

DOCKETED

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Response to IJJA Transition to ZE Sub-Working Group

Additional submitted attachment is included below.

June 10, 2022

California Energy Commission
Docket Unit, MS-4
Re: Docket No. 22-EVI-03
715 P Street
Sacramento, CA 95814

Re: Docket No. 22-EVI-03 - Comments of the Center for Sustainable Energy® regarding the Infrastructure Investment and Jobs Act (IIJA) Transition to Zero-Emission Sub-Working Group Meeting

The Center for Sustainable Energy® (CSE) appreciates the opportunity to provide comments in response to the questions raised during the IIJA Transition to Zero-Emission Sub-Working Group Meeting held on May 16, 2022. CSE commends the efforts of the California State Transportation Agency (CalSTA), the California Department of Transportation (Caltrans) and the California Energy Commission (CEC) to utilize the Federal funding made available under the National Electric Vehicle Infrastructure (NEVI) Program. CSE is excited to contribute to the development of California's NEVI plan.

CSE is a 25-year-old national nonprofit driven by one simple mission – decarbonize. We provide program administration, technical assistance, and policy advisement, and serve as a trusted resource helping government agencies implement successful clean energy and transportation programs. CSE provides these comments based on our experience designing, implementing, and evaluating statewide incentive programs in California, Connecticut, Massachusetts, New Jersey, New York, Oregon, and Vermont, which collectively translates to over \$1 billion worth of program value provided.

CSE highlights the potential for NEVI Program funds to help address California's electric vehicle (EV) infrastructure needs and enable equity in widespread EV adoption. CSE contends that data-driven EV infrastructure planning will be critical to achieving these goals. Specifically, CSE offers the following responses to the questions raised during the Sub-Working Group meeting:

1. Utilize analytical tools to strategically deploy EV infrastructure and coordinate State and Federal investments.
2. Enable equitable EV infrastructure deployment by prioritizing disadvantaged and low-income communities.
3. Adopt prioritization criteria that emphasize equity, reliability, utilization, and convenience.
4. Forecast local and long-distance demand through 2035.
5. Support technologies that promote grid-friendliness, including distributed energy resources.
6. Ensure compliance with NEVI requirements while enabling flexibility to address local needs.

CSE's responses are discussed in detail below.

1. Utilize analytical tools to strategically deploy EV infrastructure and coordinate State and Federal investments.

CSE commends California's efforts to deploy EV charging infrastructure, but notes that additional efforts are needed to achieve the State's transportation electrification and equity goals. The CEC estimates that California will have a net gap of nearly 900,000 chargers by 2030, relative to estimated need.¹ This shortfall will occur despite California's commitment of several billion dollars to EV infrastructure deployment through various agency initiatives, as highlighted during the Sub-Working Group meeting held on April 5, 2022. The CEC also notes that existing chargers are not distributed equally across low-income communities or census tracts with high population densities.² The combination of the projected charger shortfall and the lack of equitable distribution further exacerbates the challenge of ensuring that residents of disadvantaged communities (DACs) and low-income communities can participate equitably in the transition to electrified transportation. CSE contends that the influx of Federal funding through the NEVI Program presents an ideal opportunity to refine California's approach to EV infrastructure planning to operationalize a more holistic strategy.

CSE recommends that CalSTA/Caltrans/CEC utilize robust analytical tools to implement this integrative EV infrastructure planning strategy. Technology systems exist today that allow the State to reliably forecast EV fleet size and associated charging demand, and then prioritize EV infrastructure deployment by rank ordering potential sites based on charging needs, equity considerations and other State goals. This ranking can be done at high levels of granularity, including identifying property size sections down to one-third of a square mile. Additionally, specific ranking factors can incorporate the broad set of prioritization criteria that decision-makers must balance. These ranking factors include existing charger deployment by type, area median income, regional population, regional fleet share and EV adoption levels, distribution of amenities and retail areas, distribution of housing (including single-family, multi-family, and affordable housing units), traffic considerations (including vehicle miles traveled through freeway and non-freeway travel), existing grid capacity (including proximity to electrical substations), land use characteristics (including whether the area is in an unincorporated territory or military area) and proximity to highways, Federal Alternative Fuel Corridors, DACs, low-income communities, Tribal nations, rural regions and other key indicators identified through CalEnviroScreen 4.0,³ the U.S. Department of Transportation's (DOT) EV Charging Justice40 Map Tool⁴ and other equity initiatives.

¹ California Energy Commission, 2022-2023 Investment Plan Update for the Clean Transportation Program.

² California Energy Commission, California Electric Vehicle Infrastructure Deployment Assessment: Senate Bill 1000 Report.

³ California Office of Environmental Health Hazard Assessment, CalEnviroScreen.

⁴ Argonne National Laboratory, Electric Vehicle Charging Considerations.

<https://www.anl.gov/es/electric-vehicle-charging-equity-considerations>

CSE also recommends that the tools and technology systems selected by CalSTA/Caltrans/CEC leverage live data that enables decision-makers to perform the real-world planning necessary to achieve State goals. In addition to the ranking factor metrics described above, the selected technology should leverage real-world charger use session data and embed this information into charger forecasting and siting processes. This will result in updated charger use profiles that reflect the evolving state of EV technology and the public's understanding of charging options. The selected technology should include data indicators from CalEnviroScreen 4.0 and the DOT's EV Charging Justice40 Map Tool and should be capable of overlaying these data layers to identify priority sites that satisfy equity criteria and ensure benefits are directed towards disadvantaged and low-income communities. These equity considerations are discussed in detail below.

Due to the compressed planning timeline for utilizing Federal funding and the fact that significant State investment has already been committed, CSE recommends that CalSTA/Caltrans/CEC prioritize presently available tools and technology systems rather than fund the development of new systems. CSE also recommends that the selected technology prioritize the ability to integrate with software solutions presently used by the State for planning EV infrastructure.

The ability to rapidly translate goals and objectives into a siting map fundamentally changes that way planning can be accomplished. This rapid, iterative process allows decision-makers to instantly compare scenarios and generates a more integrative understanding of the impacts of planning decisions. The ability to iterate rapidly also creates a new way to engage stakeholders, both through public workshops and through stakeholders' independent use of the technology. In addition to improving the planning process, utilizing a database that functions as a single source of truth also enhances transparency and deepens trust in the utilization of public funds.

2. Enable equitable EV infrastructure deployment by prioritizing disadvantaged and low-income communities.

CSE emphasizes the importance of promoting equity considerations in the implementation of the NEVI Program and harmonizing these efforts with existing equity initiatives in California. CSE notes that the White House Office of Management and Budget's Interim Implementation Guidance for the Justice40 Initiative seeks to ensure that at least 40 percent of the benefits of Federal investment are directed towards DACs, as designated by the DOT and U.S. Department of Energy in an interim joint definition.⁵ Additionally, the DOT has released a beta version of the EV Charging Justice40 Map tool, as discussed above. However, the guidance, definitions, and mapping assessments from the Federal government differ from those established in California. For example, the CEC's most recent Investment Plan Update for the Clean Transportation Program included a commitment to provide over 50 percent of funds to

⁵ Office of Management and Budget, Interim Implementation Guidance for the Justice40 Initiative. <https://www.whitehouse.gov/wp-content/uploads/2021/07/M-21-28.pdf>

low-income and disadvantaged communities.⁶ This 50 percent equity commitment was also adopted in multiple Decisions through the California Public Utilities Commission's (CPUC) Order Instituting Rulemaking to Continue the Development of Rates and Infrastructure for Vehicle Electrification (DRIVE). Additionally, the CalEnviroScreen 4.0 tool used to identify DACs in California utilizes indicators that differ from those used in the DOT's EV Charging Justice40 Map tool. While CSE appreciates the existing efforts conducted by the Federal government and California agencies, additional work is needed to coordinate across these entities and actualize equity in the deployment of EV charging infrastructure.

As discussed above, technology can be used to integrate disparate definitions into a holistic planning effort. For example, existing technology can be used to provide a geographic information system (GIS) overlay that combines all of the relevant definitions onto one map, allowing decision-makers to identify regions that simultaneously meet all of the designated prioritization criteria. The technology can then overlay the existing environment and auto-populate the selected region with charging sites that meet the goals specified by the decision-maker.

3. Adopt prioritization criteria that emphasize equity, reliability, utilization, and convenience.

CSE recommends that CalSTA/Caltrans/CEC adopt prioritization criteria to emphasize equity, reliability, utilization, and convenience. CSE notes that many of these principles were highlighted during the Sub-Working Group meeting held on April 5, 2022. As mentioned above, CSE suggests that equity criteria be designed to encourage EV infrastructure deployment in areas with an unequal distribution of chargers, including DACs, low-income communities, Tribal nations and rural regions. With respect to equity, key metrics to address can include area median income, the number of affordable multi-family units within an area and other key indicators identified through CalEnviroScreen 4.0 and EV Charging Justice40 Map tool. As discussed above, indicators from both CalEnviroScreen4.0 and the EV Charging Justice40 Map tool must be overlaid and assessed to identify priority sites for charging stations.

With respect to reliability, CSE highlights the requirement that EV infrastructure should be reliably accessible above 97 percent of the time at the individual station level, as outlined in the NEVI Program guidance issued by the Federal Highway Administration (FHWA).⁷ CSE encourages CalSTA/Caltrans/CEC to adopt this requirement for future EV infrastructure initiatives to maintain consistency across State and Federal projects. With respect to reliability, CSE recommends that CalSTA/Caltrans/CEC seek to access a proven platform to collect, validate and analyze charger utilization data in order to assess reliability and ensure adherence to the standards described above. Lastly, with respect to convenience,

⁶ California Energy Commission, 2022-2023 Investment Plan Update for the Clean Transportation Program.

⁷ Federal Highway Administration, Information: The National Electric Vehicle Infrastructure (NEVI) Formula Program Guidance.

https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/nominations/90d_nevi_formula_program_guidance.pdf

CSE supports establishing minimum amenity requirements to provide consumer accessibility and safety. For example, adequate signing, lighting, sheltered seating, and access to restrooms and food and beverage services will enable customers to know where charging is available and feel comfortable accessing it. CSE also supports providing exceptions to these requirements for locations that do not have access to these amenities but are located in priority areas that might not otherwise receive funding.

4. Forecast local and long-distance demand through 2035.

CSE recommends that CalSTA/Caltrans/CEC forecast demand through 2035. Ideally, these forecasts should be annual and should predict EV demand at a minimum of census-tract level granularity to better anticipate where local infrastructure demand will be highest. CSE notes that CEC has already forecasted county level demand through 2030 as part of its AB 2127 EV infrastructure assessment,⁸ and encourages State agencies to expand on this effort. CSE also recommends that CalSTA/Caltrans/CEC forecast demand for both local and long-distance trips. Local demand for fast charging is important given the anticipated increase in EV ownership among multi-family unit residents, who may not have access to dedicated, EV-accessible parking. Additionally, long-distance demand will be important given the increased reliance on transportation network companies (TNCs) and the reliance of these vehicles on both highway and community fast chargers for their operation.

5. Support technologies that promote grid-friendliness, including distributed energy resources.

CSE strongly encourages CalSTA/Caltrans/CEC to support the adoption of distributed energy resources (DERs) such as solar photovoltaic (PV) and battery energy storage in conjunction with EV infrastructure projects. Utilizing DERs will help manage EV charging loads, avoid costly demand chargers and reduce installation and operating costs by avoiding grid capacity upgrades, which can provide benefits to site hosts, utilities and ratepayers alike. Specifically, CSE recommends allowing incentives to be stacked across EV infrastructure and DER incentive programs. CSE also encourages CalSTA/Caltrans/CEC to begin planning for bidirectional charging and vehicle-grid integration (VGI) functionalities, which will further enhance cost-effectiveness and minimize the need for grid upgrades. These functionalities can be supported by requiring the adoption of ISO 15118 communication standards. CSE notes that the CEC has already proposed requiring these standards to be enabled for CEC-funded EV infrastructure projects.⁹

6. Ensure compliance with NEVI requirements while enabling flexibility to address local needs.

CSE recommends CalSTA/Caltrans/CEC exceed NEVI requirements where feasible and beneficial. For example, CSE supports exceeding NEVI requirements for the minimum number of chargers in areas with high modeled demand, though CSE cautions against instituting multiple layers of program requirements that may confuse incentive applicants. Similarly, to comply with the NEVI requirement to provide a

⁸ California Energy Commission, Electric Vehicle charging Infrastructure Assessment – AB 2127.

⁹ California Energy Commission, ISO 15118 Charger Communications and Interoperability Workshop.

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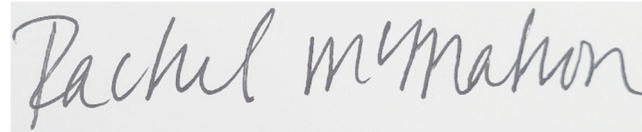
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minimum of four 350 kW chargers, CSE recommends that CalSTA/Caltrans/CEC identify locations where sufficient capacity already exists to accommodate this additional load. As discussed above, CSE supports the use of DERs to generate and store renewable energy and lower the overall operational costs of EV infrastructure. CSE encourages agencies to consider promoting and funding these resources through NEVI to the extent allowable, particularly for sites where they can provide direct local benefits. For example, DERs may be particularly beneficial in offsetting the higher loads associated with charging medium- and heavy-duty (MD/HD) vehicles and preventing the need for new generation assets that are powered by fossil fuels.

Conclusion

CSE appreciates the opportunity to provide comments responding to the questions posed during the CalSTA/Caltrans/CEC IJJA Sub-Working Group on Transition to Zero-Emissions held on May 16, 2022. CSE commends these agencies' efforts to implement the requirements of the NEVI Program and looks forward to continued engagement in deploying EV infrastructure in California.

Sincerely,

A handwritten signature in cursive script that reads "Rachel McMahon". The signature is written in dark ink on a light-colored background.

Rachel McMahon

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