

# Electric Vehicle Infrastructure: Contra Costa County Experience

129<sup>th</sup> CSAC Annual Meeting  
CEAC Infrastructure and Development Committee  
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Deputy Director  
Public Works Department  
Contra Costa County



Contra Costa County  
**Public Works**  
Department

# Measure X and Sustainability Fund

- BOS adopted a resolution declaring a climate emergency (2020)
- Interdepartmental Climate Action Task Force established
- First report from Task Force included a recommendation to establish a Sustainability Fund (\$2.5 million/year Measure X Allocation)
- Staff recommended initial focus of the Fund to support projects identified in the Distributed Energy Resource (DER) Plan
  - EV Charging (highest priority)
  - Zero-Emission Fleet Plan
  - Energy Efficiency Implementation



# Electric Vehicle Charging Infrastructure

## Project Description

- Design and implement EV Charging equipment to serve electric fleet vehicles
- Over 140 ports (plugs) across 15 sites
- Level 2 (19.2 kW) and Level 3 (100 kW) chargers
- Portable Solar EV charging Equipment, (4) units, "EV BEAM ARC"

## Current Project Status

- 59 ports- in construction
- 33 ports- submitted for permit
- 45+ ports- in design phase
- PO issued for 100 EV chargers (Flo Services)

## Anticipated Schedule/Timeline

- 66 ports- Completed by Dec 2023
- 26 ports- Complete by Jan 2024
- >50 ports- Complete by June 2024

# Measure X Funded Projects

Address	Department	# of Ports	Status
30 Muir Rd	DCD	26	In Construction
255 Glacier Dr	PW	9	In Construction
1960 Muir Rd	Sheriff Office	16	In Construction
202 Glacier Dr	Probation	8	In Construction
4545 Delta Fair Blvd	EHSD	14	Submitted for Permit
4549 Delta Fair Blvd	EHSD	12	Submitted for Permit
BEAM ARC	various	16	Issuing Purchase Order
2475 Waterbird Way	PW Corp Yard	6	In Design
4061 Port Chicago Hwy	Print & Mail	7	In Design
10 Douglas Dr	Veterans Services	10	In Design
2467 Waterbird Way	PW Fleet	6	In Design
4800 Imhoff Place	Animal Services	8	In Design
597 Center Ave	HSD	6	In Design
2047 Arnold Industrial Way	HSD	4	In Design
847 Brookside Dr	HSD	8	In Design
2467 Waterbird Way *DCFC	PW Fuel Station	2	Feasibility Phase



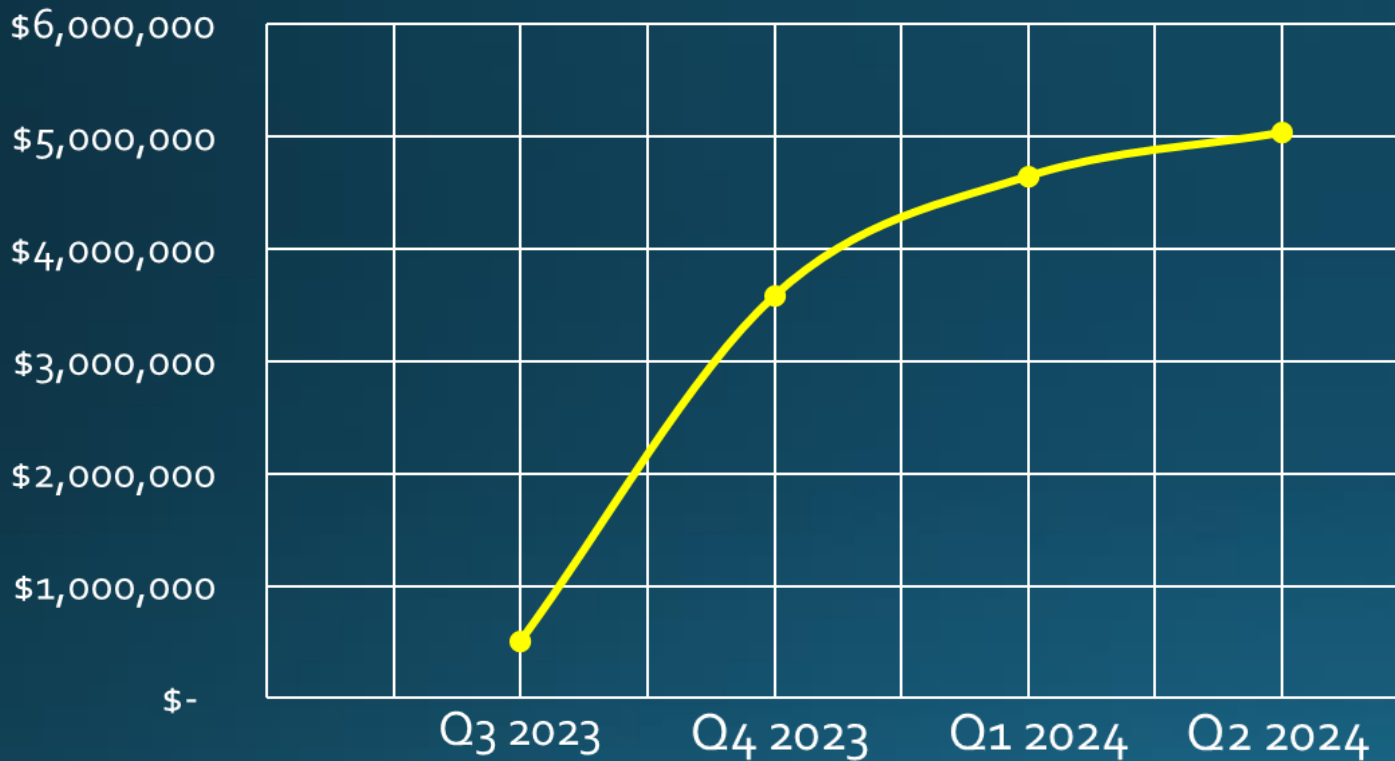
# BEAM ARC

- 100% renewable, transportable, off-grid EV charging



- 4 Charging ports per unit
- Battery energy storage system
- Deployable clean energy generator for extended emergency response
- Limited maintenance
- No cost vehicle fueling
- Functions when electric grid is down

# EV Charging Planned Expenditures



- Sustainability Fund Allocation
  - 2022-23 = \$2,500,000
  - 2023-24 = \$2,650,000
  - **Total = \$5,150,000**

>\$5,000,000 expended  
by July 1, 2024

Average cost/port = \$32,000

Average rebate/port = \$5,000

# Projects *Leveraged* by Measure X (3rd Party-Funded)

Site Name	# of DCFC Ports	# of L2 Ports	Status
Antioch Library	4	4	Pending Federal Funding
Brentwood Library	4	4	Pending Federal Funding
Clayton Library	4	4	Pending Federal Funding
Concord Library	4	4	Pending Federal Funding
Crockett Library	2	4	Pending Federal Funding
San Ramon Library	4	4	Pending Federal Funding
El Sobrante Library	2	4	Pending Federal Funding
Hercules Library	4	4	Pending Federal Funding
Martinez Library	4	4	Pending Federal Funding
Moraga Library	2	4	Pending Federal Funding
Pinole Library	2	4	Pending Federal Funding
Pittsburg Library	4	4	Pending Federal Funding
Pleasant Hill Library	4	4	Pending Federal Funding
Antioch Library	4	4	Pending Federal Funding
San Pablo Library	4	4	Pending Federal Funding
West County Detention Facility	8	14	Pending State Funding / L2 funding from Measure X
50 Douglas	8	0	Design review, pending approval
151 Linus Pauling	8	0	Design review, pending approval
Regional Medical Center	8	0	Partial funding reserved (CEC)
<b>Total</b>	<b>76</b>	<b>74</b>	

# Leveraged Funding / Climate Benefits

- \$3,000 to \$10,000 per port rebate from local programs
  - 10 – 30% project level cost coverage
  - \$420,000 – \$900,000 portfolio level cost coverage
- Pending \$15,000,000 grant submitted for federal funding
  - (52) DCFC, (60) Level 2 @ 15 county libraries
- Contract with charging vendor (EVCS) to install, own and operate 16 DCFC across two sites (WCDF, CCRMC)
  - Estimated revenue to County = \$112,000/year (profit share)
- Zero Emission Vehicles (ZEV) offers significant GHG reduction value for County Climate Action Plan (CAP)



# EV Car Show

*"We want to empower and educate our employees on how to operate and become comfortable with EV technology. We have a County policy of purchasing zero-emission vehicles, so our fleet will electrify rapidly. We are deploying charging infrastructure across the County at various sites to make sure we have adequate charging to power our vehicles."*

- Brendan Havenar-Daughton  
Contra Costa County Energy Manager

## CONTRA COSTA COUNTY EV & EBIKE SHOW: ELECTRIFY YOUR RIDE



Contra Costa County Fire Protection District's new electric Rivian truck.

**THURSDAY, JUNE 1, 2023, 11 a.m. - 1 p.m.**

County Administration Parking Lot, 1126 Escobar St., Martinez

Learn about electric vehicles at the County's  
First Annual EV Car Show!

### THE EVENT WILL FEATURE:

- A showcase of 20+ EV models
- Opportunities to talk with colleagues who own EVs
- Demonstrations of on-site charging infrastructure
- Q&A with EV experts
- Rebate information
- Updates on the County's EV charger projects
- Free lunch for the first 200 public sector attendees checking in at the event

### REGISTER

Use the QR code above or visit:  
<https://www.eventbrite.com/e/contracosta-county-ev-ebike-show-electrify-your-ride-tickets-611534936457>.

### DO YOU DRIVE AN EV?

Showcase your vehicle and talk to your colleagues about your EV ownership experience! Contact Annika Osborn ([aosborn@cooltheearth.org](mailto:aosborn@cooltheearth.org)) to coordinate. A free lunch and small gift will be provided to County employee volunteers.



This event is for public sector employees.  
Employees may attend on non-work time.  
The event is not open to the public.

# EV Charger Infrastructure Challenges

- Short term “wins” vs. Master Plan goals
- Standards and Consistency (Charge Point vs. Flo, Internal billing)
- ADA accessibility (Fleet vs. Public Facing/Employee)
- Experienced contractors
- Supply Chain (transformers and electrical equipment)
- Policy Development and Administrative Bulletin (charging & parking cost of County owned chargers, electric vehicle purchasing requirements)
- County owned (procure, implement, manage) vs. Private partnership

# Questions and Discussion



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