BALTIMORE METROPOLITAN COUNCIL

Electric Vehicle Community Charging Hubs for Multi-Unit Dwellings

BRTB Technical Committee Meeting
December 3, 2024

Hummingbird

autoflex FLEET Leasing Solutions Plus

KITTELSON & ASSOCIATES

Agenda

1. Project Overview
2. Project Outcomes – Fact Sheets & Guide
3. Next Steps

Study Team

BRTB
Baltimore Regional Transportation Board

BALTIMORE METROPOLITAN COUNCIL

KITTELSON & ASSOCIATES

Project Lead

Hummingbird

Engagement Specialist

autoflex FLEET
Leasing Solutions Plus

Electrification Expert

Steering Committee

Seth Blumen – Energy and Sustainability Coordinator, Baltimore County

Tim von Stetten – Manager of EV Charging Programs, Baltimore City

Andrew Gray – Comprehensive Planner, Carroll County

Jill Manion – Department of Planning & Zoning, Howard County

Alex Rawls – Chief, Long-Range Planning, Harford County

Amanda Hinh – NEVI Program Manager, Maryland DOT

Matthew Fleming – Director for the Resilience Authority of Annapolis and Anne Arundel County

Steve Cohoon – DPW Public Facilities Planner, Queen Anne's County

Tim Shepherd – Deputy Program Manager, MDE Mobile Sources Control Program

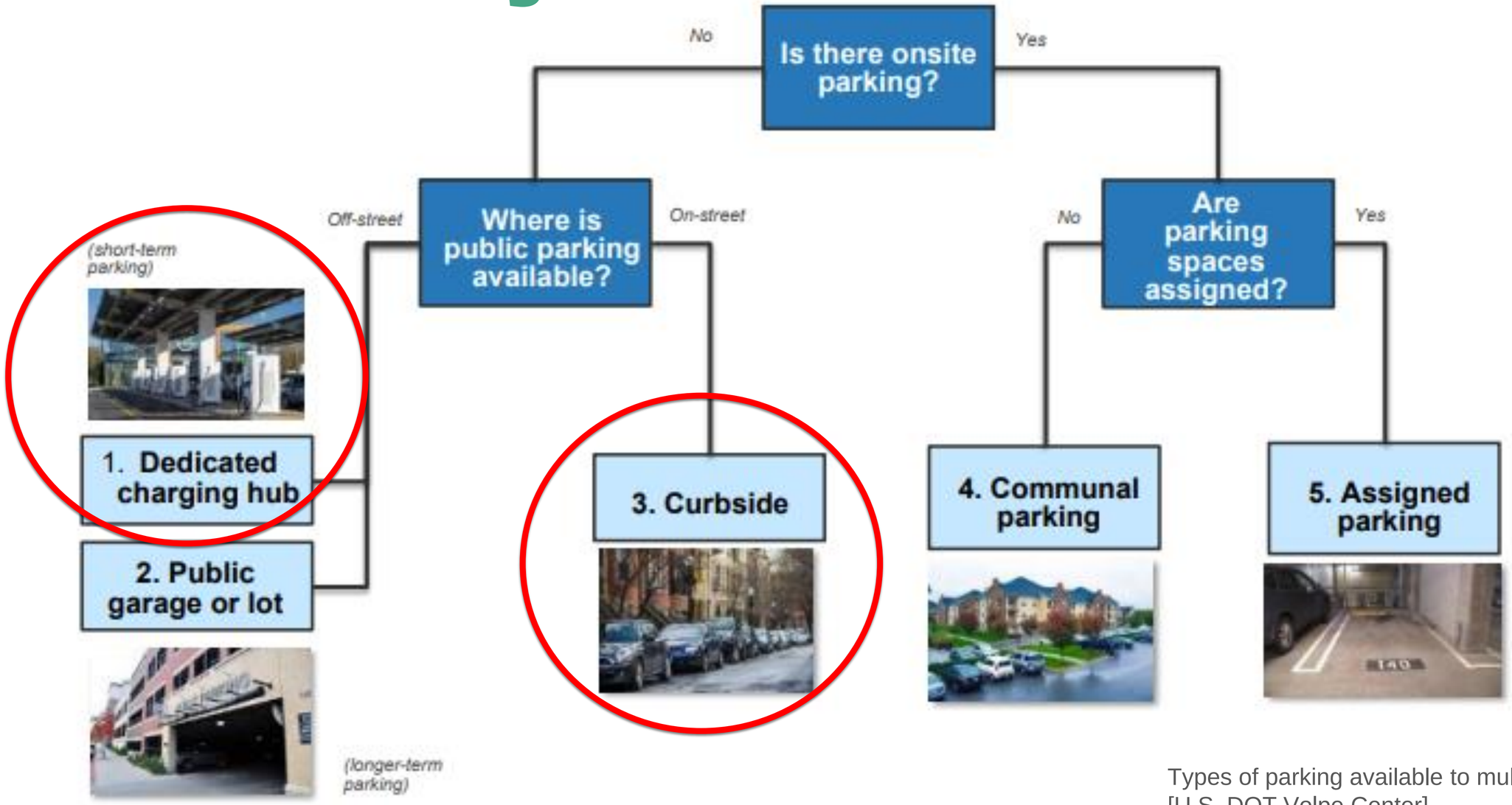
Shanaya Herbert – Regulatory Compliance Engineer, MDE Mobile Sources Control Program

Project Background

- Electric vehicle (EV) adoption is on the rise in Maryland!
- 100% of new vehicles sold in MD will be zero emission by 2035 [Advanced Clean Cars II Act]
- About 80% of all EV charging takes place at home
- People who live in high-density areas and do not have access to chargers at home or work need public access to chargers

Electric vehicle charging [Forbes]

Types of Parking Available to Multi-Family Residents



Types of parking available to multifamily residents. [U.S. DOT Volpe Center]

Project Overview

Develop a plan to provide EV charging opportunities for residents in **high-density residential areas** across the Baltimore region

What will the plan include?

- Recommendations on how to implement EV chargers in high-density residential areas
- Fact sheets to share with elected officials, colleagues, and community members about EV charging
- Potential locations for community charging hubs

What are community charging hubs?

Designated locations near high-density employment centers or multi-family housing where community members can reliably charge their electric vehicles and access additional transportation options (i.e., rideshare, transit, micromobility) while their vehicles charge

Key Characteristics

- **Reliable** charging infrastructure (it works; wait times are reasonable)
- **Convenient** location to high-density multi-family housing, employment centers, and/or other destinations such as shopping centers or community centers
- **Connections** to transit or other transportation services
- **Inclusive** public space with integrated wayfinding, travel information, and payment options
- **On-site services** such as restrooms or convenience store are optional amenities
- **Equitably distributed** throughout communities

Examples

EVGo Charging Station | California

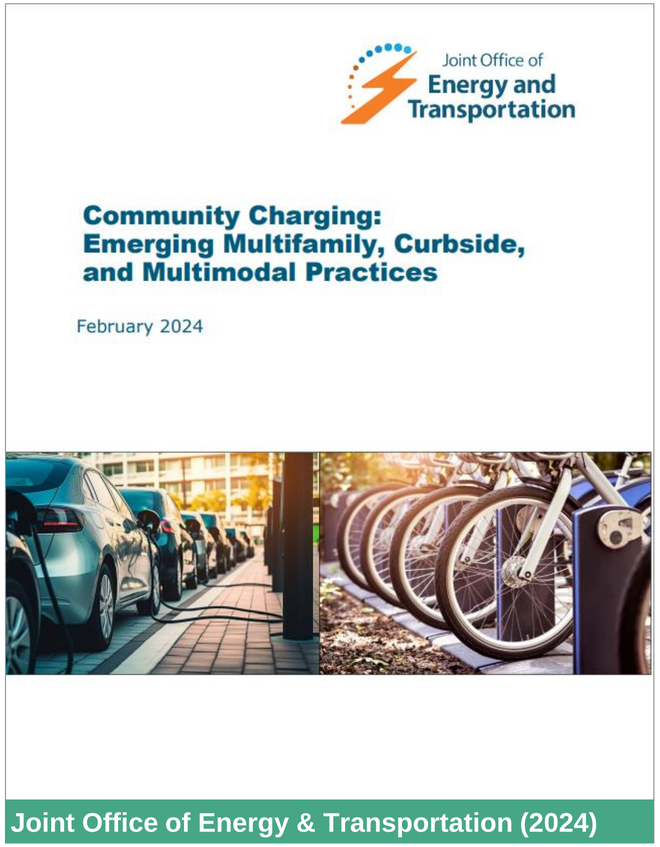
St. Frances EV Charging Station | Baltimore, MD

OUC Charging Station | Orlando, FL

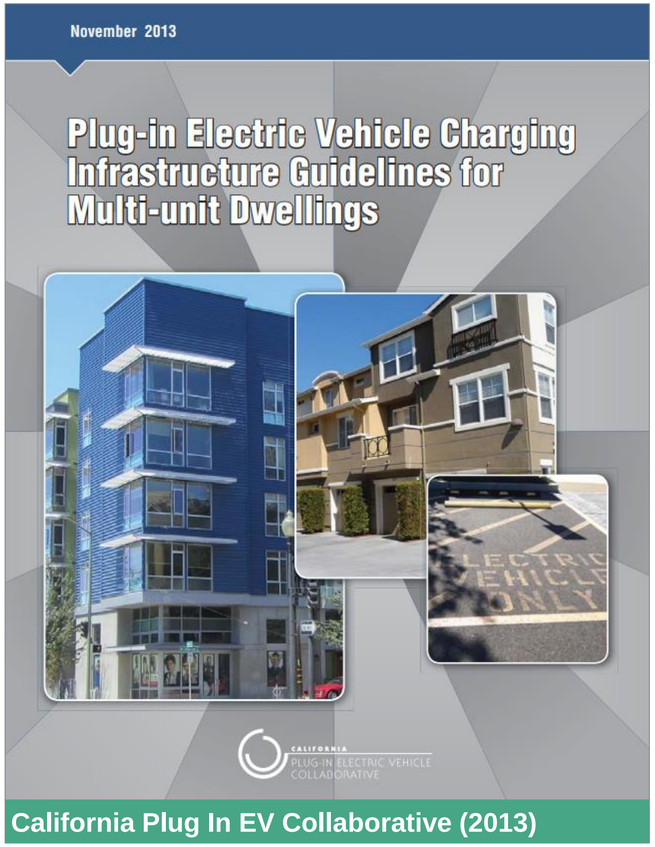
Connecticut Post Mall | Milford, CT

What guidance is available?

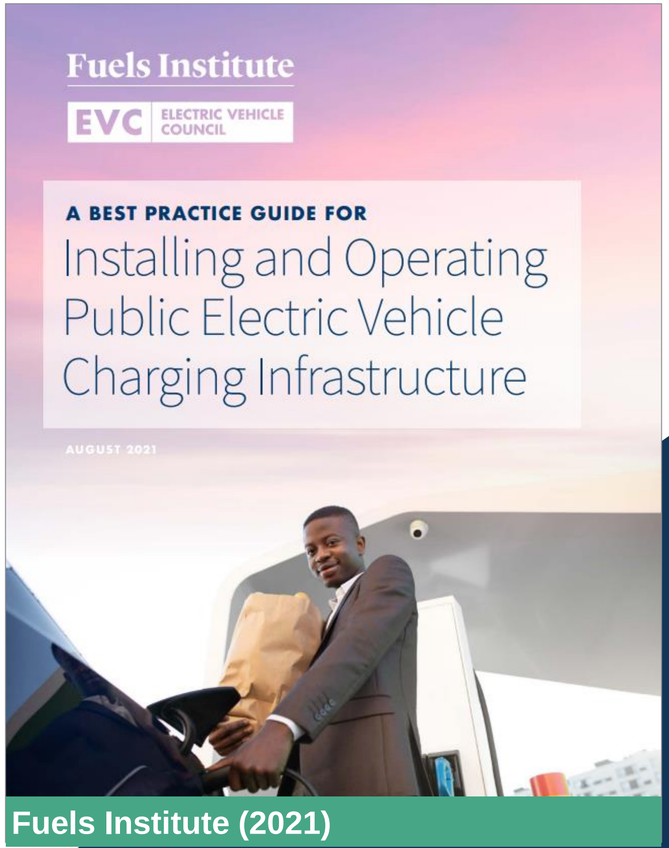
National publications provide guidance on how to fund and install EV charging infrastructure.



Joint Office of Energy & Transportation (2024)



California Plug In EV Collaborative (2013)



Fuels Institute (2021)

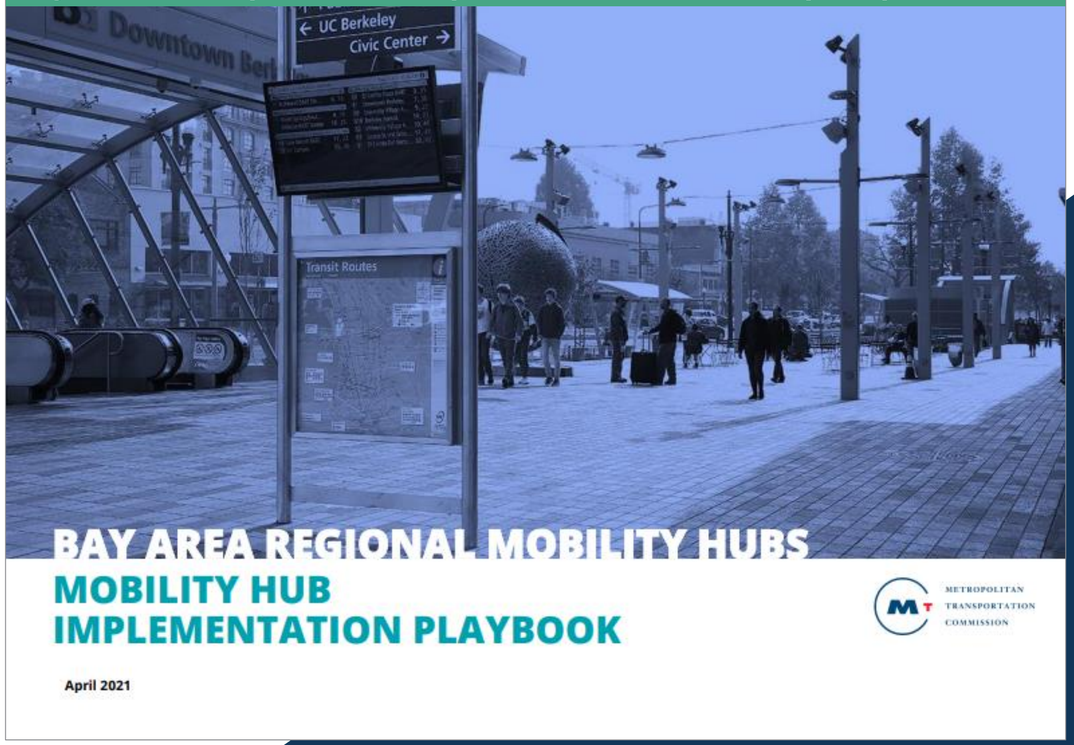
What guidance is available?

Planning documents from other cities, regions, and states provide examples of how to cite and leverage partnerships to implement community charging hubs.

Seattle DOT (2018)

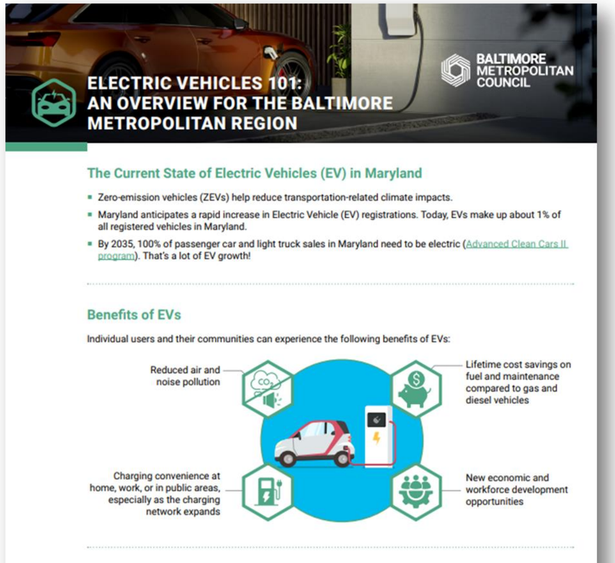
LADOT (2016)

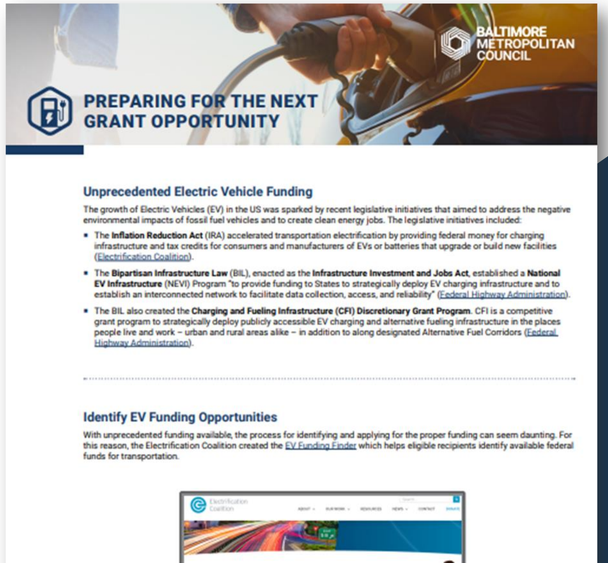
Bay Area Metropolitan Transportation Commission (2021)



Project Outcomes

- **Fact sheet**s to share with elected officials, colleagues, and community members about EV charging
- **Guide** with recommendations on how to implement EV chargers in high-density residential areas
- **Case studies** that highlight potential locations for community charging hubs





Fact Sheet Topics

Electric Vehicles 101

Community Charging Hubs

Preparing for the Next Grant Cycle

Workforce Development Opportunities

Statewide Incentives

Use the fact sheets to…

- Engage with community members, colleagues, and elected officials about the **benefits of EVs**
- Discuss the **types of EV chargers** and **locations** the types can be used most effectively
- Direct colleagues to best practices for **planning, siting, and designing hubs**
- Identify EV **funding opportunities**
- Learn more about **EV-related jobs**
- Share strategies for **equitable workforce development**

Guidebook Outline

- Executive Summary
- Community Charging Hubs
- Planning Toolbox
- Next Steps
- Appendix A: Case Studies
- Appendix B: Budgeting & Funding
- Appendix C: Funding and Procurement Options

Planning Toolbox

- Engage Stakeholders
- Select Location
- Design Hub
- Operate & Maintain Hub
- Develop Workforce

Case Study Examples

Where have community charging hubs been used?

Community charging hubs have been successfully implemented in Europe and are being piloted in several locations in the United States. In Europe, the following cities have successfully implemented innovative solutions to provide EV charging opportunities in urban areas and for multi-family housing:

- Hamburg, Germany
- Amsterdam, Netherlands
- Cologne, Germany
- London, UK
- Oslo, Norway

Local Examples

Pennsylvania Ave Market Lot
- Baltimore, Maryland
- City-owned parking lot
- 4 Level 2 chargers, 2 Level 3 fast chargers

Saint Frances Academy
- Baltimore, Maryland
- Baltimore Gas and Electric (BGE) in collaboration with the Mid-Atlantic Electrification Partnership, Lyft, St. Frances Academy, and the Johnston Square neighborhood planned this charging hub.
- 3 Level 3 fast chargers, 2 dual-port Level 2 chargers

Michael E. Busch Annapolis Library
- Annapolis, Maryland
- County-owned library in residential area
- 4 Level 2 chargers, 1 Level 3 charger

Clean Cities Partnership: The GUMBO Initiative

The GUMBO (Guaranteeing Access to Underserved and Marginalized Populations by Building Employment Opportunities) initiative provides EV educational curriculum to regional and national training partners. Initially developed by Louisiana Clean Fuels and Baton Rouge Community College, it received Department of Energy funding. Now, multiple partners, including Greater Washington Region Clean Cities Coalition and Virginia Clean Cities, are involved. Maryland Clean Cities and Communities Coalition may also benefit from exploring this partnership.

Key points of workforce development from the GUMBO initiative include:

- **Practical Training:** Hands-on training in installing, maintaining, and servicing electric vehicle supply equipment (EVSE), directly addressing the growing need for skilled technicians in the EV sector.
- **Career Opportunities:** New career pathways in the EV infrastructure, with technicians specializing in EVSE installation and maintenance potentially earning between $40,000 and $65,000 annually.
- **Supporting Underserved Populations:** Access to training and employment opportunities explicitly targeting underserved and marginalized populations.
- **Curriculum Development:** Curriculum for EVSE installation and operations will be made publicly available, enabling broader access to education and skill-building.

Next Steps

- Download and share the fact sheets
- Look out for the guidebook available at the end of this year
- Contact **Anna Marshall** (amarshall@baltometro.org) for more information

Fact sheets are available now!
Scan QR code or visit
baltometro.org.