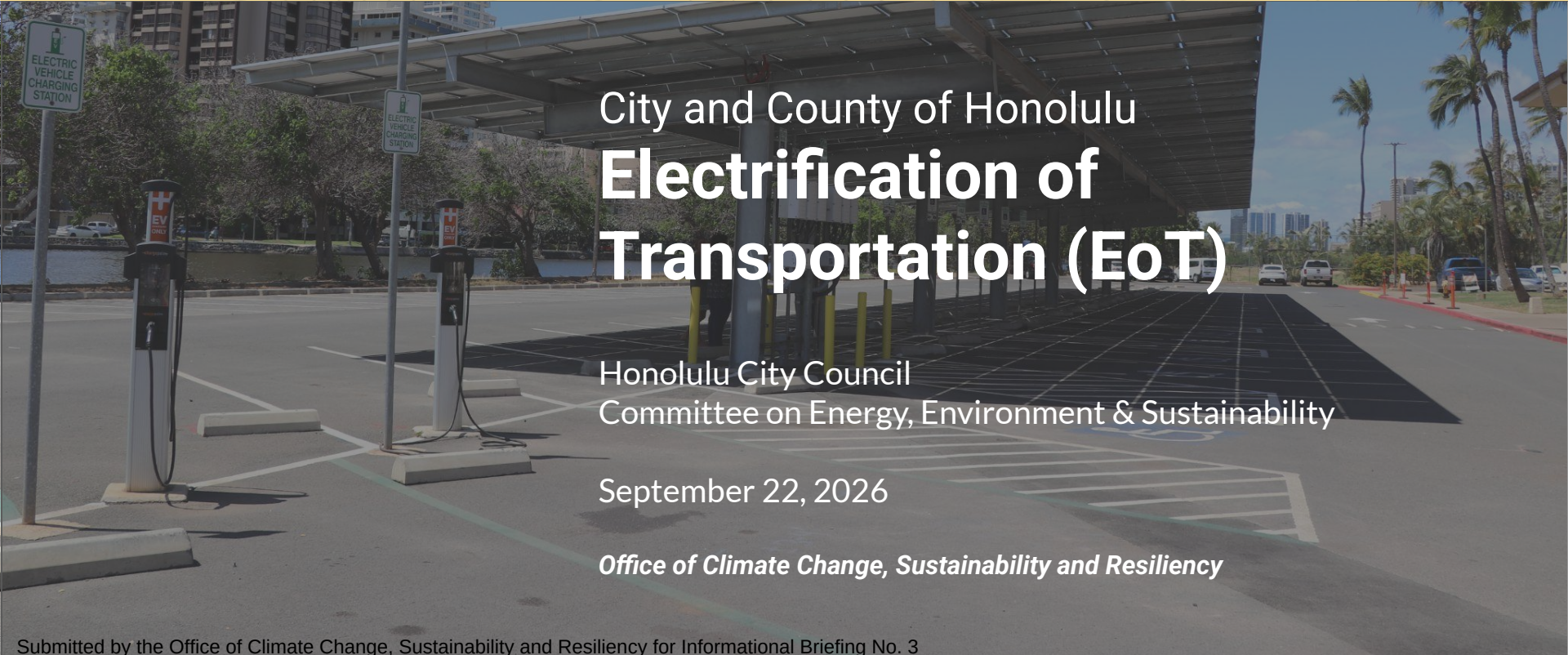
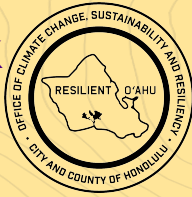




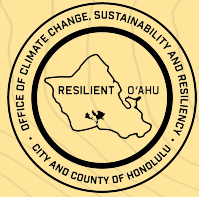
# City and County of Honolulu **Electrification of Transportation (EoT)**

Honolulu City Council  
Committee on Energy, Environment & Sustainability

September 22, 2026

*Office of Climate Change, Sustainability and Resiliency*

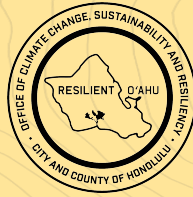
# EoT Initiatives



- Fleet Vehicle Electrification
- Fleet EV Charging
- Public EV Charging
- Fleet Modernization Working Group (FMWG)
- Collaborations



# Local Policies & Commitments

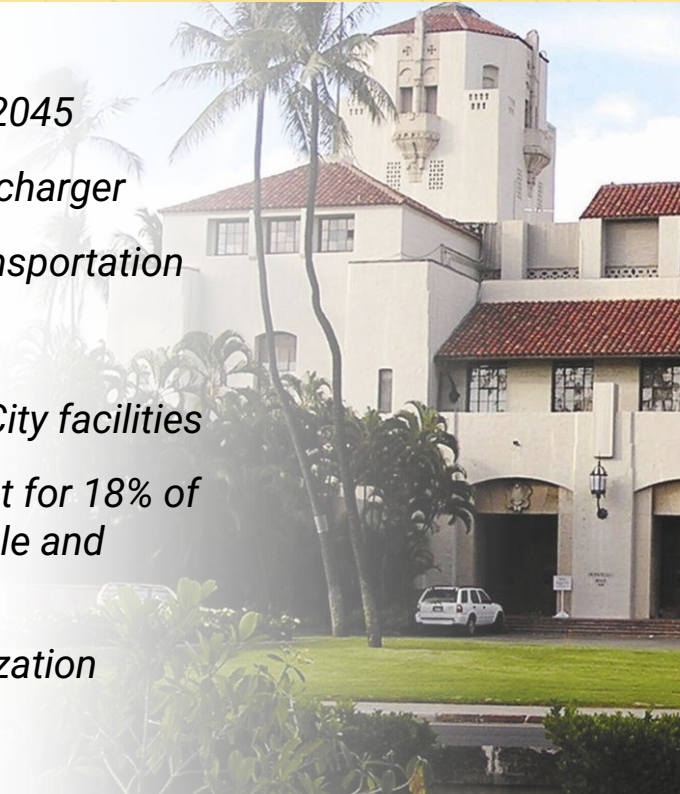


## State:

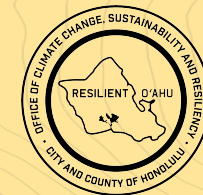
- **HRS § 225P-5:** *Statewide target of zero emission economy by 2045*
- **HRS § 291-71:** *Owners of large parking lots must provide a EV charger*
- **Navahine v. HDOT Settlement:** *Commitment to 100% clean transportation*

## City:

- **ROH § 2-10.2:** *100% renewable fleet by 2035 & EV chargers at City facilities*
- **Climate Action Plan 2025-2030:** *Ground transportation account for 18% of the greenhouse gas emissions on O'ahu; City can lead by example and encourage EVs for those who need to drive*
- **Mayor's Directive 24-1 (MD 24-1):** *Establishes a Fleet Modernization Working Group & practices for EoT planning*

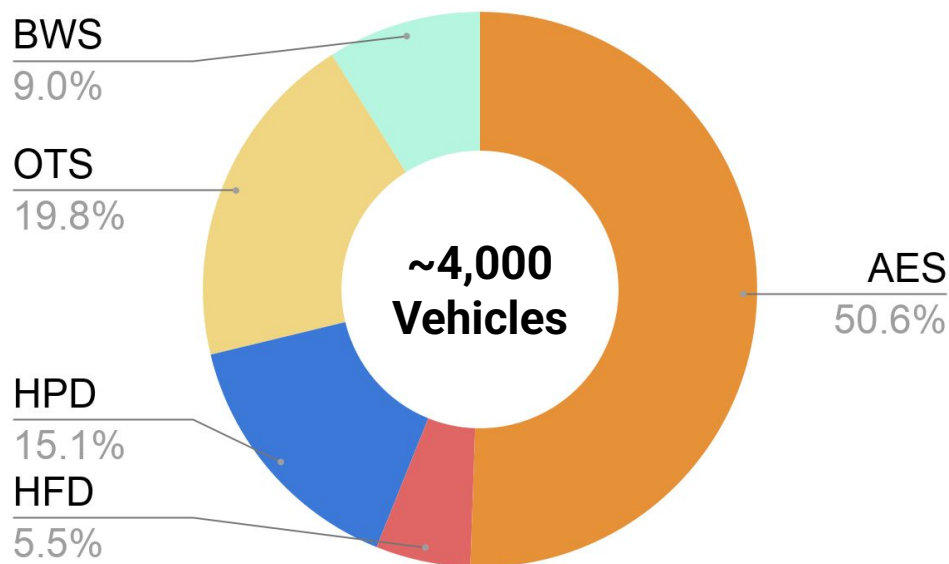


# City Fleet Vehicles

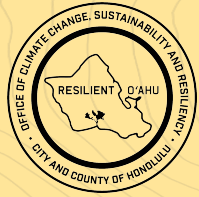


- DFM Automotive Equipment Services (AES) maintains fleet vehicles for all agencies except: OTS, HFD, HPD, BWS, HART
  - Most considered “light-duty”
  - 13 plug-in electric vehicles (EVs)
- O’ahu Transit Services (OTS) has 17 electric and 87 hybrid buses
  - Receiving next batch of e-buses
- HFD piloting electric messenger vehicle

2025 Fleet Composition by Maintenance Agency



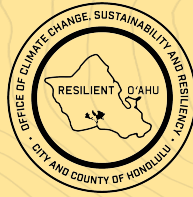
# Fleet Vehicles Purchasing Policy



- **HRS § 103D-412: Motor Vehicle Requirement for Public Procurement**
  - Agencies must select cleanest vehicle when purchasing or leasing a vehicle
  - Selection priority given in this order:
    - 1) Zero Emission Vehicle (ZEV)
    - 2) Plug-in Hybrid Electric Vehicle
    - 3) Alternative Fuel Vehicle
    - 4) Hybrid Electric Vehicle
  - May apply for exemption if ZEV is not available or cannot meet specific needs
    - CCSR administers exception process in collaboration with AES & BFS



# Electric Vehicle Purchases



## Challenges:

- Driver perceptions
- Performance limitations
- Market response & availability
- Sporadic Vehicles Purchases

## Current Efforts:

- Improving data-driven decision making
- Evaluating right-sizing opportunities
- Listening sessions
  - With City staff & vendors
- City employee education



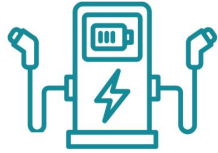
# Types of EV Chargers



- Different EV use different connector types and each charger has different speeds

| Charger Level                                            | Connector Type                                                                                                                                                                                                                                                                           | Charging Speed                      | Ideal Use Case            |
|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|---------------------------|
| <b>AC Level 1</b><br><b>120V</b>                         |                                                                                                                        | 3 to 5 miles per hour of charging   | Daily Overnight Charging  |
| <b>AC Level 2</b><br><b>240/208V</b>                     | J1772<br>Non Tesla      J3400/NAC<br>Tesla + newer<br>non-tesla models                                                                                                                                                                                                                   | 15 to 30 miles per hour of charging | Weekly Overnight Charging |
| <b>Level 3 or DC Fast Charging (DCFC)</b><br><b>480V</b> |   <br>CCS      J3400/NAC      CHAdeMO | 100 to 200+ miles per 30 minutes    | Fast Charging             |

# Components of an EV Charging Network



□ **Hardware:** Physical infrastructure to connect to the vehicle



□ **Network Connectivity:** The internet service connecting hardware to software - typically bundled with software



□ **Charger Management System (CMS):** Cloud-based software platform used to manage the charging network.

- Access controls
- Power management
- Revenue collection
- Usage reporting

# History of EV charging in the City

- **2012:** City received a grant from DBEDT as part of the Hawai'i EV Ready Program
  - 2 pilot EVs purchased - 60 miles of range
  - 6 public & 1 City fleet chargers
- **2019+:** Initial charger upgrade to dual port. Additional chargers installed as part of larger renovation projects
- **2020/2021+:** Additional chargers installed under the City's Energy Savings Performance Contract and dedicated CIP projects like TheBus Chargers



# Fleet Charging Locations

## Current (77):

- Civic Center (4)
- Honolulu Hale (1)
- Kapolei Hale (2)
- Hālawā Corp. Yard (2)
- Medical Examiner Office (2)
- HFD Headquarters (2)
- Mililani Mauka Fire Station (2)
- HFD Waipahu Maint. Facility (2)
- Hale o Honouliuli (32)
- Lā'ie Corp. Yard (1\*)
- 'Umi Street Fueling Facility (1\*)
- Kalihi-Palama Bus Depot\*\* (26\*)

\* *Fast Chargers*

\*\* *Restricted to E-Buses by HECO/PUC*

## Planning + Design/Construction (132):

- Kapolei Hale (60)
- Civic Center Phase 1 (56)
- Kapālama Hale (4)
- PBEM Kokea St. Phase 1 (12)
- Kualoa Regional Park (TBD)

Subject to change



# Cost of Charging Infrastructure



## **Medical Examiner: 2 Ports | Fleet - \$61,955**

- *Part of larger renovation project*

## **Mililani Mauka Fire Station: 2 Ports | Fleet - \$122,124**

- *Installed under City's Energy Savings Performance Contract*

## **Honolulu Hale: 1 Port | Fleet - \$139,627**

- *Included archaeological work*

## **Umi Street Fueling Facility: 1 DCFC Port | Fleet - \$294,088**

## **Kapālama Hale: 4 Ports | Public - \$540,228**

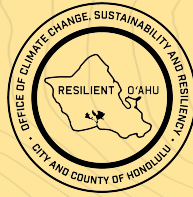
- *Included hazardous material mitigation*

## **Challenges & Cost Drivers:**

- Existing electrical capacity and varying site conditions
- Varying fleet sizes, vehicle types, and use cases



# Charging our City Fleet



## Challenges:

- Aligning planned charging infrastructure with vehicle purchases
- Cost (capital + operating)
- Charging during emergencies

## Current Efforts:

- Data-driven decision making
- Interdepartmental collaboration
- Rightsizing vehicle to charging ratio



# Public Charging Demand

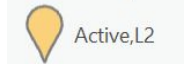
- **2025: 54k registered EVs** on O'ahu (56% battery electric, 44% plug-in hybrid)
- **Aug. 2026: 637 public charging ports** at 238 locations
  - **1.8 ports per 100 EVs**
- **2,400+ public charging ports** are needed by 2030
- **HI “superusers” ( $\geq 1,270$  gal/yr) make up 6% of drivers but consume 25% of gas** statewide
  - Can save \$5,000+/yr by switching to an EV



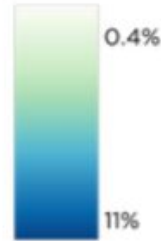
Source: U.S. Dept. of Energy, Hawai'i Dept. of Business, Economic Development & Tourism, Hawaiian Electric, Ulupono Initiative

# City's Public Charging Network - Existing

## City Public Chargers



## EV Registration



## Non-City Public Chargers



View map @ [resilientoahu.org/goev](https://resilientoahu.org/goev)

## Current Network: 10 locations & 23 ports

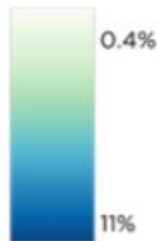
- **DTS (6 ports):** Chinatown Gateway (2), Smith/Beretania (2), Hale Pauahi (2)
- **DFM (8 ports):** Civic Center (2), Kapālama Hale (4), Wahiawa Satellite City Hall (2)
- **DES (7 ports):** Blaisdell (2), Honolulu Zoo (2), Ala Wai Golf Course (3)
- **DPR (2 ports):** Hans L'Orange Park (2)

# City's Public Charging Network - Upcoming

## City Public Chargers

-  Active, L2
-  Upcoming DCFC
-  Upcoming Level 2

## EV Registration



## Non-City Public Chargers

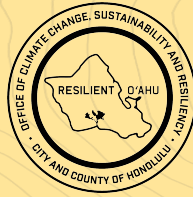
-  Level 2 Chargers
-  DCFC Charger
-  DCFC & L2 Chargers

View map @ [resilientoahu.org/goev](https://resilientoahu.org/goev)

## Upcoming: 7 new locations & 26 new ports

- **DTS (24 ports):** Hālawā Syline Station (6), Lani Huli (4), Harbor Court (4), Harbor Village (4), Kaimukī Parking Lot (1), Kailua Parking Lot (5)
  - **DFM (2 ports):** Kapolei Hale (2 DCFC)
  - **HDOT x DTS:** Mililani Park n Ride (4 DCFC)\*
- \*HDOT public chargers hosted at City facility (not pictured on map)*

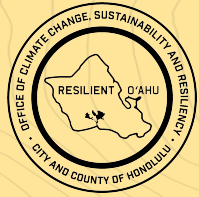
# Fleet Modernization Working Group



- Established by Mayoral Directive 24-1
- Meets monthly and as needed as a group
- Includes department representatives from:
  - DFM, DDC, BFS, CCSR (Facilitator)
  - Voluntary/ad-hoc: DTS, ENV, DPR, DES, other agencies
- Discussions on policies, practices, and projects
- Address cross-department topics and collaboration
- Feedback loop for CCSR's EoT work



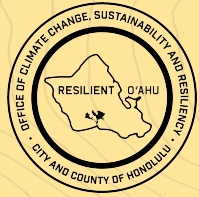
# Collaborations & Peer Networks



- Four County Sustainability Network (4CSN)
- Drive Electric Hawai'i / Sustainable Transportation Coalition of Hawai'i
- FORTH Mobility
- ICLEI Local Governments for Sustainability
- Urban Sustainability Directors Network
- American Council for an Energy-Efficient Economy (ACEEE)



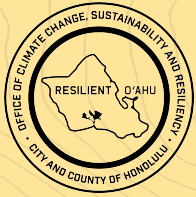
# Looking Ahead



- EoT during disaster response
- Improve data reporting
- Interdepartment coordination
- Exploring other charger types
  - Mobile solar powered charger, curbside charging, etc.
- Migration to open standard to be vendor agnostic
- Financing options
  - Clean Fuel Standards, partnerships, etc.



# Mahalo!



**Chris Agcanas**  
Electrification of Transportation Analyst  
[c.agcanas@honolulu.gov](mailto:c.agcanas@honolulu.gov)

Social Media: @resilientoahu    

Website: [resilientoahu.org/goEV](https://resilientoahu.org/goEV)