



Staff Report Item 14

TO: East Bay Community Energy Board of Directors

FROM: JP Ross, Vice President, Local Development, Electrification & Innovation

SUBJECT: Update on EBCE's Electric Vehicle Fast Charging Network Development (Informational)

DATE: September 21, 2022

Recommendation

Receive an informational update on EBCE's electric vehicle (EV) fast charging network development, including pursuit of a Tolling Partner to help accelerate infrastructure deployment.

Background and Discussion

EBCE is building a network of EV fast charging hubs on behalf of its customers and JPA member cities. These public fast charging stations will not only help EBCE's service area meet statewide mandates for zero-emission vehicles (ZEVs), but will also help meet the needs of current and future EV drivers, especially renters who do not have access to at-home charging. It is important to note that:

- 47% of all residents in Alameda County are renters
- 90% of all multi-family buildings in Alameda County are 50+ years-old and will therefore need electrical capacity upgrades to accommodate Level 2 (overnight) EV charging
- These critical factors are among several key barriers to renters (nearly half of our population) adopting and benefiting from EVs near-term

Therefore, EBCE's charging network strategy is focused on siting fast charging hubs in areas where there are dense concentrations of multi-family units. EBCE is leveraging its relationship with its JPA member cities whose municipally owned, publicly accessible parking lots and garages will serve as site hosts for these EV fast charging hubs.

- Each project site will have a standard design goal of 10 dual-port fast chargers (20 ports total). This design may be flexible based on site constraints.
- Fast chargers will be capable of charging two EVs simultaneously
- Fast charging hubs will be available 24/7 to EV drivers
- All EV fast charging hubs will be powered by EBCE's Renewable 100 electricity product

Multi-Site Approach

To build a network of EV fast charging hubs across our service area, EBCE's Transportation Electrification program team is identifying sites in each JPA member city. The quantity of sites per city that need EV fast charging hubs to meet the state's ZEV mandates depends on the size of the city and number of vehicle registrations. Critical to EBCE's project development strategy is the identification of viable municipally owned facilities with publicly accessible parking, which will serve as site hosts to EBCE's fast charging hubs. EBCE is working with our JPA member cities to assess these real estate assets for EV fast charging project development. These can be standalone parking facilities or other municipally owned sites that have public parking (e.g., libraries, community centers, etc.). Once municipal sites have been identified, EBCE's Transportation Electrification program team then reviews each in detail to confirm those that meet our priority siting attributes:

- Located in a multi-family "hotspot" (i.e., area with dense concentration of multi-family units)
- Located within walkable distance to desirable driver amenities (e.g., cafes/restaurants, retail, grocery stores, etc.)
- Located in an area with little-to-no existing publicly accessible EV fast charging
- Located in an area with little constraint on PG&E's transmission and distribution system

Tolling Structure

EBCE aims to develop 40-50 public fast charging hubs by 2030. To reach this scale, EBCE is pursuing a tolling structure through which EBCE would contract with a counterparty who will finance, construct, and maintain these charging stations over a 10-year period, and EBCE would pay the counterparty a fixed monthly payment. This Tolling Structure is utilized in the utility industry, including for standalone battery energy storage. This structure is also a similar approach to EBCE's efforts to deploy local, distributed solar and storage on municipal facilities. However, tolling agreements have never been leveraged for EV charging infrastructure, and EBCE will be the first in the U.S. to leverage this financing structure enabling replicability throughout CCAs statewide.

A tolling partnership will enable EBCE to scale its EV fast charging network quickly and cost-effectively by attracting low-cost capital, de-risking technology deployment, and leveraging federal funding opportunities, such as tax credits, to the maximum extent possible.

Next Steps

Staff will come back to the Board later this year seeking approval of an agreement with an EV fast charging tolling partner.

Financial Impact

A tolling agreement would not exceed a net annual expense of the \$3MM already approved in the Local Development budget annually for EV charging.

Attachments

- A. Presentation

SEPTEMBER 21, 2022

EV Fast Charging Network: Development Update



EBCE's EV Fast Charging Network

EBCE is building a network of 24/7 publicly accessible electric vehicle (EV) fast chargers to:

- Enable the transition to EVs for *all* residents, especially renters
- Support JPA member cities' Climate Action Plan targets around transportation-related emissions reductions
- Enable our service area to reach CA state mandates for zero-emission vehicles (ZEVs)
 - 1.5 million ZEVs by 2025 → 64k in EBCE service area
 - 5 million ZEVs by 2030 → 200k in EBCE service area
 - 100% of in-state new sales to be ZEV by 2035

EBCE's EV fast charging network targets:

- 40-50 hubs by 2030
- Standard hub design: 10 dual-port fast chargers reaching 20 EVs (i.e., gas station model)

Partnering with JPA Member Cities

To deliver this network as cost-effectively as possible, EBCE is working with JPA member cities to leverage city-owned real estate parking assets as site hosts. This innovative public-public partnership model will deliver lower EV fast charging project costs (and therefore lower charging costs for drivers).

Cities engaged in Phase I projects:

- Berkeley
- Hayward
- Livermore
- Oakland
- Piedmont
- Pleasanton
- San Leandro

Site Selection Process

EBCE is identifying sites that meet the following priority attributes:

1. In a multi-unit dwelling (MUD) hotspot
 - 47% of County residents are renters
 - 90% of multi-family housing stock is 50+ yrs old → electrical upgrades required for at-home charging + other barriers for renters
 - DMV registration data shows virtually no uptake of EVs by renters to date
 - Need adoption to reach local GHG reduction and California ZEV targets
 - Convenient, reliable, affordable fast charging near where renters live will enable lower income drivers to benefit from EVs near term
2. Walkable driver amenities (e.g., retail, dining, etc.)
3. Fills gaps in existing fast charging locations (i.e., “charging deserts”)
 - Investing in areas where private sector has not been willing to thus far

Financing to Scale the Network: Tolling Structure

To deploy 40-50 EV fast charging hubs by 2030, EBCE is pursuing a tolling agreement with a counterparty who will finance, construct, and maintain these charging stations over a 10-year period. Negotiations are currently underway with potential counterparties.

Common structure in utilities (e.g., recent deployment of battery energy storage). Enables EBCE to:

- Attract low-cost capital
- De-risk deployment of an evolving technology
 - No in-house capabilities to own and operate this level of infrastructure assets
- Leverage federal funding opportunities, including tax credits, to the max extent possible through third-party ownership

Financial Impact:

- Will not carry a net annual expense greater than the \$3MM annual budget already approved by the Board for public EV charging infrastructure

Next Steps

- Staff will come back to the Board later this year seeking approval of an agreement with the selected EV Charging Tolling Partner