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TECHNICAL ASSISTANCE HELP SHEET

Embedding Equity Into Electric Vehicle Charging Station Design

Once a site location is selected for the installation of an electric vehicle (EV) charging station, the next step is to plan and design the specific station. Local and state governments can require and/or incentivize accessible and safe design elements, so the station is constructed in an equitable manner.

Integrating Equity in the Clean Transportation Transition

The Joint Office United Support for Transportation (JUST) Lab Consortium conducts actionable research on integrating equity into federally funded EV infrastructure deployment efforts. For more information on the JUST Lab Consortium, visit DriveElectric.gov/just-lab-consortium.

Strategies for Incorporating Equity Into EV Charging Station Site Design

Strategies for incorporating equity into EV charging station site design cover all aspects of the investment, from site access and signage to community engagement. One important, yet often overlooked, consideration that can increase the value of the charging station infrastructure in the host location is what additional amenities can be included to benefit neighbors of the charging station, whether or not they will be plugging in a vehicle. Keeping that consideration in mind across the different areas of planning described below can help better address equity concerns compared to a process that focuses only on the technical or engineering aspects of a charging station.

Community Engagement

- **Strategy:** Meet with community leaders and stakeholders about the project, collect their input, and coordinate with stakeholders to identify opportunities to incorporate their feedback into the project, especially when planning a network of chargers.
- **Equity considerations:** When conducting engagement, be prepared to receive input on mobility needs beyond EV charging stations and consider how to respond to those needs. That can include both how EV charging stations could provide benefit to more people than just EV drivers and how that input can inform additional transportation investments. For recommendations on performing community engagement for EV-related projects and additional resources, review [“Community Engagement Tips for EV Infrastructure Deployment”](#). Some examples include looking for opportunities for business owners in disadvantaged communities to own EV infrastructure and collaborating with the private sector to develop a public-private working group with diverse representation to help increase best practice use and dissemination.

Accessibility

- **Strategy:** Require accessible EV charging station spaces and routes to access nearby destinations. Consider access to the station by different types of users.
- **Equity considerations:** When designing EV charging stations that are compliant with the Americans with Disabilities Act (ADA), consider accessibility, ease of use, and safety for disabled drivers and vehicle occupants, including those using wheelchairs or other assistive equipment. Key considerations include ensuring adequate space for exiting and entering the vehicle, unobstructed access to the charger, free movement around the charger and connection point on the vehicle, and clear paths and proximity to building entrances. Look beyond the immediate vicinity of the charger to ensure ADA-compliant curb cuts and crosswalks connect the charging station to all nearby destinations.

Another emerging opportunity to increase station access for different types of users is the inclusion of 120-V outlets for multimodal charging of e-bikes, e-scooters, or low-speed EVs (also referred to as neighborhood EVs or electric microcars).



Require accessible EV charging station spaces.

Signage

- **Strategy:** Ensure that navigation signage clearly identifies charging stations and that stations provide clear instructions for their use. For individuals arriving at a charging location, ensure there is wayfinding for connections to nearby destinations (e.g., restroom facilities, transit connections, dining).
- **Equity considerations:** Understand the community where the EV charging station is located and the potential users of the charging station. Incorporate multilingual signage as needed to make charging more accessible. For more information, refer to the Alternative Fuels Data Center [“Signage for Electric Vehicle Charging Stations”](#) webpage.

Design Recommendations for Accessible Electric Vehicle Charging Stations

Refer to the U.S. Access Board’s [Design Recommendations for Accessible Electric Vehicle Charging Stations](#). This technical assistance document can assist in the design and construction of EV charging stations that are accessible to and usable by people with disabilities.

Safety and Security

- **Strategy:** When scoping and designing a project, consider adding safety and security design elements such as lighting and security cameras, locating the station in a highly visible and active area, and providing amenities with an attendant available during hours of operation.
- **Equity considerations:** Charging events that may need to be completed at night and/or by a user that is traveling alone can lead to scenarios that are unsafe or feel unsafe for drivers and passengers when using public EV charging stations depending on things like lighting and degree of isolation.

Recommendations for what safety and security design elements should be included in a project are location-specific. These elements typically add to the project cost but may significantly increase users' comfort and safety. For more information about physical safety and security at EV charging sites, go to [DriveElectric.gov/files/EV-site-safety.pdf](https://www.driveelectric.gov/files/EV-site-safety.pdf)



Consider adding safety and security lighting.

Station Charging Fees

- **Strategy:** Consider the range of options available for charging payment, and whenever possible give users choices for how to pay. Fund and/or prioritize EV station plans that offer low-cost or free charging, particularly when they are located in low-income or disadvantaged communities or support underserved populations.
- **Equity considerations:** Providing low-cost or free charging for nearby residents or low-income users can improve access to EV charging stations for community members and make charging more affordable. In addition, it can potentially bring in additional business revenue with new EV visitors to the community. Consider emerging options such as discounted charging, vouchers, or other forms of targeted incentives to lower the barriers to access for neighbors or low-income users.

Indirect Opportunities

- **Strategy:** Incorporate co-benefits with the project such as improved sidewalks or crosswalks, lighting, benches, art or beautification, trees, green space, or secure bike parking. Prioritize connections to multimodal options such as transit, bike-share, or taxi/ride-hailing services.

- **Equity considerations:** Installing an EV charging station is an opportunity to add other needed infrastructure improvements to the neighborhood. For example, lighting added to the project for the EV charging station can also improve the overall lighting in the neighborhood, curb cuts can improve accessibility, and crosswalk upgrades can improve pedestrian safety.

Providing Technical Assistance With a Focus on Equity

The JUST Lab Consortium provides technical expertise to Joint Office staff and its constituents with a focus on an equitable and clean transportation transition. The JUST Lab Consortium developed this help sheet to assist states, communities, and Tribal nations with developing meaningful community engagement processes and activities for EV infrastructure planning. For more information on the JUST Lab Consortium, please visit [DriveElectric.gov/just-lab-consortium](https://www.driveelectric.gov/just-lab-consortium). To contact the JUST Lab Consortium, [submit a general inquiry through the Joint Office](#) and reference the "JUST Lab Consortium."