e.g., 150kW).

According to the American Lung Association's 2022 State of the Air report, a national shift to 100% zero-emission passenger vehicles by 2035 and 100% medium- and heavy-duty trucks by 2040 would generate over $1.2 trillion in public health benefits between 2020 and 2050. While passenger vehicles are responsible for the largest share of emissions from the transportation sector, it is critical that states also build EV infrastructure to meet the needs of electric MHDVs as these vehicles represent only 10% of the vehicles on the road but currently account for more than 28% of GHG emissions. Further, MHDVs typically run on diesel fuel, the top source for criteria pollutants like nitrogen oxides (NOx) and PM2.5 that are most threatening to human health. These emissions disproportionally impact the health of traditionally low-income and BIPOC communities situated near fleet depots, major transportation corridors, distribution centers, and ports.

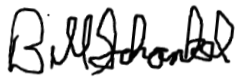
In sum, on behalf of the Alliance and NAFA, we urge state transportation and energy agencies to site and design public EV charging infrastructure in a way that spurs EV adoption and enables both individual users and commercial fleet operators to take advantage of the robust benefits offered by vehicle electrification. By supporting vehicle electrification and the related build out of EV charging infrastructure, you are improving U.S. energy security by keeping energy (electricity) dollars local, significantly reducing the number of respiratory and cardiovascular illnesses in the state that can be attributed to poor air quality, and bolstering the economy.

Thank you for your time and consideration of our recommendations.

Sincerely,

Sara Forni
On behalf of the Corporate Electric Vehicle Alliance, led by Ceres
Director of the Corporate Electric Vehicle Alliance

Sincerely,



Bill Schankel
Chief Executive Officer

Corporate Electric Vehicle Alliance

NAFA Fleet Management Association