

REGIONAL EV STRATEGY

Innovative EV Charging Models

July 11, 2024



REGIONAL EV STRATEGY



Today's Agenda

1:00-1:10 p.m.	Welcome & Introduction	Alison Felix, MAPC
1:10-1:45 p.m.	Emerging Charging Models	Shannon Dulaney, it'selectric Josh Aviv, SparkCharge Chelsea Kammerer, Voltpost
1:45-1:55 p.m.	Utility Perspective	Kurt Steiner, National Grid
1:55-2:10 p.m.	Group Discussion	All
2:10-2:25 p.m.	Municipal Updates	All
2:25-2:30 p.m.	Resources and Next Steps	Emma Zehner, MAPC



Background: Emerging EV Charging Models



Public EV Charging Landscape

Existing

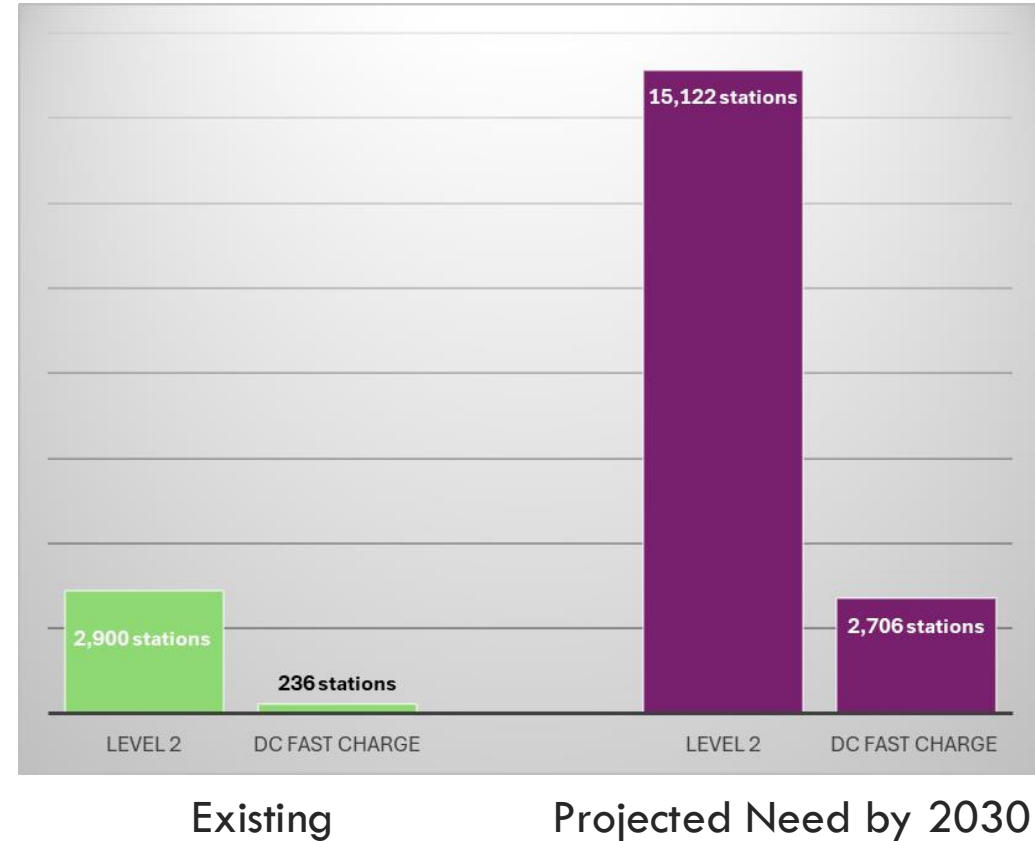
Level 2 - 2,900 stations/6,712 ports

DC fast charge - 236 stations/872 ports

Projected Need by 2030

Level 2 - 15,122 stations/35,000 ports

DC fast charge - 2,706 stations/10,000 ports

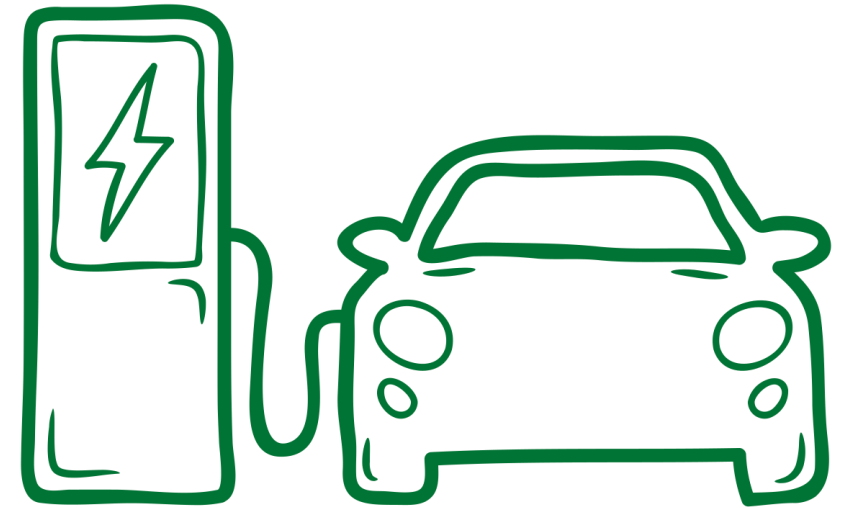


Sources: Alternative Fuels Data Center, U.S. Department of Energy. <https://afdc.energy.gov/>
Initial Assessment to the General Court, Electric Vehicle Infrastructure Coordinating Council, August 2023
<https://www.mass.gov/info-details/electric-vehicle-infrastructure-coordinating-council-evicc>

Note: MAPC estimated the number of projected stations based on AFDC data and the projected ports from the Initial Assessment.
While the CECP finds there is a need for 900,000 EVs by 2030, the modeling performed for the Initial Assessment shows 970,000 EVs on the road by 2030.

Public EV Charging Landscape

- Barriers Can Include:
 - Municipal procurement
 - Equipment and Installation costs and delays
 - Utility connection delays (e.g., make-ready)
 - Operation and Maintenance costs
 - Reliability (e.g., broken public chargers)
 - Uncertainty around siting and utilization



Source: Noun Project



Emerging Models

- Connecting to existing infrastructure - streetlights, utility poles, street cabinets, etc.
- Solar-powered charging facilities
- On-demand charging that comes to the vehicle
- Wireless charging
- Pop-up chargers
- Mobility hubs (combining e-bike docks, public transportation, and charging)
- Robotic mobile EV charging platform that serves parking spaces in a lot



Community Charging: Emerging Multifamily, Curbside, and Multimodal Practices

February 2024



<https://driveelectric.gov/files/community-emobility-charging.pdf>



Growing Federal and State Priority



"The Joint Office of Energy and Transportation has been researching emerging approaches to community charging solutions...we are now asking eligible entities to come up with concepts for potential planning, demonstration, and/or deployment projects...the Accelerator will then invest in those ideas that can help meet our electric goals as a country."

Healey-Driscoll Administration Announces \$50 Million Investment in Electric Vehicle Charging Infrastructure

Programs include a curbside charging pilot for renters, expanded charging infrastructure for the state fleet, support for TNC charging needs, and mobile chargers for medium- and heavy-duty electric vehicles



Questions we are considering during this session:

- What existing infrastructure can charging solutions leverage?
- What approaches could overcome barriers including maintenance and competition for street space?
- How do emerging approaches work with utilities in Massachusetts and navigate regulations and compliance?



it'selectric





Solving the biggest barriers cities face in the deployment of public EV charging

it's electric

WASH. POST | BY JEFF KRAVITZ | PHOTOGRAPH BY JEFF KRAVITZ

Wait, So Where Will Urbanites Charge Their EVs?

Homeowners with garages can easily charge their electric cars, but not apartment dwellers. Here's what it'll take to get plugs everywhere in cities.



'Charger Desert' in Big Cities Keeps Electric Cars From Mainstream

For city dwellers who would love an E.V., the biggest hurdle might be keeping it juiced up without a garage or other convenient charging stations.



1M public L2 chargers are needed in the US by 2030

For the 48 million EVs expected
on the road by the same date

(Currently the US has 126,000 chargers)

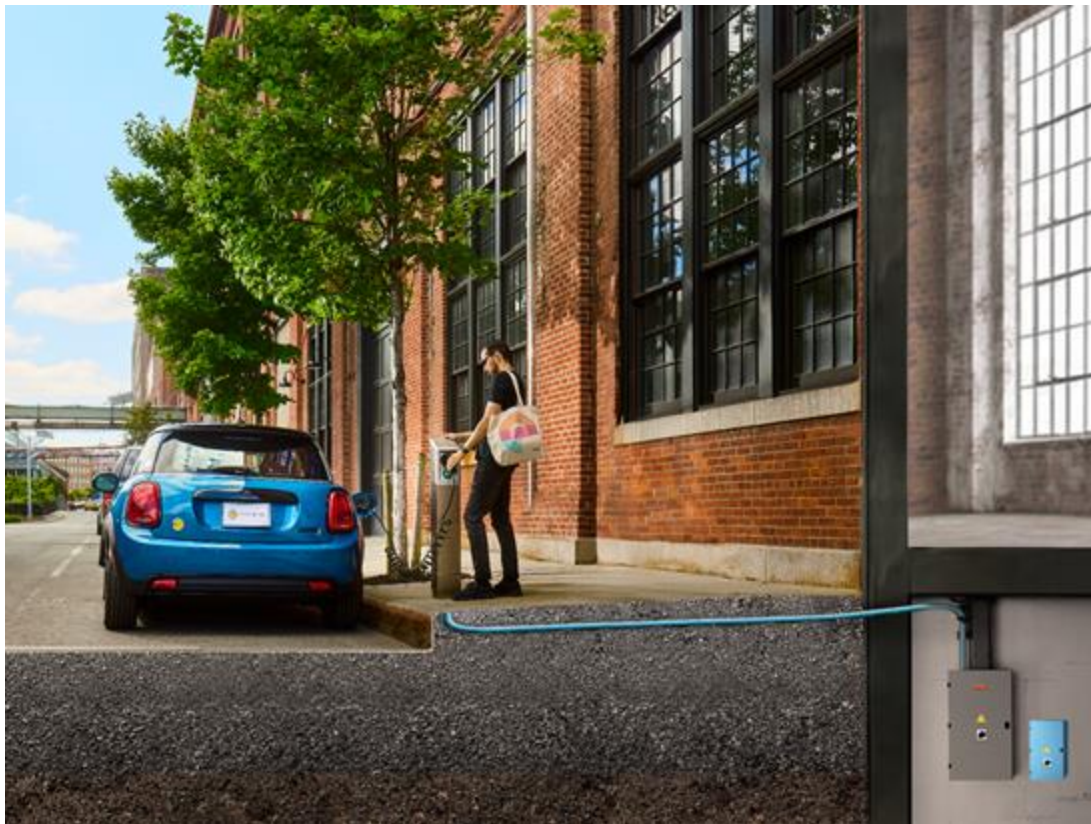
itselectric is the
world's first public
charging system
powered by
buildings

Solving the
biggest barrier
cities face in the
deployment of
chargers



We utilize existing residential and commercial infrastructure to power our chargers

We simply run a shallow conduit from the building's panel to the curb to power a public charger



There are no hardware or installation costs for cities or for property owners

We are the only curbside charging company with revenue share



Forbes

FORBES > INNOVATION > TRANSPORTATION

**Hyundai And Itselectric Pilot
Curbside EV Charging In
Brooklyn**

U.S. News & WORLD REPORT

**New York to Pilot
Revenue-Sharing EV
Charging**

The U.S. has many "charging deserts" where EV owners have no place to plug in. itselectric is proposing an urban model where property owners gain revenue from free chargers installed at their locations. New York City has a pilot program.

We are also the first US
company to offer a
detachable cable



Keeping streets free
of cables when a
car is not charging



Boston



itselectric Powers Boston's EV Future

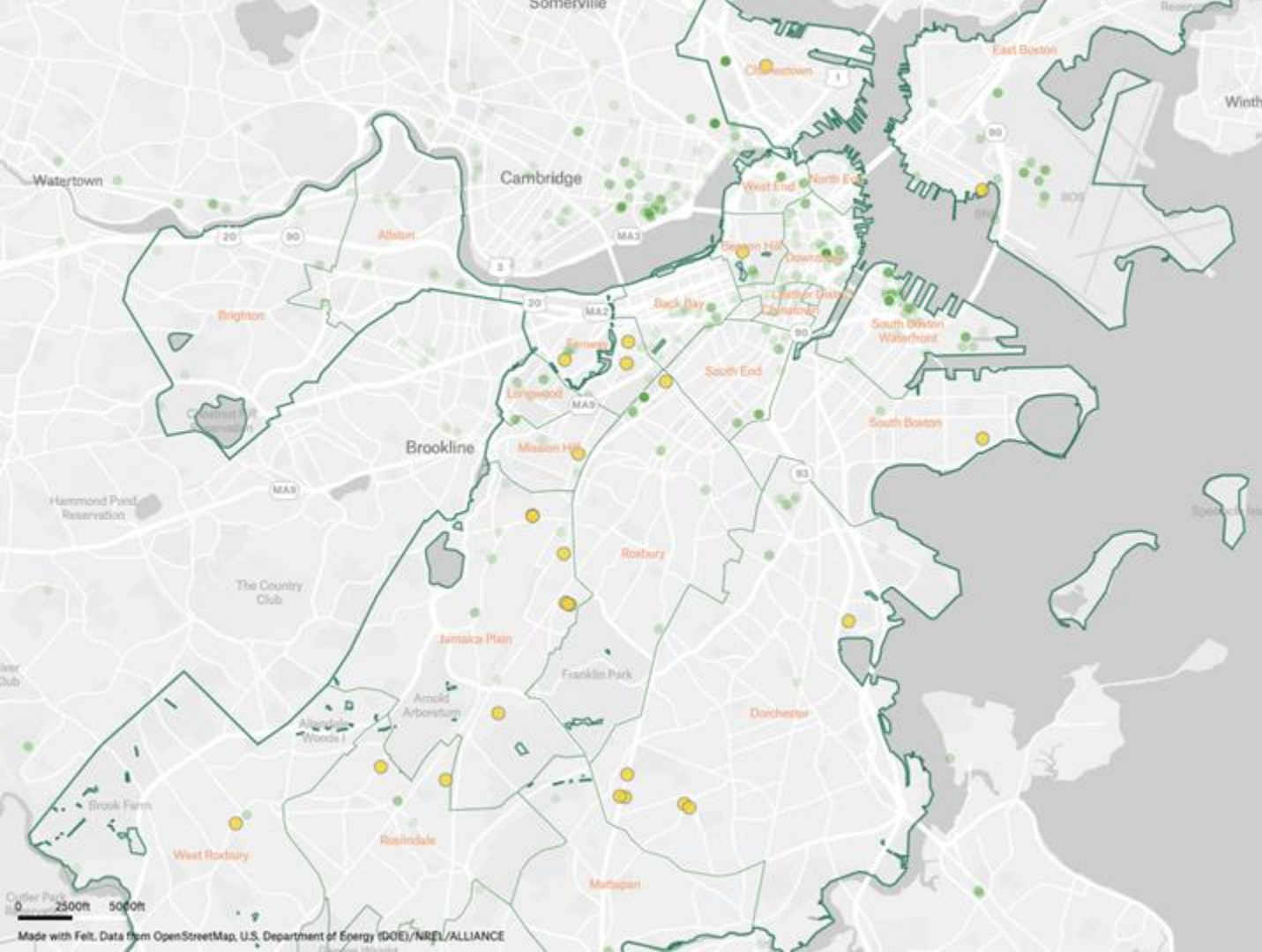
 THE EV REPORT / JULY 9, 2024 / ENERGY

Awarded the city's RFP

Starting with 225 chargers over the next 5 years

Meeting Boston's target that every household be within 5-minute walk of a public charger

Collaboration with local M/WBE for EVSE training & hiring pipelines



Interested Property Partners

- Existing L2 charger
- Property Partner

Full map can be viewed [here](#)

A simple but revolutionary idea



CRAIN'S
NEW YORK BUSINESS

The Atlantic

Forbes


MONOCLE

THE
WALL STREET
JOURNAL

Clean@Technica

U.S. News & WORLD REPORT

Grist

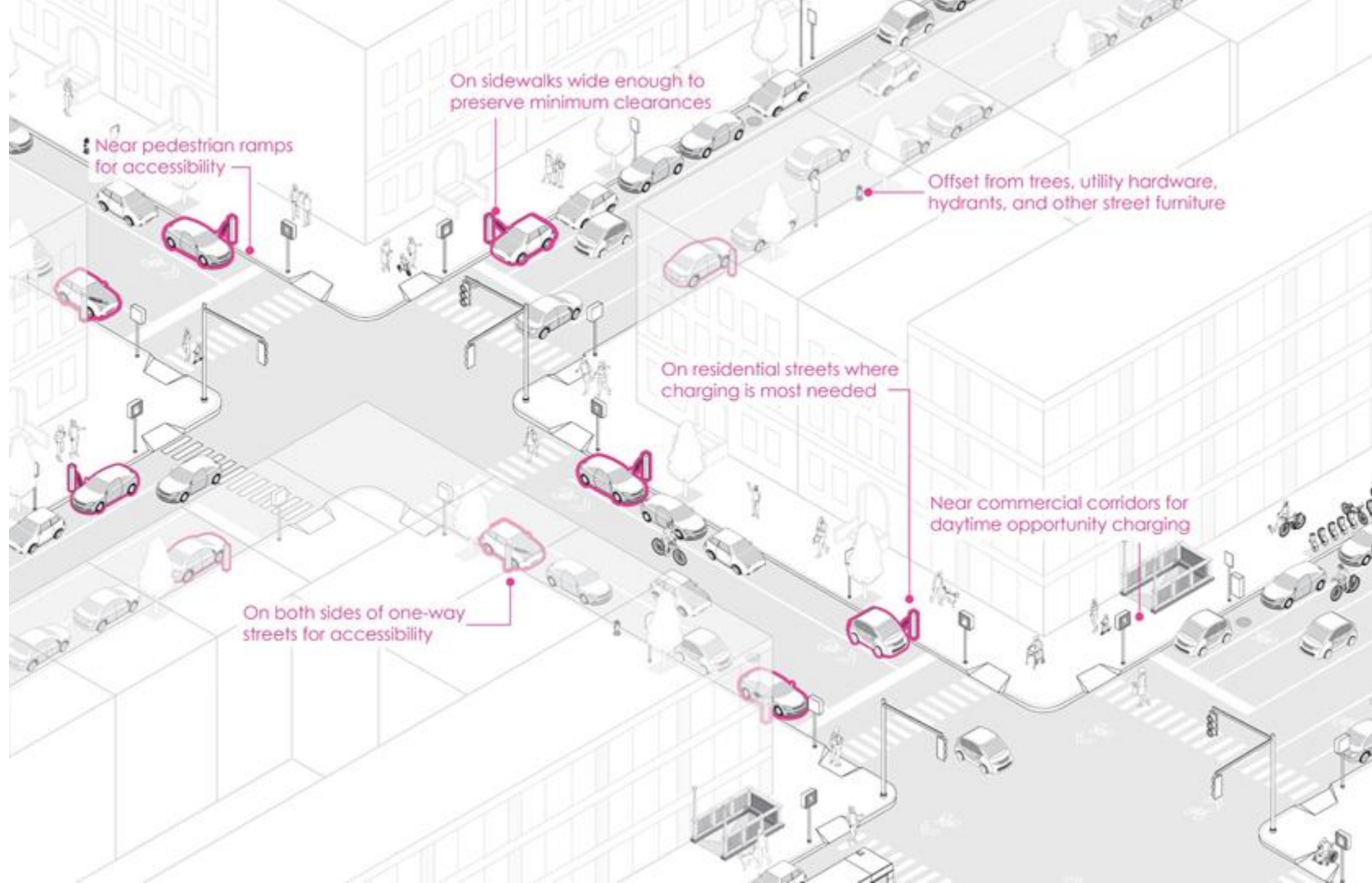
npr

The future
it's electric

shannon@itselectric.us



Appendix



Near pedestrian ramps
for accessibility

On sidewalks wide enough to
preserve minimum clearances

Offset from trees, utility hardware,
hydrants, and other street furniture

On residential streets where
charging is most needed

Near commercial corridors for
daytime opportunity charging

On both sides of one-way
streets for accessibility

Time

Avoiding inter-utility connection brings installation timeline down to 1-2 days

Cost

...which reduces costs drastically (by approximately 10x)¹

O&M

97% minimum uptime standard easily met thanks in large part to detachable cord system

Urban Design

Unobtrusive design, accessible sidewalks, and durability should be core priorities, not afterthoughts

Inequitable Access

Lower fabrication and installation costs and revenue share model break the chicken-or-the-egg cycle

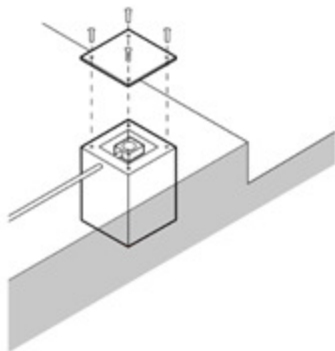
Competing Curb Uses

Avoid streets with active curbside uses like bike lanes, bus lanes, delivery loading zones, and Shared Space Uses

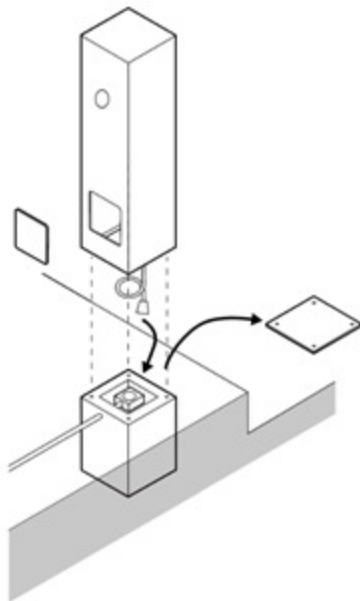
¹ [Utility Dive: ConEd developing \\$13M curbside EV charging program with AddEnergie](#)

Installation

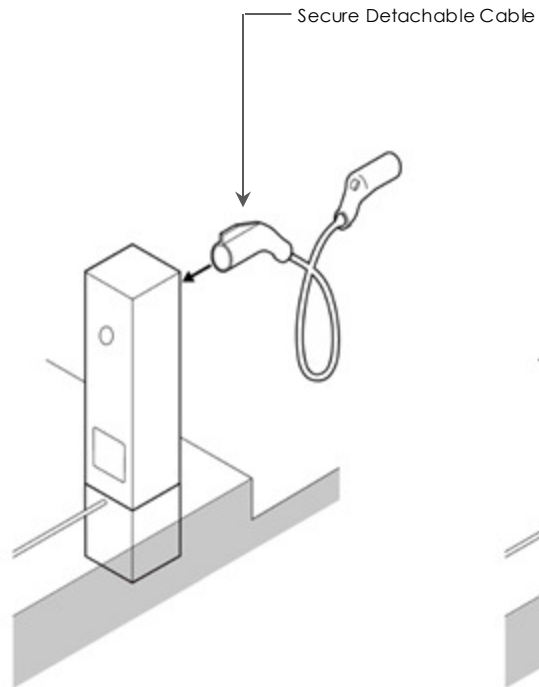
[Video Documentation Here](#)



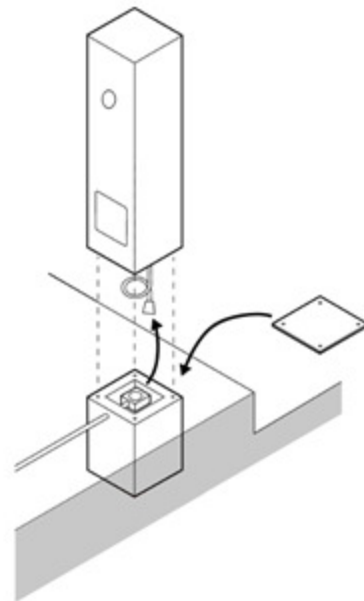
Day 1: Install



Day 2: Install



Detachable Cable



Post Repair / Replacement

Easy In, Easy Out

[Installation Video](#)

1



2



3



4



5



6



1. Saw cut and trenching
2. Interior EVSE boxes connected
3. Exterior penetrations
4. Exterior subgrade conduit delivered,
5. Concrete sidewalk poured
6. Charging post install > operational

SparkCharge





The World First Mobile EV Charging Platform & Network



Overview

About SparkCharge



Who we are

We are the first company to create an EV charging system and network, single-handedly creating Charging-as-a-Service (CaaS). We make all aspects of EV charging **simple, seamless and convenient**.



What we do

We provide EV owners, managers, and operators with the freedom to **immediately deploy DCFC without grid connection**. We created an EV charging system called the Decentralized Grid allowing energy to be moved and delivered around a city.



What drives us

Our mission is democratizing energy around the world. We are committed to changing the way the world charges electric vehicles, powering the shift through **innovative mobile EV charging solutions** for all partners.

TEAM

SparkCharge's leadership team brings a wealth of experience from the EV industry and beyond, driving innovation and growth.



Joshua Aviv

CEO & Founder

8 years of EV experience, specializing in data science, marketing, and sales.

Recognized as EY entrepreneur of the year and featured in the Boston Globe as a Tech power player.

Innovative with a strong focus on sustainable technology.



David Piperno

CFO

20+ years of experience in mobility, mergers and acquisitions, and finance.

Instrumental in the half-billion-dollar acquisition of Zipcar.

Strategic with a deep understanding of financial operations.



Adam Urban

Head of Engineering

8 years in the electric vehicle sector, managing large-scale energy projects.

Led BESS legislative deployment for Tesla, showcasing project management excellence.

Technical expert with a track record of innovation.



Company Goals & Achievements

1

Founded in 2014, Headquartered in Somerville MA

2

Set a record and delivered over 110,000 kWh (110 Megawatts) of power in less than 90 days to EV fleet customer.

3

In 2023, SparkCharge Mobile delivered 2,691,672 miles and avoided 201.87 mtCO2e. We are on track to 3X that impact this year.



PROBLEM

Inadequate EV charging infrastructure hinders the transition to sustainable transportation.

❌ PROBLEMS

Limited charging access for fleets

Charging unavailability in remote areas

High infrastructure setup costs

Complex Install

Bad Reliability

😞 OUTCOMES

Increased downtime and operational costs

Restricted EV usage and adoption

Slowed progress towards environmental goals

12-48 month wait time to install EV charging stations

22% of chargers are experiencing charging failures or equipment malfunctions at a given moment in the United States.

SOLUTION

SparkCharge is the world's largest mobile EV Charging Service

Every 5 Minutes SparkCharge charges a vehicle in the USA



Minimized Fleet Downtime

SparkCharge Mobile Charging As A Service allows for on-demand charging, reducing the need for fleets to rely on fixed stations.



Remote Charging Capability

Patented Mobile DC Fast chargers can be quickly deployed to remote locations, ensuring EVs remain operational anywhere.



Cost-Effective Charging

SparkCharge's service eliminates the need for expensive infrastructure, saving on installation and maintenance costs.



HOW IT WORKS

From scheduling to charging completion, SparkCharge streamlines the EV charging process for its customers.

01

Scheduling Charge

- Select desired charging time and location via the app or website
- Receive confirmation and service details



02

Battery Delivery

- Track the delivery of the portable battery
- Get notified upon the arrival of the charging unit



03

Charging Process

- Monitor charging progress through the charging report
- Receive alerts when charging is complete



Fastest Growing Mobile Charging Network

Why Use Charging As A Service?

SparkCharge Mobile is an EV charging delivery network enables range to be delivered to your EVs fleets at the push of a button. This charging-as-a-service (CaaS) network combines software and hardware for a 100% grid-free, convenient, scalable, and turnkey EV charging solution.



EV Charging Delivered

Ideal for decentralized and centralized fleets, where grid access is limited, and turnkey service is preferred



Scalable

SparkCharge's mobile EV chargers can be deployed in days or as little as 2 weeks in new markets



Flexible Operations

We can customize the service to your fleets specific needs.



99.9% Charge Readiness

99.9% uptime guaranteed for all CaaS services, ensuring EVs are ready when needed



Turnkey

Mobile charging-as-a-service with each battery system delivering 58 kWh of useable energy at speeds up to 120kW



SparkCharge Connect

Manage all your fleet EV Charging needs through our portal



The Solution

Powering All Types Of Fleets

Centralized Fleets

Bring or deliver charging directly to your hub, depot, or lot. Unlock a new era of convenience with mobile EV charging services. Increase productivity and reduce downtime with charge deliveries.



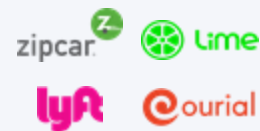
Events

Increase attendee satisfaction and gain on-site, hassle-free charging options that keep functions running smoothly.



Decentralized Fleets

Eliminate the need for centralized charging infrastructure and maximize mobility by having the EV charge delivered anywhere your vehicles are stationed.



Roadside Assistance

Gain access to fast and reliable mobile charging to keep drivers on the road with ease.



Vehicles to Charge	Requested Charge	Address
 x 7	⚡ 125 kWh	📍

01 Charge Option ✓

Priority Faster #
Charge within 90 mins

02 Review Charge ✓

Priority Faster #

📍 355 Broadway, Somerville, MA 02145

Note: Enter through gate

The Solution

Seamless Integration

API Integration

Streamlines fleet management with a seamless data exchange that increases efficiency and ensures a smooth transition to EVs for our partners.

Hertz**Agero****KIA****Courial**

Data Reporting

Offering detailed analytics empowers partners to make informed decisions to optimize operations.

SIXT**gm****lyft****cruise**

On Demand & Scheduled Charging

Gain access to EV charging with unparalleled flexibility. Partners can schedule customized charging sessions and adapt to real-time demand.

amazon**Lime****Polestar****DHL**

Vehicle Monitoring

Partners get real-time visibility into the status and performance of their vehicles to ensure the reliability of their fleet.

**Boston Water and
Sewer Commission****zipcar****kyte.****AVIS**



Roadie Flex

Solutions For Fleets Of All Sizes

We can rapidly deploy and scale your EV charging infrastructure with 100% grid-free DCFC. No trenching, digging, or tunneling required for this stand alone EV charging unit. We are actively deploying this grid-optional EV charging solution with key customers. Commercially available in 2024, Roadie Flex provides fast and scalable EV charging.



Grid Optional

Ideal for decentralized fleets, where grid access is limited, and turnkey service is preferred



Patented Technology

Leverages existing SparkCharge patents with incremental pending patents securing our competitive image.



Variable Charging Needs

Stationary, but moveable, with swappable V3 batteries (4 Batteries, 4 Chargers), Hybrid is the world's first flexible charging solution to meet peak time needs



4 Independent 120kW Chargers

Upgradeable to 300kW; No power loss - no power sharing between chargers; NACS and CCS compatible. The ability to service 100+ cars daily.



Fast and Powerful

Built for scaled charging of high volume such as centralized fleets with power constraints (e.g. airport locations etc.)

- Expected NEVI Compliant in 2H 2024
- Insulated Interior
- 20ft x 9ft Dimensions
- Push-to-start charging activation
- 4 Installed EV Charging Stations

Solutions Fit for a Variety of Industries

Why Partners Choose SparkCharge

Fleets



Decentralized fleets have needs not easily met with fixed infrastructure. They were able to quickly and effectively deploy mobile EV charging for our fleet, so our customers always have an electric vehicle that is charged and ready to go.



Public Agencies



They offer resilient EV charging infrastructure accompanied by policy guidance, stakeholder engagement, and industry expertise.



Utility



With their solutions, charging can be simple, done without electrical infrastructure upgrades, and deployed immediately at any location.



Automotive



With SparkCharge, we're able to ensure that every EV coming off the lot is at a sufficient level of charge.





SPARKCHARGE®

Thank You!

Voltpost





advancing a greener Massachusetts.

15K

public charging stations needed by
2025.

100K

EVs on the road in Massachusetts as
of 2023.

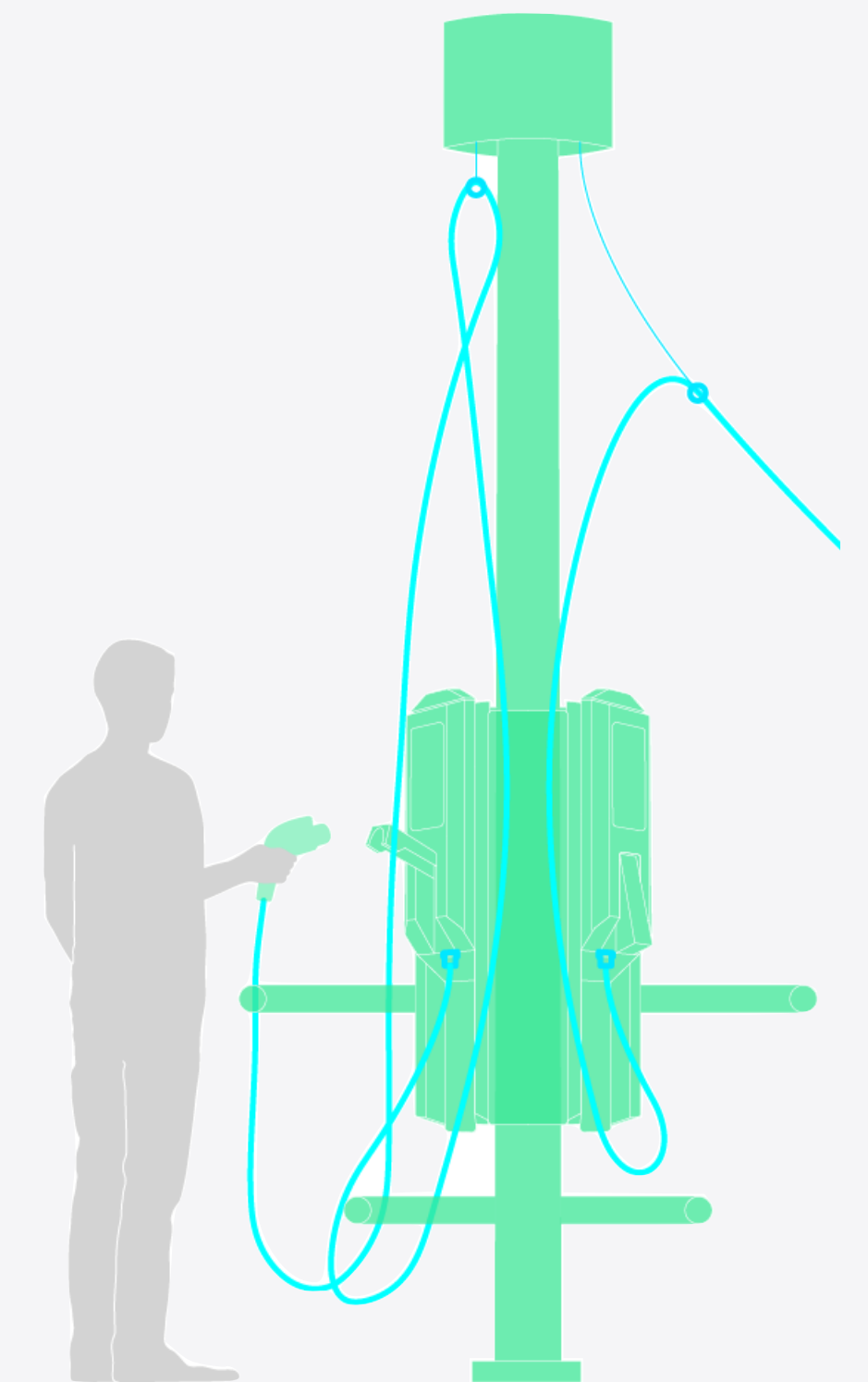
1:10 public chargers per EV are needed
to meet current goals.



PROBLEM

**the top electric car
adoption barrier**
for drivers is the lack
of charging.

Existing solutions are
**unsightly, unsafe
and unreliable.**

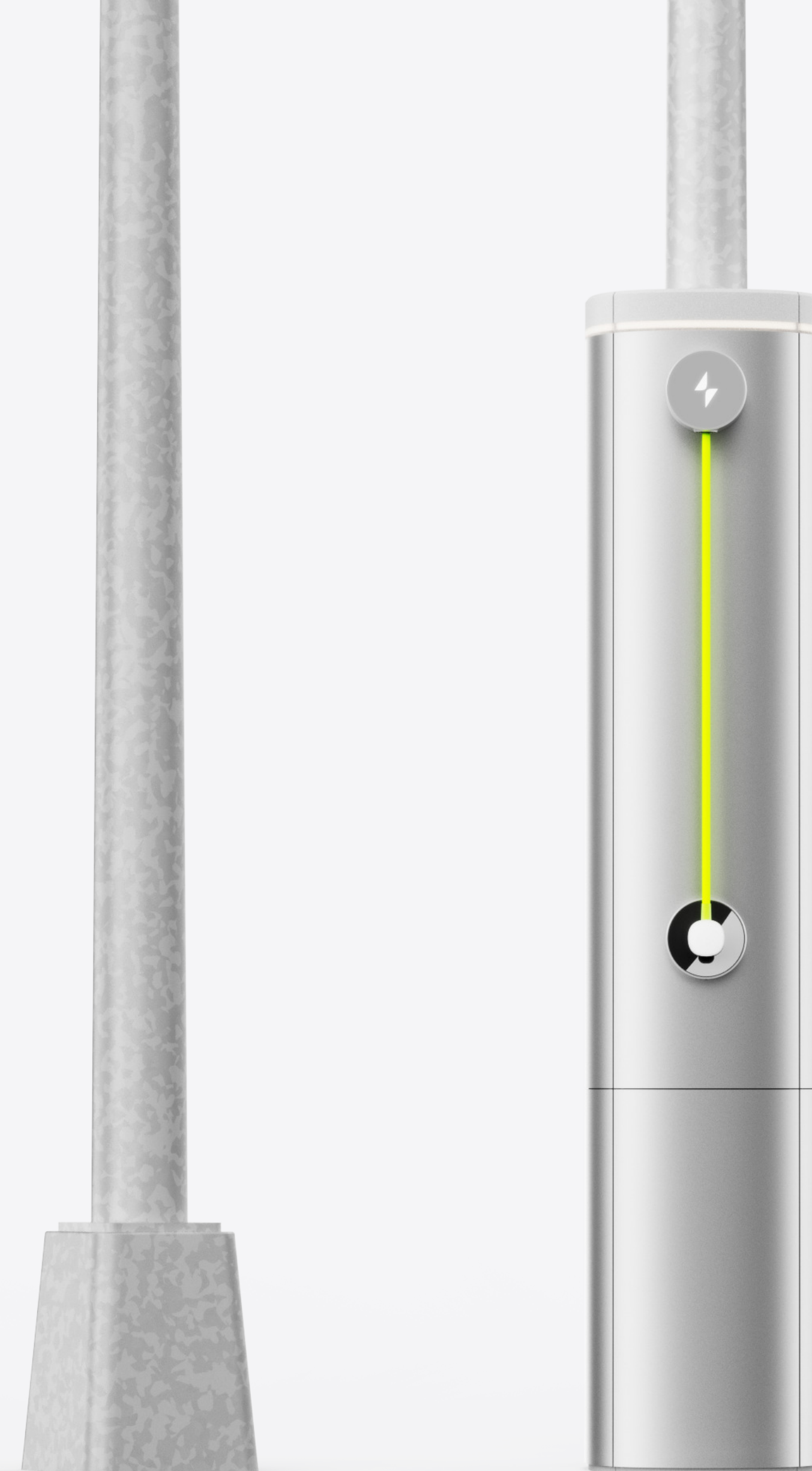




from lamppost to
voltpost

the retrofit lamppost charger.

increasing public charging access
to spur electric vehicle adoption.



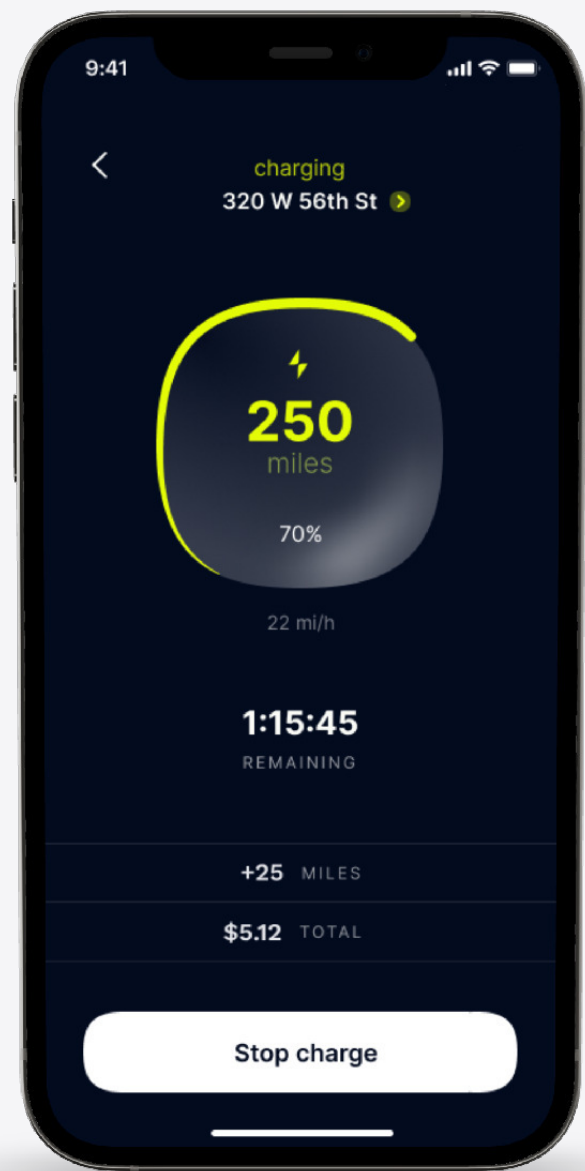


the most convenient, reliable,
flexible charging experience.

software

application: charging discovery, status,
billing, parking, and impact features.

dashboard: charging utilization data,
insights, benchmarking, and forecasting.



hardware

features: weatherproof, utility meter, integrated
cable, mobile connection.

benefits: rapid, inexpensive deployment,
streamlined O&M, upgrade ready.





voltpost

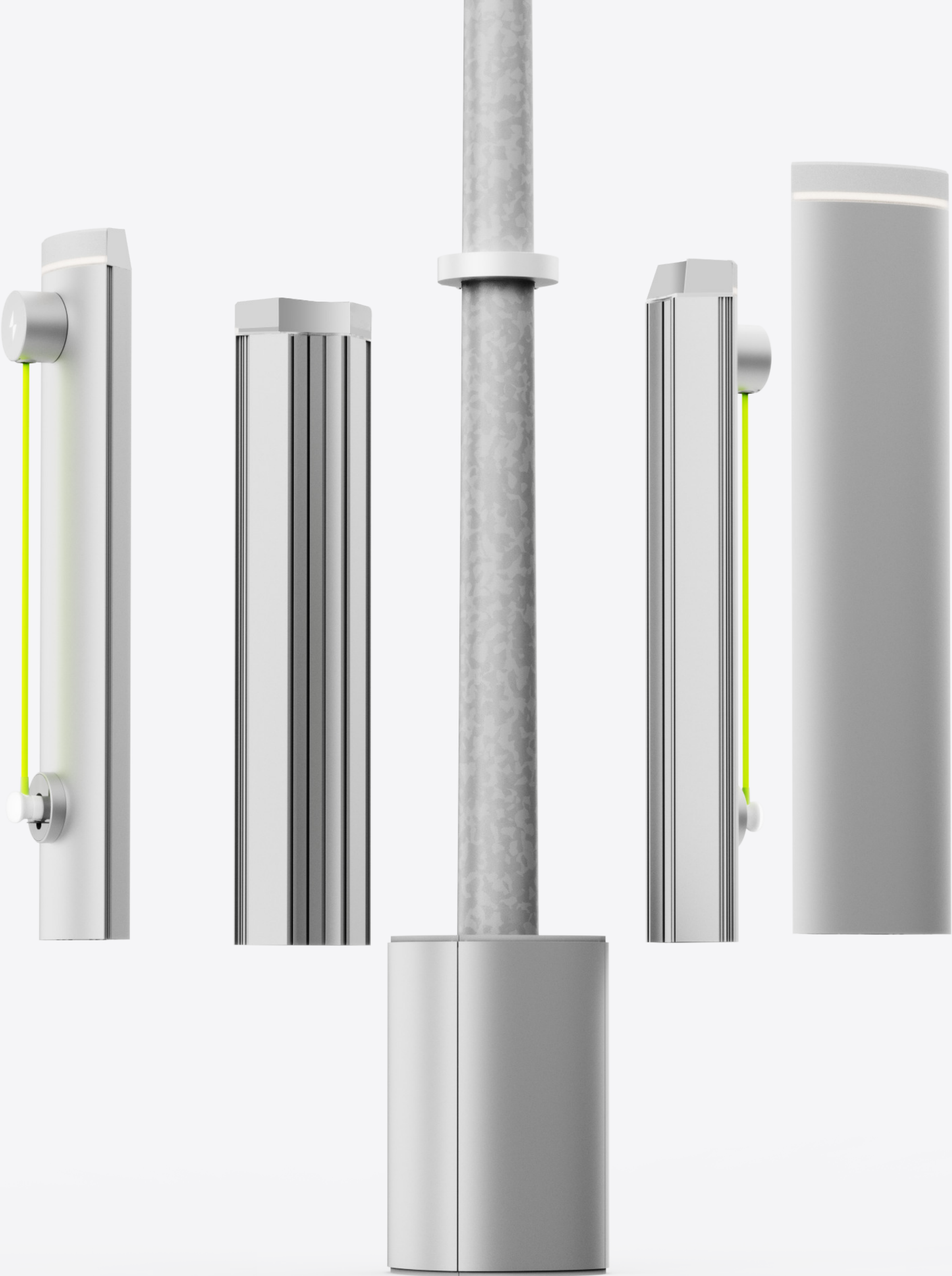
platform services

current

charging
software
data
maintenance

roadmap

connectivity
sensors
grid
media





selling to public, private, and utility customers
with projects in new york, detroit, chicago, new jersey, and maryland.



new york

NYCDOT pilot: fleet charging,
highest uptime, 1 hour install.



detroit

DSPL demo project to Newlab
2 Michigan grants submitted.



chicagoland

2024 deployments in ComEd territory,
Oak Park, and Cook County.





EV carshare + EVSE installation in Cape Cod

Accelerating Clean Transportation For All (ACT4All 2) Grant with Good2Go, Bt2 Energy, and other Massachusetts partners.




Goals:

- ensure low income underserved populations receive personal, economic, and environmental benefits from the installed charging infrastructure
- evaluate municipal rights-of-way and affordable housing developments as site hosts for the EVSE and carsharing
- compare efficiency and reliability of lamppost and traditional EVSE technologies within carsharing environment






experienced team with proven track record of success
across product, business, and policy development.

TEAM





Jeff Prosserman
Co-Founder, CEO









Alejandro Vallejo
Senior Director, Hardware





Jörn Vicari
Co-Founder, CPO









Luke Mairo
Co-Founder, COO



Chelsea Kammerer
Senior Director, Gov Affairs



INVESTORS



ADVISORS



Laura Fox
Government

Cheikh Drame
Utility



Jayson Pankin
Enterprise + IP

Alby Shale
Financing



John Bindel
Senior Director, Software



Aditi Desai
Director, Partnerships



Alvin Li
Senior Product Manager





preferred model

hardware-as-a-service

voltpost bundled services plan
billed on an annual basis.

key services

- + charging
- + software
- + network
- + maintenance

customer benefits

- + generate revenue
- + low upfront cost
- + flat rate
- + reliable service

alternate models

- + sell and service
- + grant and charge





Providing convenient, accessible, & reliable charging for all.

network expansion

rapidly deploy chargers
to support municipal needs.

economic benefits

generate revenue and reduce
costs across network.

environmental impact

increase public charging access
to reduce carbon and air pollution.



charging ahead.
we welcome you to join us.

National Grid



National Grid Clean Transportation MA Electric Vehicle Programs

MAPC Briefing

July 2024

nationalgrid



Agenda

1. **Overview of National Grid's EV charging programs**
2. **Make-ready program eligibility and incentives**
3. **Utility pole-mounted charging pilot – lessons learned**
4. **Considerations for innovative public charging solutions**

Vision for Clean Transportation Programs

A future in MA where clean transportation is universal and the environmental and public health benefits are shared by all our customers and communities.

Our Guiding Principles

- Our programs support a cleaner environment and reduce GHG emissions
- Our customers and communities have equitable and affordable access to clean transportation choices
- Smart integration allows for grid optimization, customer savings, and enables a clean energy future

Alignment

- Align our work with state policies and commitments, ensuring we provide the necessary support to reach the state's ZEV goals, CECP targets, and a net-zero future by 2050.
- Expand our stakeholder partnerships to leverage existing and future efforts



Transportation is the single biggest source of GHG emissions in MA and a leading cause of air pollution.

**National Charging Network Supporting
33 Million Light-Duty PEVs by 2030**

**The Branches:
Public Destination Charging**

right speeding* for neighborhood,
office, retail

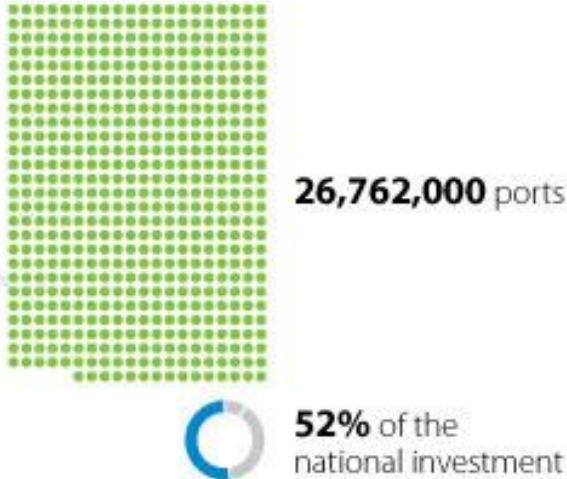
**The Trunk:
Public Fast Charging**

corridor and community

**The Roots:
Private Charging**

single family, multifamily, workplace

Public Network
Private Network

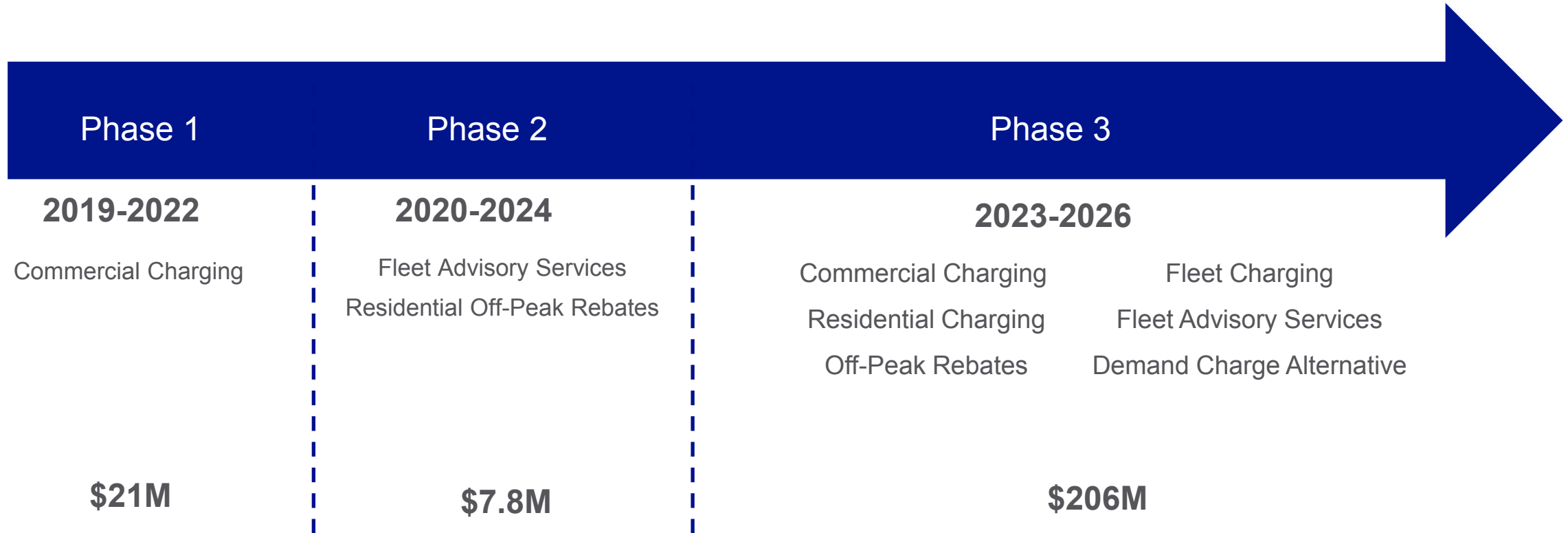


**Right speeding refers to matching the charging power provided at a particular location with the typical duration of the activity.*

Each ● represents 50,000 charging ports.

MA EV Charging Programs

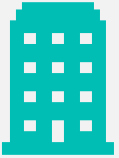
The Massachusetts Department of Public Utilities approved our Phase III Electric Vehicle (EV) proposal on December 30, 2022. This approval is among the first of its kind in the Northeast and will provide extensive EV infrastructure support (Make-Ready) to our customers, along with other unique program offerings.



Community Electrification: *Enabling equitable & affordable EV charging everywhere*

~\$206M
MA EV Programs

Multi-Unit Dwellings



EV charging provides greater value to residents and improves property values

Public / Workplace



Limited public charging is one of the biggest barriers to EV adoption

Fleets











One MHDV EV truck or bus can reduce >8x more CO₂ and >30x PM_{2.5} than a passenger vehicle

Residential



>80% of charging at home today, but barriers exist for >50% of drivers

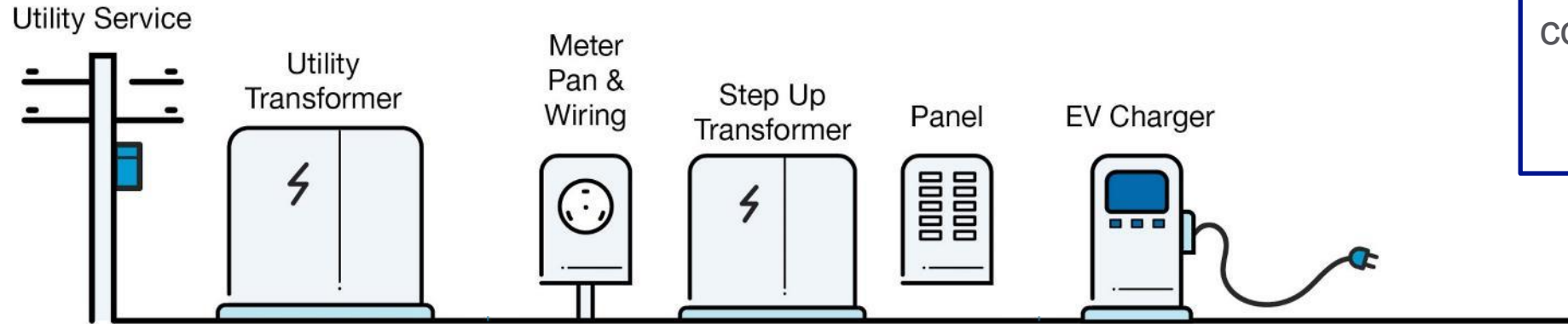
Massachusetts EV Programs: ~\$206M of support for all EV customer types

Customer	Budget ¹	Value ²	 Plans	 Infra.	 EVSE	 O&M
Residential 	~\$26M	<ul style="list-style-type: none"> • 240V service upgrades for ~18k households • Turnkey install & charger rebates for ~2k EJC households • Off-peak charging rebates of \$0.03-\$0.05 / kWh 		✓	✓	✓
Multi-Unit Dwellings 	~\$38M	<ul style="list-style-type: none"> • No-Cost EV Ready site plans for ~200 sites • Infrastructure and EVSE incentives for ~550 sites • Demand Charge Alt. can save 20% to up to 70% on electricity 	✓	✓	✓	✓
Public / Workplace 	~\$95M	<ul style="list-style-type: none"> • Infrastructure and EVSE incentives for >7k ports • Co-Located Energy Storage for ~5 DCFC projects • Demand Charge Alt. can save 20% to up to 70% on electricity 		✓	✓	✓
Fleets 	~\$30M	<ul style="list-style-type: none"> • No-Cost Fleet Advisory Services for ~275 public fleets • Infrastructure and EVSE incentives for >600 ports • Demand Charge Alt. can save 20% to up to 70% on electricity • Off-peak charging rebates of \$0.03-\$0.05 / kWh 	✓ for Public fleets	✓	✓ for Public fleets	✓

Note: 1) \$206M total program budget includes administration; 2) Summary information only – see following pages or the program website for additional details and eligibility: ngrid.com/ma-evcharging

Commercial Charging Infrastructure (Make-Ready) Summary

What's Eligible?



Applies to all commercial customers (Public, Workplace, MUDs, Fleets)

Eligible for EV Charging Program Incentives				Not eligible
<ul style="list-style-type: none">Customers may be required to pay for grid upgrades in excess of utility's design requirements	<ul style="list-style-type: none">PanelConduitTrenchingDesignPermitting	<ul style="list-style-type: none">Step Up TransformersWiringCustomer Switchgear	<ul style="list-style-type: none">Charging Station (public only)Networking (comm. & MUD - public only)	<ul style="list-style-type: none">SignageMaintenance
Utility Constructs	Customer Constructs			

Public & Workplace Charging Infrastructure (Make-Ready) Incentives

Available incentives and eligibility: effective date June 1, 2024

Level 2					
Customer Segment Eligibility	Environmental Justice Community Criteria**	Level 2 Charger Rebates	Networking Rebates*	Utility-Side Infrastructure Incentives	Customer-Side Infrastructure Incentives
Public***	Located in EJC that meets income criteria	Up to 100% (ports 1-10) (cap up to \$3,900 per port)	\$480	Up to 100%	Up to 100% (per port cap: up to \$9,600 / \$6,700 if new service)
	Located in EJC that <u>does not</u> meet income criteria	Up to 75% (ports 1-10) (cap up to \$2,925 per port)			
	Not located in EJC	Up to 50% Municipal (ports 3-10) Non-municipal (ports 5-10) (cap up to \$1,950 per port)			
Workplace (non-public)	N/A	None offered	None offered		

DCFC				
Customer Segment Eligibility	EJC Criteria	DCFC Charger Rebates	Utility-Side Infrastructure Incentives	Customer-Side Infrastructure Incentives
Public***	Located in EJC that meets <u>any</u> criteria	Up to 100% (50-149 kW: cap up to \$40,000 per port 150+ kW: cap up to \$80,000 per port)	Up to 100%	Up to 100% (per port cap 50-149 kW: up to \$30,000 150+ kW: up to \$60,000)
	Not located in EJC	Up to 100% for 50-149 kW: (cap up to \$40,000 per port) Up to 50% for 150+ kW: (cap up to \$40,000 per port)		

Multi-Unit Dwelling Charging Infrastructure (Make-Ready) Incentives

Available incentives and eligibility: effective date June 1, 2024

MUD EV Charging Program (L2 Infrastructure Rebates)					
Customer Segment Eligibility	Environmental Justice Community Criteria*	Level 2 Charger Rebates	Networking Rebates**	Utility-Side Infrastructure Incentives	Customer-Side Infrastructure Incentives
Multi-Unit Dwelling (5 + residential units)	Located in EJC that meets income criteria	Up to 100% (cap up to \$3,900 per port)	\$480	Up to 100%	Up to 100% (per port cap up to \$9,600/\$6,700 if new service)
	Located in EJC that <u>does not</u> meet income criteria	Up to 75% (cap up to \$2,925 per port)			
	Not located in EJC	Up to 50% (cap up to \$1,950 per port)			

[Commercial and Fleet EV Charging Programs | National Grid \(nationalgridus.com\)](https://nationalgridus.com)

Utility Pole-Mounted Charging Pilot – Melrose

- In 2021, National Grid partnered with City of Melrose to install 16 pole-mounted charging stations.
- Additional pole-mounted charging programs were not approved by the Department of Public Utilities.
- While some installation costs were lower (70% compared to ground-mounted stations), the third-party attachment process can be cumbersome.
- Time and expense to survey poles, pay annual licensing, and obtain additional insurance can be significant barriers.
- **Takeaway: mounting EVSE on a nearby, standalone pedestal/pole may be faster and less costly in many cases.**



Considerations for Public Curbside Charging

How will EV charging station(s) get electric service?

- New service connection & meter (overhead, mid-span, or underground service drop from utility pole)
- Existing building service (behind the meter)
- Streetlight (usually cannot support Level 2 without upgrade)
- External utility-grade meter required

Where will station be mounted?

- Ground-level pedestal
- Pole-mounted (e.g., EVSE lowers via app)

Is project eligible for utility make-ready incentives?

- To receive EVSE rebates, equipment must be qualified by National Grid or EPRI (ENERGY STAR and SASD)
- Check EV program website and/or contact National Grid's EV program managers

Midpoint Modification Proposal – DPU Filing

The Utilities (National Grid, Eversource, and Unitil) plan to file a Midpoint Modification Proposal to the DPU in September with the goal of improving and expanding their EV Programs.

Key topics/requests will likely include the following:

- Modification to the third-party funding requirement (if not resolved through legislation), enabling stacking of funds
- Approval for companies to offer customers support for Future-Proofing to enable smart infrastructure investment that supports longer-term growth and adding chargers in the future
- Approval for Eversource to support Medium- and Heavy-duty vehicles (similarly to how National Grid is able)
- Expansion to the managed charging program for National Grid and a request for Eversource to offer something similar
- Suspension of Unitil's requirement for enrollment in their EV Time-of-Use rate (which requires a costly second meter)
- Expansion of contractor options for Unitil customers, where they can use their own installer/electrician

ngrid.com/ma-evcharging

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Open Discussion



Municipal Updates



Municipal Updates

Newton:

- received a DOE grant that allows for \$35,000 for a consultant to determine locations for EV chargers AND \$110,000 for purchase/install of chargers
- grant will be used in conjunction with MassEVIP and Make Ready grants.



Source: EV charging station in Newton. Green Newton.

Municipal Updates

Boston:

- broke ground on more EV chargers for electric school buses
- working quickly to fit as much construction as possible during summer months



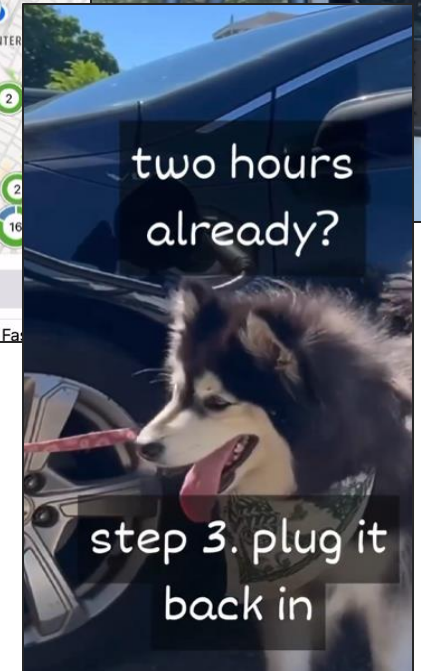
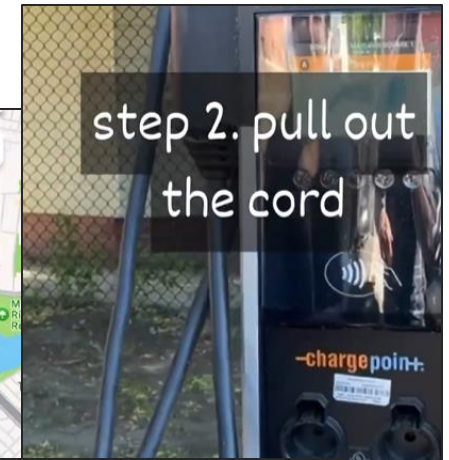
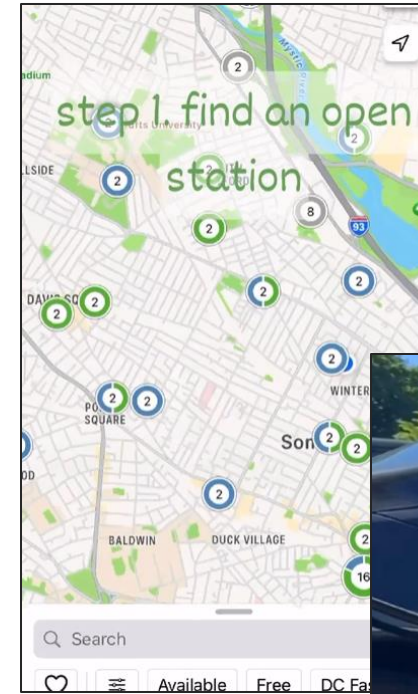
Source: City of Boston.



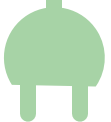
Municipal Updates

Somerville:

- started collecting fees for the use of public EV charging stations. Somerville is charging \$0.25 per kilowatt-hour for charging.
- Charge4Charge "aims to incentivize space turn over, reduce misuse and vandalism of stations, and promote longevity of Somerville's charging network."
- Part of a larger public information campaign by City to promote EV charging etiquette due to frequent reports of misuse and vandalism of the stations.



Source: *Sustainaville.ma* Instagram.



Updates and Resources



Utility Midpoint Modification Proposal

National Grid, Eversource, and Unitil plan to file a Midpoint Modification Proposal to the DPU in September 2024 with the goal of improving and expanding their EV Programs.

EVERSOURCE

nationalgrid

Key topics/requests will likely include:

- Modification to the third-party funding requirement (enabling stacking of funds).
- Approval to offer customers support for Future-Proofing to enable smart infrastructure. investment that supports longer-term growth and adds chargers in the future.
- Approval for Eversource to support Medium- and Heavy duty vehicles (similarly to how National Grid is able).
- Expansion to the managed charging program for National Grid and a request for Eversource to offer something similar.

Municipalities interested in providing feedback or with questions are encouraged to contact Julia Gold of National Grid at julia.gold@nationalgrid.com



EPA Clean Bus Rebate Program – School Bus Funding Awards

- Last May, EPA's Clean School Bus Rebate Program announced over \$42 million in rebates to fund over 165 new clean school buses in 17 school districts across MA.

Acton-Boxborough	Fall River	Ipswich
Amherst	Fitchburg	Marblehead
Andover	Gloucester	Newburyport
Arlington	Hingham	Salem
Beverly	Holyoke	Cape Cod Regional Vocational Technical
Essex North Shore Agricultural and Technical School District	Advanced Math and Science Academy Charter (District)	

EPA Heavy Duty Vehicles Program

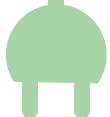
- Grant program to support deployment of clean heavy-duty vehicles.
- **Eligible Funding Uses:**
 - replacement of conventional Class 6 and 7 heavy-duty vehicles with zero-emission Class 6 and 7 heavy-duty vehicles
 - construction of charging infrastructure
 - establishment of workforce development and training programs
 - project implementation costs
- **Eligible Applicants:** Municipalities (including public school districts), States, Indian Tribes, Nonprofit school transportation associations
- **Deadline:** Thursday, July 25



EPA Heavy Duty Vehicles Program (continued)

Sub-program competitions:

- The **School Bus Sub-Program** for applicants replacing school buses.
- The **Vocational Vehicles Sub-Program** for applicants replacing non-school bus Class 6 and 7 vehicles – including box trucks, refuse haulers, dump trucks, street sweepers, delivery trucks, bucket trucks, and utility trucks.
- **More Information:** <https://www.epa.gov/clean-heavy-duty-vehicles-program/clean-heavy-duty-vehicles-grant-program>
- **NOFO:** <https://www.epa.gov/system/files/documents/2024-04/2024-chdv-grants-nofo-2024-04.pdf>



Boston MPO Selected for Grant to Address Transportation Insecurity



- Research and demonstration program funded by the Federal Transit Administration and administered by the University of Minnesota to explore strategies to improve people's mobility and access to daily needs.
- Led by the Boston MPO, this project will focus on creating multimodal transportation options for low-income households in Revere, Everett, and Chelsea by combining an expanded free-fare transit pilot project and electric car-sharing services.
- Team members - Metropolitan Area Planning Council, Good2Go car-sharing, Union Capital Boston, The Neighborhood Developers, and the Massachusetts Institute of Technology.
- Eight \$150,000 grants awarded nationwide.



Wrap Up & Next Steps

**Next Meeting Thursday, September 12 from 1-2:30pm -
agenda TBD**

If you aren't already on our invite list, please email ezehner@mapc.org to be added for future meetings.



REGIONAL EV STRATEGY

