



Edison Electric
INSTITUTE

NATIONAL ELECTRIC
HIGHWAY COALITION

Vision Statement:

Ensuring a Positive Customer Experience for Public EV Fast Charging

BACKGROUND ON THE NATIONAL ELECTRIC HIGHWAY COALITION

The members of the National Electric Highway Coalition (NEHC) are dedicated to serving their customers and the public by supporting the buildout of a foundational network of electric vehicle (EV) fast charging stations along major U.S. travel corridors. The NEHC brings together more than 60 investor-owned and municipal electric companies and electric cooperatives that are committed to supporting the growing number of EVs and to helping ensure that the transition to EVs is seamless for drivers. These electric companies are collaborating across the industry and with key stakeholders to ensure that there are reliable and efficient EV chargers available for customers across the country.

EV charging infrastructure should be widely available where drivers already park their EVs, whether at home, at work, or at public locations. Although these charging opportunities can meet most drivers' daily charging needs, the NEHC is focused on deploying public EV fast charging stations along major travel corridors because that is a critical step to giving EV drivers confidence to travel longer distances and enabling more drivers to switch to driving an EV.

EEI projects that more than 26 million EVs will be on U.S. roads in 2030 and that approximately 140,000 public DC fast chargers will be needed to support them. Reaching that number of chargers will require a roughly ten-fold increase in the current number of open-network public DC fast chargers. The members of the NEHC seek to jumpstart this buildout in various ways, including assisting with planning the energization of charging stations, offering rebates and incentives for charging infrastructure, and installing charging infrastructure. The NEHC also recognizes that delivering on the vision of an EV future will require not just building charging stations, but also ensuring a positive charging experience for customers.

To better define a positive customer charging experience, EEI, as coordinator of the NEHC, has engaged with multiple parties from across the EV charging ecosystem, including driver advocacy groups, equity groups, electric companies, automakers, charging providers, equipment manufacturers, and more. From these conversations, we have distilled a vision for both NEHC members and the industry at large. While NEHC members do not have direct control over every aspect of the charging experience, our goal is to enhance positive customer experience outcomes through available tools, which may include procurement practices, program guidelines, industry norms, and standards setting processes. This document provides the guiding principles for ensuring a positive customer experience at public EV fast charging stations.

GUIDING PRINCIPLES FOR A POSITIVE EV FAST CHARGING CUSTOMER EXPERIENCE

1) Ensure public EV fast chargers are reliable and easy to access

Drivers should expect that they will always be able to charge their vehicles at a public EV fast charging station. Increasing the number of EV fast charging ports will not lead to increased EV adoption if they are unreliable or difficult to operate. This requires both a proactive and reactive approach to maintenance, reliability, and accessibility of public EV charging infrastructure. Public EV fast charging sites should be designed, owned, and operated with the following in mind:

- The charging site should include sufficient charging ports to ensure that drivers are always able to use a functioning charger.
- Charging projects should be designed with a detailed plan for ongoing maintenance with clearly defined roles for all parties.
- Stations should have clear signage that indicates who is responsible for customer service.
- Payment methods for charging should be easy to use and take into consideration all drivers, regardless of financial or technological circumstance.
- Operators should seek to standardize the information shared across platforms and minimize the number of applications needed to initiate and pay for a charging session.
- Charging stations should be accessible to all drivers and include accommodations such as instructions in multiple languages and compliance with the latest ADA guidelines.
- The network of charging stations should be sufficient to cover all drivers on major travel corridors and storm evacuation routes; no drivers should be stranded in charging deserts or during major weather events.

2) Build public EV fast charging to meet future needs

EV adoption is quickly growing and our plans for charging infrastructure should reflect that reality. EEI expects that more than 26 million EVs will be on U.S. roads in 2030, an approximate ten-fold increase from the current number of EVs. Approximately 140,000 public EV fast chargers will be needed to support these EVs, roughly ten times more than the number of open-network chargers currently installed. To ensure that the transition to EVs is seamless for drivers both now and in the future, the NEHC proposes the following:

- The number of chargers at a site should be sufficient to serve the current and near-term population of EVs with minimal driver wait time and should include a plan for future expansion.
- Chargers should adhere to the latest market and technology standards with the capability for future upgrades as technology and standards evolve.
- Where feasible, sites should be designed for pull-through charging to accommodate larger vehicles such as pickup trucks and large SUVs and greater accessibility for all drivers.
- Sufficient parking should be clearly reserved for EVs with proper signage to ensure unobstructed access to charging stations.

3) Public EV fast charging must be transparent, safe, and secure

Drivers must feel confident that they are able to use charging infrastructure safely and securely. There should be no surprises in a driver's charging experience. To that end, the NEHC proposes the following:

- Charging sites should include sufficient lighting, signage, and other measures as necessary such as security monitoring to ensure a safe charging experience for drivers.
- The price for charging should be transparent, prominently displayed, and easily understood by all drivers.

4) Amenities and convenience are key to the public EV fast charging experience

To ensure a truly positive customer experience while charging, amenities should be available to all drivers. Namely, the NEHC proposes the following:

- Where possible, charging should be co-located with access to basic amenities such as bathrooms, trash cans, and shelter from the elements.
- Charging should be conveniently located near travel corridors to meet the needs and expectations of drivers.
- To the extent possible, charging sites should be located in close proximity to amenities such as restaurants or stores.
- Charging sites should include prominent highway or street signage and be easy to visually locate.
- Drivers should be able to determine if a charger is operational and available prior to arriving to the charging site via a mobile device or other means.

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