ZETA | ZERO EMISSION TRANSPORTATION ASSOCIATION

January 10, 2022

Stephanie Pollack, Deputy Administrator
Federal Highway Administration
U.S. Department of Transportation
1200 New Jersey Ave. SE, W12-140
Washington, DC 20590-0001

Re: Response to Request for Information (RFI) number FHWA-2021-0015: Buy America

Dear Ms. Pollack:

Please find the Zero Emission Transportation Association's (ZETA) response to the Department of Energy and the Department of Transportation, FHWA-2021-0015: Request for Information on Buy America. Responses to specific questions in the RFI are numbered in accordance with the solicitation.

ZETA is an industry-backed coalition of 65 member companies advocating for the shared goal of achieving 100% electric vehicle (EV) sales in the United States by 2030. Our diverse membership represents a broad swath of the EV sector and has a deep understanding of the domestic supply chain. There is enormous economic potential in the build-out and installation of electric vehicle supply equipment (EVSE) networks across the United States. Manufacturing, assembling, installing, and maintaining EVSE will result in thousands of good-paying American jobs. We thank the Biden-Harris Administration for boldly recommending substantial investments in EV charging infrastructure while considering impacts to the supply chain.

Background:

On November 15, 2021, President Biden signed the Infrastructure and Investment Jobs Act (IIJA) into law. This bill includes grant and formula funding programs that can help the nation meet the President's goal of installing 500,000 public EV chargers across the country by 2030. However, the IIJA includes expanded domestic content requirements that could undermine the bill's EV charging goals. Specifically, it raises the floor for federal Buy America compliance and appears to eliminate the Federal Highway Administration's long-standing exemption for manufactured products like EVSE.

The U.S does not currently have an EVSE manufacturing sector that can meet the IIJA's new domestic content standard at any meaningful scale. While some manufacturers may assemble EVSE products domestically, the supply chain ecosystem is nascent and would not allow manufacturers to swiftly come into compliance. If applied strictly in the short term, this domestic content requirement has the potential to thwart Congress' intended deployment of EVSE and hinder President Biden's effort to make EV charging ubiquitous.

1. Identify all EV charger manufacturers currently selling, manufacturing, or operating in the United States, of which you are aware.

ZETA's membership includes a variety of EVSE manufacturers and distributors. Companies such as ABB, ChargePoint, Electrum, Enel X, EVgo, FLO, Momentum Dynamics, Proterra, Qmerit, Rivian, Siemens,

Tesla, Volta, Wallbox, and WAVE all participate in the sale, production, or operation of EV chargers in the U.S.

2. Identify all such EV charger manufacturers of which you are aware that can either meet FHWA's Buy America requirement or can currently assemble EV chargers in the United States to meet a domestic final assembly condition. For those that can meet a final assembly condition, please identify the percentage of components manufactured in the United States (if known).

ZETA does not have information regarding the percentage of its members' components manufactured in the U.S. but has encouraged them to answer this question independently.

Since 2012, FHWA has interpreted the 1983 manufactured products exemption created under its Buy America authority to cover goods not made predominantly of steel and/or iron. As a manufactured good that does not rely heavily on either of those metals, EV chargers have historically qualified for this waiver. ZETA recommends that FHWA provide certainty on this matter instead of leaving determinations up to its Division Offices. The latter would lead to a patchwork of rules that would increase industry compliance costs without delivering a corresponding public benefit.

ZETA's member companies have indicated that they cannot currently manufacture EVSE that can both comply with the IIJA's domestic content requirements and provide the capabilities Congress anticipated when it created the bill's EVSE funding programs: Section 11401 of the Surface Transportation Title and the National Electric Vehicle Formula Program created in Title VIII. However, over time and with clear guidance from FHWA, the EVSE industry can make progress towards meeting the IIJA's Buy America standard.

3. What is the total cost of a typical EV charger?

ZETA does not have the market data necessary to answer this question, because EV chargers come in a wide variety of power levels (7kW to 350kW), capabilities, and architectures. ZETA encourages FHWA to take care in categorizing and assessing each of those varieties independently in order to arrive at "apples to apples" comparisons.

4. How much does cost vary for EV chargers? Why does the cost vary?

ZETA does not have access to the proprietary information that might explain cost differences between chargers with similar attributes, but have instructed our members to answer this question individually.

Hardware costs vary widely among chargers based on power levels, capabilities, and architectures, as well as regulatory requirements that impact supply chain decisions. Installed costs can also vary widely based on geography and site-specific characteristics, such as proximity to electrical infrastructure. Ongoing operations and maintenance costs also vary, as do networking features that increase public visibility of stations and support higher station uptime.

5. What is the average delivery timeline for an EV charger?

ZETA does not have this information but has encouraged its member companies to respond to this question independently.

6. How much does delivery time vary for EV chargers? Why does the delivery time vary?
The average delivery timeline is between a few weeks and several months. The delivery timeline is affected by the following considerations:

- Whether the product is in stock or requires additional production.

- Whether the product is standard or custom.
- The volume being produced.
- The complexity of the EV charging product.
- Supply chain issues impacting availability components and subcomponents
- Available production capacity, including orders for other regions and customers.
- Issues impacting shipping and logistics to get the station from final assembly to the deployment site.

ZETA does not have more information beyond the considerations above but has encouraged its member companies to respond to this question independently.

7. For manufacturers: What type(s) of EV chargers are currently produced or likely to be produced in the near future?

Siting an EV charger requires coordination between local, state, and (in some cases) federal government agencies. As communities begin to explore EVSE deployment opportunities, they must take into consideration what power levels, capabilities, and architectures will best meet the needs of the drivers they are seeking to serve.

ZETA is not aware of an authoritative list of EVSE being produced or likely to be produced in the future. But the following are categories that, while not established industry standards, could be considered the most commercially available chargers:

- AC Level 2: 7-19kW
- DC Fast: 50-150kW
- DC High-Power: 150-350kW

It is important to note that there is a wide variety of architectures and capabilities within these categories, especially when it comes to the rate of charge that direct current fast chargers (DCFC) of different power levels can deliver to a vehicle. Segmenting power levels this way does not indicate a preference for one category of charging product over the other. Rather, the nature and location of the charging site should dictate which type of EV charging product is used.

For light-duty passenger vehicles, Level 2 (L2) chargers are often suitable for public charging near residential, workplace, or commercial parking facilities. DCFC chargers are usually installed near interstate highways, downtown areas, and retail centers. Medium- and heavy-duty vehicles and their respective fleets typically require dedicated or private facilities in which the use of DCFC or L2 are driven by factors such as vehicle type and daily routes.

The production of specific types of chargers will thus reflect market demand created by private industry, government fleets, and light-duty passenger vehicles. With those dynamics in mind, ZETA recommends that federal grants and formula programs such as the Congestion Mitigation and Air Quality (CMAQ) Improvement Program or the Surface Transportation Block Grant (STBG) Program provide the appropriate flexibility so that transportation planning agencies can use federal funds to install their preferred charger type. The requested funding (corridor vs. community vs. other) and subsequently required charger type will depend on community needs and feedback.

Manufacturer Ability To Meet FHWA's Existing Buy America Requirement

8. Are there existing EV chargers that meet FHWA's existing Buy America requirement for steel and iron? (Yes or No)

As noted above, FHWA’s standing interpretation of its 1983 manufactured products exemption should cover EV chargers, as they are not made predominantly of steel and/or iron.

With that in mind, ZETA urges FHWA to clarify that EV chargers are not predominantly iron or steel

products and to adhere to its 2012 interpretation of its manufactured product exemption when it comes to products that are not predominantly iron or steel.

9. If you answered yes to the preceding question:

- a. How many EV chargers meeting FHWA's existing Buy America requirement for steel and iron can be manufactured per year?
- b. What is the price typically paid for the steel and iron for used in EV chargers?
- c. What percent of the total price is typically representative cost of the steel and iron used in EV chargers?
- d. Can the origins of the steel and iron used in your charger by certified by documentation? If so, how?
- e. What is the typical delivery timeline for EV chargers?

ZETA has encouraged its member companies to respond to this question independently.

10. For those EV chargers currently manufactured that cannot meet FHWA's Buy America requirement, what steps can be taken to provide EV chargers that meet FHWA's existing Buy America requirement? How long might it take to undertake those steps? What is the volume of EV chargers that could be shifted to manufacture in compliance with FHWA's Buy America requirement? Can that volume be ramped up over time?

First, ZETA recommends granting EVSE an interim national waiver from the IIJA's Buy America provisions to allow near-term implementation of the IIJA's Section 11401 grant program and its National Electric Vehicle Formula Program. Doing so would be in line with not only President Biden's EV charging goals but also with the waiver authority included in the bill's Buy America provisions. Specifically, Section 70914 of Title IX authorizes the head of a Federal Agency to waive the domestic content requirements of Title IX for a manufactured product if they find that said product is "not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality."

Providing an interim waiver will give EVSE manufacturers time to respond to the IIJA's new domestic content requirements. It would also allow FHWA to establish a clear set of rules for EVSE manufacturers to follow in order to comply with the Buy America Act and the IIJA without undermining the President's decarbonization goals.

FHWA should also allow 100% of the domestic manufacturing costs—including labor costs for both final assembly and component manufacturing—to count toward the IIJA's domestic content tests. Including labor costs in domestic content calculations would reward companies for their domestic assembly efforts and support the President's goal of creating high-wage manufacturing jobs.

Second, ZETA recommends that FHWA apply the IIJA's domestic content requirements to components only, without regard to the country of origin of subcomponents. Charging companies source thousands of parts and subcomponents worldwide to manufacture EVSE. Many of these parts are embedded within larger systems. Determining the country of origin of each subcomponent would be arduous, and it is unclear whether extending the IIJA's domestic content test to subcomponents would meaningfully increase domestic manufacturing.

Applying domestic content requirements at the subcomponent level could force companies to significantly redesign their products and cause additional product recertification. These processes take and divert time, resources, and revenues away from EVSE production and deployment. It is critical that FHWA does not underestimate the time required to recertify production processes and EV charging products for safety specifications (e.g. UL certifications are required for all charging stations). Accordingly, ZETA recommends that any domestic content requirements remain at the component level.

Third, it is critical that FHWA headquarters provide clear, detailed Buy America rules for State

transportation departments (DOTs) to follow in order to ensure consistent interpretation of its guidance. Otherwise, it significantly complicates companies' ability to comply and access federal funds, ultimately slowing infrastructure deployment. Once final federal Buy America guidance is published, ZETA recommends that FHWA hold public briefings and Q&A sessions for stakeholders and develop briefings tailored specifically for State DOT officials. Further, should charging companies and State DOTs disagree on the interpretation of certain aspects of FHWA's rules, it will be critical to have resources available to provide clarity and technical assistance.

Finally, to ensure the intent of the IIJA's Buy America provisions are honored during the proposed waiver period, ZETA recommends that FHWA work with industry to establish procedures that will promote consistent, ongoing compliance. Having a transparent and fairly-applied standard will increase the efficiency of infrastructure investments and deployment by removing uncertainty regarding each charger's Buy America status.

Manufacturer Ability To Meet Domestic Final Assembly Condition for EV Chargers

11. Are there existing EV chargers that are currently assembled in the United States that could meet a domestic final assembly condition? (Yes or No).

It is important to allow sufficient time for the market to respond to a domestic final assembly requirement by expanding, establishing, or scaling up production commensurate with the expected demand generated by relevant grants and the National EV Formula Program. In the event that such a condition is adopted, it should apply to the charger itself, not its components or subcomponents.

12. If you answered yes to the preceding question, provide details about domestic final assembly. Also explain whether this includes domestic final assembly of all EV charger components and whether the assembled EV charger is ready for installation and use.

ZETA has encouraged its member companies to respond to this question independently.

13. If you answered yes to Question 12:

- a. How many EV chargers assembled in the United States (meeting a domestic final assembly condition) currently meet the domestic final assembly requirement?
- b. How many EV chargers assembled in the United States (meeting a domestic final assembly condition) could be expected to be provided annually each year between 2022 and 2030?
- c. What would be the likely price of EV chargers meeting the domestic final assembly requirement?
- d. What is the likely timeline for delivery of those EV chargers?
- e. What percentage of the components used in an EV charger assembled in the United States are themselves made in the United States? Of the components made in the United States, what percentage of those are iron and steel as opposed to other parts?

ZETA has encouraged its member companies to respond to this question independently.

EV Charger Components and Subcomponents

14. Identify each component and subcomponent typically contained in an EV charger (or for manufacturers, in the EV chargers you produce).

EV chargers include thousands of parts and subcomponents. A significant portion of those parts and

subcomponents (such as semiconductors, microprocessors, printed circuit boards, advanced power electronics, communications modules, and liquid crystal displays) are not produced in the US in sufficient and reasonably available quantities or costs. Production of these components and subcomponents cannot be scaled up rapidly—hence the need for an interim waiver to provide manufacturers with the time to meet the IIJA's domestic content requirements.

15. What materials do the components and subcomponents consist of (e.g., iron, steel, non-ferrous metals, semiconductors, plastics?

ZETA does not have this information but has encouraged its member companies to respond to this question independently.

16. Provide information on the manufacturing processes for each component and subcomponent, including where the manufacturing processes occur.

ZETA does not have this information but has encouraged its member companies to respond to this question independently.

17. Provide information on the assembly steps for each component or subcomponent including where the assembly steps occur (if the answer differs from the preceding question).

ZETA does not have this information but has encouraged its member companies to respond to this question independently.

18. Provide information on the cost of each component or subcomponent.

ZETA does not have this information but has encouraged its member companies to respond to this question independently.

Ability To Maximize Domestic Content, Services, and Labor

19. Provide information on the domestic content of each component or subcomponent, including the amount and percentage of domestic content (relative to foreign content). If this cannot be traced, explain why.

ZETA does not have this information but has encouraged its member companies to respond to this question independently.

20. Provide information on how the domestic content of EV chargers (including their components, subcomponents, or component bundles) could be maximized (even if full Buy-America compliance is not possible).

ZETA does not have this information but has encouraged its member companies to respond to this question independently.

21. Provide information on how domestic services and labor used in the manufacturing and assembly of EV chargers (including their components, subcomponents, or component bundles) could be maximized (even if full Buy America compliance is not possible).

FHWA should allow 100% of final assembly value to count toward domestic content calculations, in addition to the costs associated with the manufacture of its components. There is merit in letting companies incorporate the "value add" from labor costs used to assemble products in order to calculate if

products are domestically produced. Tracking U.S. labor hours and costs is relatively straightforward, and FHWA should give companies credit for their domestic labor costs. Moreover, doing so is in line with President Biden's goal to produce strong local economies, high-wage jobs, and strong domestic supply chains.

Conclusion:

As EV adoption continues to grow in the U.S., EVSE deployment will present an economic growth opportunity and public need for communities across the country. Buy America requirements can encourage domestic EVSE production and incentivize the development of a domestic supplier ecosystem and workforce. However, if implemented prematurely—before the industry is able to establish, or scale up local production—it will severely impede implementation of the IIJA and the President's goal of deploying 500,000 public EV chargers.

Fortunately, Congress provided FHWA with authority to waive its Buy America requirements until the domestic EVSE manufacturing industry can produce EV chargers in "sufficient and reasonably available quantities or of a satisfactory quality." FHWA should exercise its authority on a temporary basis to give EVSE domestic manufacturers the time they need to produce a sufficient supply of EV chargers to meet the demand generated by IIJA.

ZETA and its members stand ready to help FHWA design a path forward that satisfies Congress' dictates, the President's visions, and the reality of the marketplace. A plan that accounts for all three would meet the moment and take advantage of the historic opportunity the IIJA presents.

Sincerely,

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