



Joint Office of  
**Energy and  
Transportation**

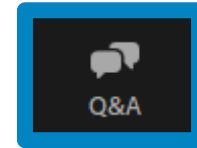
# Community Charging Models

4/25/2023

[driveelectric.gov](https://driveelectric.gov)

# Zoom Tips and Housekeeping

- Controls are located at the bottom of your screen. If they aren't appearing, move your cursor to the bottom edge.
- Submit questions using the “Q&A” window



# Disclaimer

**Notice:** This webinar is being recorded and may be posted on the Joint Office website or used internally.

If you speak during the webinar or use video, you are presumed to consent to recording and use of your voice or image.

# Agenda

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**Introduction from the Joint Office**

**Overview from NREL**

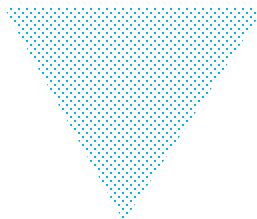
**EV Charging for Multifamily Housing from Volpe**

## **Panel**

- Minnesota Clean Cities Coalition
- Centralina Clean Cities Coalition
- Portland Bureau of Transportation
- Electrify America
- Volpe



# Mission and Vision



## Mission

To accelerate an electrified transportation system that is affordable, convenient, equitable, reliable, and safe.

## Vision

A future where everyone can ride and drive electric.

# BIL Programs Supported by the Joint Office

The Joint Office will provide unifying guidance, technical assistance, and analysis to support the following programs:



## **National Electric Vehicle Infrastructure (NEVI) Formula Program (U.S. DOT)**

\$5 billion for states to build a national electric vehicle (EV) charging network along corridors



## **Charging & Fueling Infrastructure Discretionary Grant Program (U.S. DOT)**

\$2.5 billion in community and corridor grants for EV charging, as well as hydrogen, natural gas, and propane fueling infrastructure



## **Low-No Emissions Grants Program for Transit (U.S. DOT)**

\$5.6 billion in support of low- and no-emission transit bus deployments



## **Clean School Bus Program (U.S. EPA)**

\$5 billion in support of electric school bus deployments

# Technical Assistance Strategies

- Specialized assistance for **states, communities, Tribal Nations, transit agencies, and school districts**
- **One-on-one meetings** with states to address questions and concerns related to NEVI Formula Program
- **Concierge service** (phone, email, web form) to efficiently route technical assistance requests for NEVI, electric school buses, and transit buses
- Technical assistance support team has **50 staff members across 10 organizations.**

[driveelectric.gov/technical-assistance](https://driveelectric.gov/technical-assistance)

Concierge Service Contact Methods: 833-600-2751 | [doe-dot.jo.ta@nrel.gov](mailto:doe-dot.jo.ta@nrel.gov) | [driveelectric.gov/contact/](https://driveelectric.gov/contact/)

## Technical Assistance

The Joint Office of Energy and Transportation (Joint Office) provides technical assistance on planning and implementation of a national network of electric vehicle chargers and zero-emission fueling infrastructure as well as zero-emission transit and school buses.

### States and Communities

The Joint Office provides technical assistance for [states and communities](#) creating and executing [state plans](#) under the National Electric Vehicle Infrastructure Formula Program and the Charging and Fueling Infrastructure Discretionary Grant Program.

### Tribal Nations

The Joint Office provides technical assistance to [tribal nations](#) electrifying their transportation systems. Learn more about zero-emission transportation [funding opportunities for tribal nations](#).

### School Districts

The Joint Office provides technical assistance to [school districts](#) applying for or receiving funding through the U.S. Environmental Protection Agency's Clean School Bus Program.

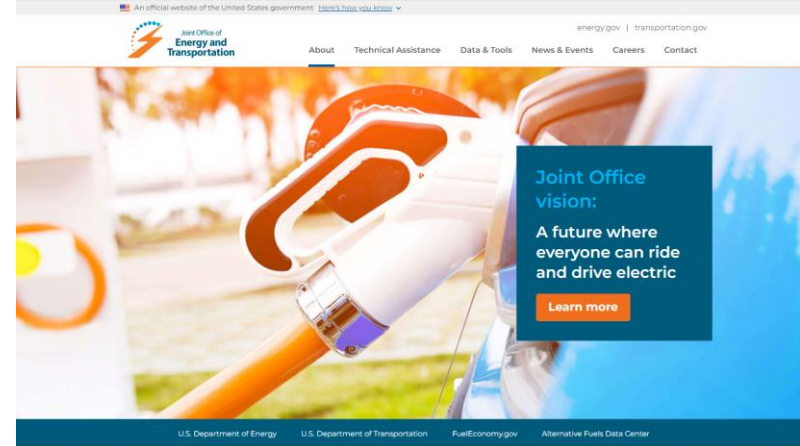
### Transit Agencies

The Joint Office provides technical assistance to [transit agencies](#) applying for or receiving funding through the Federal Transit Administration's Low or No Emission Vehicle Program.

# DriveElectric.gov

## Website connects state DOTs and other stakeholders to resources, including:

- Infrastructure planning and implementation guidance
- Data and tools
- News and events
- Technical assistance request form



**A modernized and interagency approach to support the deployment of zero-emission, convenient, accessible, equitable transportation infrastructure**

The Joint Office of Energy and Transportation was created through the Bipartisan Infrastructure Law (BIL) to facilitate collaboration between the U.S. Department of Energy and the U.S. Department of Transportation. The Joint Office will align resources and expertise across the two departments toward leveraged outcomes. The office will be a critical component in the implementation of the BIL, providing support and expertise to a multitude of programs that seek to deploy a network of electric vehicle chargers, zero-emission fueling infrastructure, and zero-emission transit and school buses. The scope of the Joint Office will continue to evolve as directed by both departments.

[Contact us](#)

[Technical assistance](#)

### Benefits of investing in our electric vehicle charging infrastructure

Initial priorities of the Joint Office will be to support states with planning and to implement the National Electric Vehicle Charging Infrastructure program.



#### Support electric vehicles

Accelerates the adoption of electric vehicles, including for those who cannot reliably charge at home to enable up to 50% of new vehicle sales to be electric by 2030.



#### Fewer emissions

Reduces transportation-related emissions and helps put the United States on a path to net-zero emissions by no later than 2050.



#### Job creation

Positions U.S. industries to lead global transportation electrification efforts and create good jobs.



#### A network for everyone

Targeted equity benefits for disadvantaged communities, reducing mobility and energy burdens while also creating jobs and supporting businesses.



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Use this contact form to submit a media inquiry, ask a general question about Joint Office of Energy and Transportation resources and activities, or request technical assistance for states, tribal nations, or clean school buses or transit buses.

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Required fields are marked with an asterisk (\*).

Inquiry type \*

Name \*

Email \*

Subject \*

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# **Intro from Executive Director Gabe Klein and Polling Questions**

# Panelists



**Sarah Cardinali**  
*National Renewable  
Energy Laboratory*



**Alexander Epstein, PhD**  
*U.S. DOT Volpe Center*



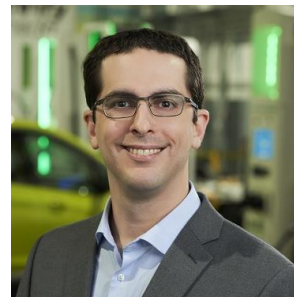
**Lisa Thurstin**  
*American Lung Association  
Minnesota Clean Cities Coalition*



**Jason Wager**  
*Centralina Regional Council  
Centralina Clean Cities Coalition*



**Hannah Morrison**  
*Portland Bureau of Transportation*

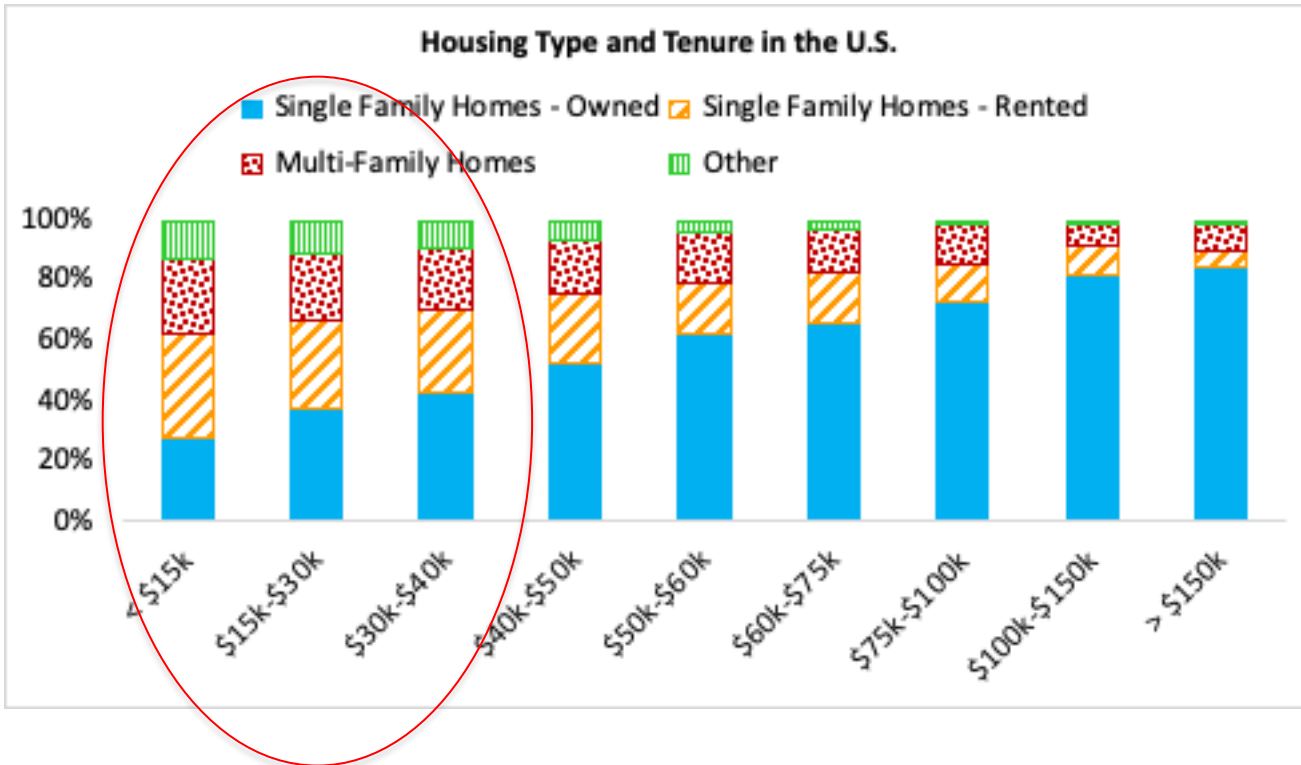


**Andrew Dick**  
*Electrify America*



# **Overview – Community Charging Models (Sarah Cardinali, NREL)**

# Publicly accessible community charging options are important as...



- 30 - 40% of low-income households live in multifamily housing; even more rent SFHs
- If at home-charging isn't an option, households of all income levels, prefer retail or curbside charging.

Source: Lee et al. (2023). *Toward Just and Equitable Mobility: Socioeconomic, Housing, and Perceptual Barriers for Electric Vehicles and Charging Infrastructure in the United States. In Progress*

# DOE Previously Funded Projects

**Curbside EV Charging**

**EV Car Share**

**EV Mobility Hubs**

**EV Charging for Multifamily Housing (MFH)**

## Key Considerations

- Site selection
- Stakeholder engagement
- Equity
- Utilization
- Accessibility
- Deployment

**Community charging** – a range of strategies that enable charging across rural and urban communities.



Image credit: UNC College of Engineering

# Curbside Charging

**Public right-of-way charging** refers to charging in a place owned by a government entity, i.e., highway, street, alley, and sidewalks.

**Curbside charging** refers to charging on the side of a road or sidewalk.

**Streetlight/pole charging** refers to charging on the side of a road or sidewalk where the charger is attached to a streetlight or other type of pole.

## Key Considerations

- Local government coordination
- Community engagement
- Site selection
- Permitting
- Accessibility
- Equity



Image credit: PGE

# EV Car Share

**Round-trip car share** dedicated location where trips begin and end.

**One-way station** based on where the car share begins; trips end at specific reserved parking locations.

**One-way free-floating** vehicles are returned to a certain zone within a region rather than to a specific parking spot.

## Key Considerations

- Operating models
- Program rate structures
- Vehicles
- Charging
- Local government coordination
- Community engagement
- Equity



Image credit: (Courtesy of Sam Holt); twincities.com



# EV Mobility Hubs

**EV charging equipment** - potential responsible parties include utility, municipality, site host, or charging station network.

**Utilities** - input on the project parameters and sites capable of supporting an EV mobility hub.

## Key Considerations

- Local government stakeholders
- EV mobility hub site selection
- Community engagement
- Equity
- Permitting



Electrify America EV fast charging station with solar-powered canopy located in Baker, CA. Image credit: Electrify America

# EV Charging at Multifamily (MFH) Housing

**EV charging equipment** determine who will own, insure, and be responsible for operations and maintenance and for what length of time.

Building owners are good candidates

**EV car share** who will own/lease, insure, clean, and maintain the vehicles

## Key Considerations

- Local government stakeholders
- Equity
- Site selection
- EV charger location
- Charging strategies
- Car share
- Permitting and policies



Image credit: (Scott Takushi / St. Paul Pioneer Press)

## EV SPOT NETWORK

Soon it will be easier than ever to use an electric vehicle in the Twin Cities. The City of Saint Paul – in partnership with the City of Minneapolis, Xcel Energy, and HOURCAR – is starting the EV Spot Network in early 2022 to support increased access to and use of electric vehicles.





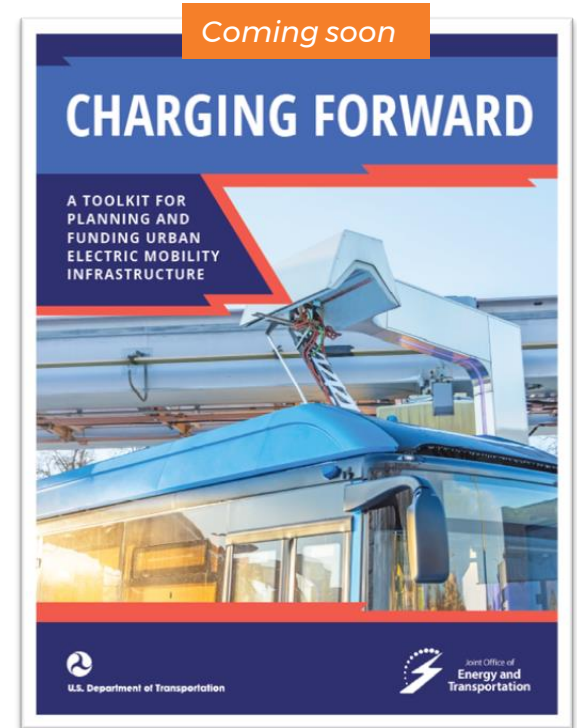
**Electric Vehicle Charging Solutions  
for Multifamily Housing -  
Market Scan  
(Dr. Alexander Epstein, Volpe)**



# Community Charging Models Panel Discussion

# Additional Resources

- DOE Previously Funded Community Charging Projects - <https://cleancities.energy.gov/partnerships/projects>
- DriveElectric.gov [Technical Assistance and Resources for States and Communities](#)
- [Vehicle Charging Innovations for Multi-Unit Dwellings \(VCI-MUD\): Project Toolkit](#)
- Electric Vehicle Charging Solutions for Multifamily Housing Market Scan from the U.S. DOT Volpe Center - *will be posted on DriveElectric.gov*
- Charging Forward: A Toolkit for Planning and Funding Urban Electric Mobility Infrastructure - *coming soon*
- Updates to the Charging Forward: A Toolkit for Planning and Funding Rural Electric Mobility Infrastructure - *coming soon*





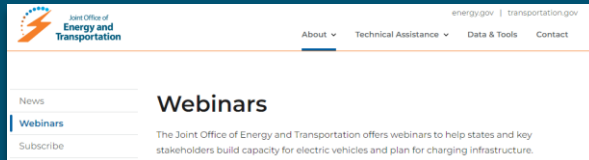
# Upcoming Webinar Topics

May 3rd

**AFLEET - CFI Tool Demo**

May 9th

Minority Business Outreach and  
Partnerships



**[driveelectric.gov/webinars](https://driveelectric.gov/webinars)**

*\* Some dates may be subject to change*

# Thank you!

*Today's Presentation:*  
Community Charging Models

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