



## Staff Report Item 17

**TO:** East Bay Community Energy Board of Directors

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

**SUBJECT:** EBCE's Equitable Electric Vehicle Fast Charging Network: Tolling Partners (Action)

**DATE:** November 16, 2022

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### Recommendation

Adopt two (2) Resolutions authorizing the CEO to negotiate and execute a ten-year tolling Agreement with an affiliate of Calibrant Energy and a ten-year tolling agreement with an affiliate of EV Realty, Inc. for the financing, design, construction, maintenance and operation of EBCE's Phase I portfolio of electric vehicle (EV) fast charging hubs.

### Background and Discussion

Statewide transportation accounts for more than 80 percent of smog-forming nitrogen oxide pollution, and 95 percent of toxic diesel particulate matter emissions. The transportation sector is also now the largest emitter of greenhouse gases in California. The full transition to zero emission vehicles (ZEV)<sup>1</sup> is a critical step toward carbon neutrality in EBCE's service area and beyond.

The State of California is taking several steps to help transition to ZEVs, which will also improve public health outcomes. On September 23, 2020, Governor Newsom signed Executive Order N-79-20<sup>2</sup> setting the following targets for ZEVs:

- By 2035, 100 percent ZEV sales for new passenger vehicles, 100 percent ZEV operations for drayage trucks, and 100 percent ZEV operations for off-road vehicles and equipment where feasible
- By 2045, 100 percent ZEV operations for medium-and heavy-duty vehicles where feasible.

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<sup>1</sup> ZEVs include battery electric vehicles, plug-in hybrid electric vehicles, and fuel cell electric vehicles

<sup>2</sup> [Executive Order N-79-20](#)

For passenger vehicles, these regulations were affirmed through the California Air Resources Board (CARB) Advanced Clean Cars II regulations in August 2022.<sup>3</sup>

Currently in California, ZEVs account for approximately ~17 percent of all new vehicle sales.<sup>4</sup> To ensure sustained growth in the plug-in EV market and to meet the State's regulations, a significant number of Direct Current Fast Charging (DCFC) ports are necessary through EBCE's service area to support new EV registrations.

In turn, EBCE is building an equitable network of EV fast charging hubs on behalf of its customers and Joint Powers Authority member cities. These public EV fast charging stations will not only help EBCE's service area meet statewide ZEV adoption mandates 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 (5+ units) in Alameda County are 50+ years-old and will therefore need electrical upgrades to accommodate Level 2 (overnight) EV charging

These data points are among several critical EV adoption barriers residents who are renters (nearly half of our population) face that will hinder equitable access to the benefits EVs near-term. Therefore, EBCE's charging network strategy is focused on locating EV fast charging hubs in areas where there are dense concentrations of multi-family housing units. EBCE is leveraging its relationships with JPA member cities who's municipally owned, publicly accessible parking lots, garages and/or public right-of-way parking spaces will serve as site hosts for the EV fast charging hubs.

- Each project site will have a standard design goal of 10 dual-port EV fast chargers (20 ports total). This design may be flexible based on-site constraints.
- EV fast chargers will be capable of charging two vehicles simultaneously
- EV fast charging hubs will generally 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*

The installation of EV fast charging infrastructure aligns with each of EBCE's JPA member city's GHG emissions reduction goals. 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 EV fast charging hubs. EBCE has been collaborating with our JPA member city's staff to assess real estate asset portfolios, identifying facilities well suited for potential EV fast charging hub project development. These sites can be standalone parking facilities or other municipally owned assets that have public parking spaces (e.g., libraries, community centers, curbside, etc.). Once a list of municipal sites has been identified by EBCE and city staff, EBCE's Transportation Electrification program team then reviews each in detail to confirm those that meet EBCE's priority siting attributes:

- Located in a multi-family "hotspot" (i.e., area with dense concentration of multi-family units)

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<sup>3</sup> [Advanced Clean Cars II regulation](#)

<sup>4</sup> [New ZEV Sales report](#)

- Located adjacent to and/or within an easily (and safe) 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

The number of EV fast charging hubs needed per city to meet the state's ZEV mandates depends on the municipality's size and the total number of vehicle registrations in that city. To determine the number of EV charging ports (and in turn number of sites) required in each city, EBCE leveraged the National Renewable Energy Laboratory's EVI-Pro tool.<sup>5</sup> This tool is also used by the California Energy Commission to determine the number of EV charging ports necessary statewide. EBCE determined 40-50 EV fast charging hubs, each with 10 dual port DCFCs, would be necessary by 2030 throughout its service area to fill current gaps in access.

### *Tolling Agreement Structure*

EBCE aims to develop 40-50 public EV fast charging hubs by 2030. To reach this scale, EBCE is pursuing a Tolling Agreement through which EBCE will contract with one or more counterparties ("Tolling Partner") who will finance, construct, maintain and operate the charging stations at each hub over a 10-year period, and EBCE will pay the counterparty a fixed monthly payment.

This Tolling Agreement structure is utilized in the utility industry, including for standalone front-of-the-meter battery-energy storage projects. This structure is also a similar approach to EBCE's efforts to enhance the energy resilience of municipal facilities through the deployment of local distributed solar and storage projects. 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 by other load serving entities statewide including CCAs and municipal utilities. Under the tolling structure EBCE will have full flexibility to set rates and will bear utilization risk. While EBCE may bear more risk under a tolling arrangement, EBCE maintains more autonomy in setting rates in a manner that may drive more adoption from underserved segments and also captures more upside opportunity.

The 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 state and federal funding opportunities to the maximum extent feasible.

### *Tolling Partners*

Through a competitive solicitation process EBCE has selected two (2) Tolling Partners to develop up to the first fifteen (15) fast charging hubs, with a target of 10-12 sites. The Tolling Partners will be responsible for financing, developing, and operating separate EV fast charging hubs from one another.

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<sup>5</sup> [EVI-Pro](#)

Calibrant Energy: Calibrant is a joint venture between the Macquarie Green Investment Group (“GIG”)<sup>6</sup> and Siemens<sup>7</sup>, bringing together two leaders in the infrastructure and energy space. Calibrant provides capital for distributed energy infrastructure projects and owns and manages them long-term, while overseeing the operations maintenance, and servicing. Calibrant is led by a team of seasoned industry professionals with decades of expertise developed through the financing and deployment of customized energy solutions for their clients and partners.

EV Realty, Inc.: EV Realty develops, deploys and owns grid-scale charging infrastructure critical to electrifying last-mile delivery and service fleets in the US. Launched in August 2021, EV Realty brings a scalable infrastructure development and asset ownership mindset to the nascent and evolving EV charging market. The EV Realty team draws upon deep sector experience gained by deploying nearly 8.5 GW of distributed and utility scale energy infrastructure projects in the US over the past 17 years. EV Realty is a privately held company headquartered in San Anselmo, CA.

### **Financial Impact**

The cumulative Tolling Agreements are estimated not to exceed a net annual expense of \$3M/year for publicly available EV charging infrastructure.

### **Attachments**

- A. Presentation
- B. Resolution Authorizing an Agreement with an affiliate of Calibrant Energy
- C. Resolution Authorizing an Agreement with an affiliate of EV Realty, Inc.

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<sup>6</sup> Macquarie Group has been a pioneer in the infrastructure and renewables sector for over two decades and, alongside its managed funds, has invested in or arranged over \$45bn in green energy projects since 2010.

<sup>7</sup> Siemens A.G. is a diversified technology company focused on industry, infrastructure, transport, and healthcare. While Siemens manufactures EV charging equipment, they do not require the use of their equipment in Calibrant-developed projects.

NOVEMBER 16, 2022

# EV Fast Charging Network Tolling Partners



# EBCE's EV Fast Charging Network

Attachment Staff Report Item 17A

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)

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).

EBCE is identifying sites that meet the following priority attributes:

1. In a multi-family housing 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

Attachment Staff Report Item 17A

To deploy 40-50 EV fast charging hubs by 2030, EBCE is pursuing a tolling agreement with two counterparties (“Tolling Partners”) who will each finance, construct, and maintain a portion of of EBCE’s Phase I portfolio of these charging stations over at least an initial 10-year period.

Tolling structure is common 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



## Action:

- Two Resolutions each asking the Board to authorize the CEO to negotiate and execute a 10-year tolling agreement with a Tolling Partner to enable the efficient construction and commissioning of up to 15 of EBCE's EV fast charging hubs.
- The two Tolling Partners are:
  - Calibrant Energy
  - EV Realty, Inc.

## Financial Impact:

- The cumulative tolling agreements will carry an estimated net annual expense not to exceed \$3M/year for publicly available EV charging infrastructure .

**RESOLUTION NO. R-2022-XX**

**A RESOLUTION OF THE BOARD OF DIRECTORS**

**OF THE EAST BAY COMMUNITY ENERGY AUTHORITY AUTHORIZING THE CEO TO NEGOTIATE AND EXECUTE AN ELECTRIC VEHICLE FAST CHARGING TOLLING MASTER SERVICES AGREEMENT WITH AN AFFILIATE OF CALIBRANT ENERGY**

**WHEREAS**, the East Bay Community Energy Authority (“EBCE”) was formed as a community choice aggregation agency (“CCA”) on December 1, 2016, under the Joint Exercise of Power Act, California Government Code sections 6500 *et seq.*, among the County of Alameda, and the Cities of Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Piedmont, Oakland, San Leandro, and Union City to study, promote, develop, conduct, operate, and manage energy-related climate change programs in all of the member jurisdictions. The cities of Newark and Pleasanton, located in Alameda County, along with the City of Tracy, located in San Joaquin County, were added as members of EBCE and parties to the JPA in March of 2020.

**WHEREAS**, in January of 2018, Executive Order B-48-18 was signed by Governor Brown which established a goal of deploying 250,000 electric vehicle (“EV”) charging stations by 2025 and 5 million zero emission vehicles on roadways by 2030;

**WHEREAS**, in September of 2020, Executive Order N-79-20 was signed by Governor Newsom which set the following targets for zero emission vehicles: By 2035, 100 percent ZEV sales for new passenger vehicles, 100 percent ZEV operations for drayage trucks, and 100 percent ZEV operations for off-road vehicles and equipment where feasible;

**WHEREAS**, in August 2022, targets set forth in Executive Order N-79-20 for passenger vehicles were affirmed through the California Air Resources Board’s Advanced Clean Cars II regulations;

**WHEREAS**, EBCE is committed to building an equitable network of publicly accessible EV fast charging hubs for light-duty passenger vehicles that are convenient, reliable, and affordable;

**WHEREAS**, in order to scale the deployment of EBCE’s EV fast charging network to meet State Executive Order targets, as well as JPA member city climate and emissions reductions targets, EBCE must partner with one or more third-party firms (“Tolling Partners”) to finance, construct, and operate the network; and

**WHEREAS**, Tolling Partners will ensure the EV fast charging hubs are operational for at least an initial term of ten years.

**NOW, THEREFORE, THE BOARD OF DIRECTORS OF THE EAST BAY COMMUNITY ENERGY AUTHORITY DOES HEREBY RESOLVE AS FOLLOWS:**

Section 1. The CEO is hereby authorized to negotiate and execute a ten-year tolling agreement with an affiliate of Calibrant Energy for the financing, construction, and operation of a portion of EBCE's Phase I portfolio of EV fast charging hubs.

ADOPTED AND APPROVED this 16<sup>th</sup> day of November, 2022.

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Dianne Martinez, Chair

ATTEST:

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Adrian Bankhead, Clerk of the Board

**RESOLUTION NO. R-2022-XX**

**A RESOLUTION OF THE BOARD OF DIRECTORS**

**OF THE EAST BAY COMMUNITY ENERGY AUTHORITY AUTHORIZING THE CEO TO NEGOTIATE AND EXECUTE AN ELECTRIC VEHICLE FAST CHARGING TOLLING MASTER SERVICES AGREEMENT WITH AN AFFILIATE OF EV REALTY, INC.**

**WHEREAS**, the East Bay Community Energy Authority (“EBCE”) was formed as a community choice aggregation agency (“CCA”) on December 1, 2016, under the Joint Exercise of Power Act, California Government Code section 6500 *et seq.*, among the County of Alameda, and the Cities of Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Piedmont, Oakland, San Leandro, and Union City to study, promote, develop, conduct, operate, and manage energy-related climate change programs in all of the member jurisdictions. The cities of Newark and Pleasanton, located in Alameda County, along with the City of Tracy, located in San Joaquin County, were added as members of EBCE and parties to the JPA in March of 2020.

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