Electric Vehicle Infrastructure Coordinating Council (EVICC) Meeting

November 6, 2024

Agenda

Opening

- Roll call, approval of minutes, meeting agenda, objectives, meeting scheduling (15 min) – EEA

Updates

- DCAMM update on charging stations at state-owned facilities (5 min) – DCAMM
- DOER update on charging for state fleets (5 min) – DOER

Educational Presentations / Discussions

- Existing Charging Business Models / Barriers
  - Overview of EVgo's business model (5 min) - EVgo
  - Overview of ChargePoint's business model (5 min) – ChargePoint
  - Overview of Tesla's business model (5 min) – Tesla
  - Questions (up to 10 min)
- Novel Charging Business Models / Barriers
  - Presentation on SWTCH's business model (10 min) - SWTCH
  - Presentation on East Coast Renewables' business model (10 min) – ECR
  - Presentation on Matcha's business model (10 min) - Matcha
  - Questions (up to 10 min)

New MassCEC Website

- MassCEC overview of new EV programs website (15 min) - MassCEC

Meeting Objectives

- Update on how EVICC / ARPA funding is being deployed for DOER and DCAMM fleets
- Better understand existing and emerging EV charger business models
- Update on progress towards MassCEC launching their one-stop EV program website

Disclaimer: *The EVICC team invites presenters to speak about topics of interest to EVICC members and the development of the second assessment to the Legislature. The Commonwealth is not endorsing any particular company or organization.*

Rules for Presentations / Public Comment

Presentations

- Presenters should keep to the assigned time
- The EVICC Chair will allow questions from EVICC members first and then the public if time remains

Public Comments

- Use the “raise hand” function to indicate your desire to speak at the appropriate time
- Identify yourself and affiliation prior to commenting
- Limit comments and questions to 3 minutes
- Please engage in constructive and respectful dialogue
- Be able to substantiate assertions or claims in support of comments

Updates

Creating A Clean, Affordable, Equitable and Resilient Energy Future For the Commonwealth

Massachusetts Department of Energy Resources

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENERGY RESOURCES
Elizabeth Mahony, Commissioner

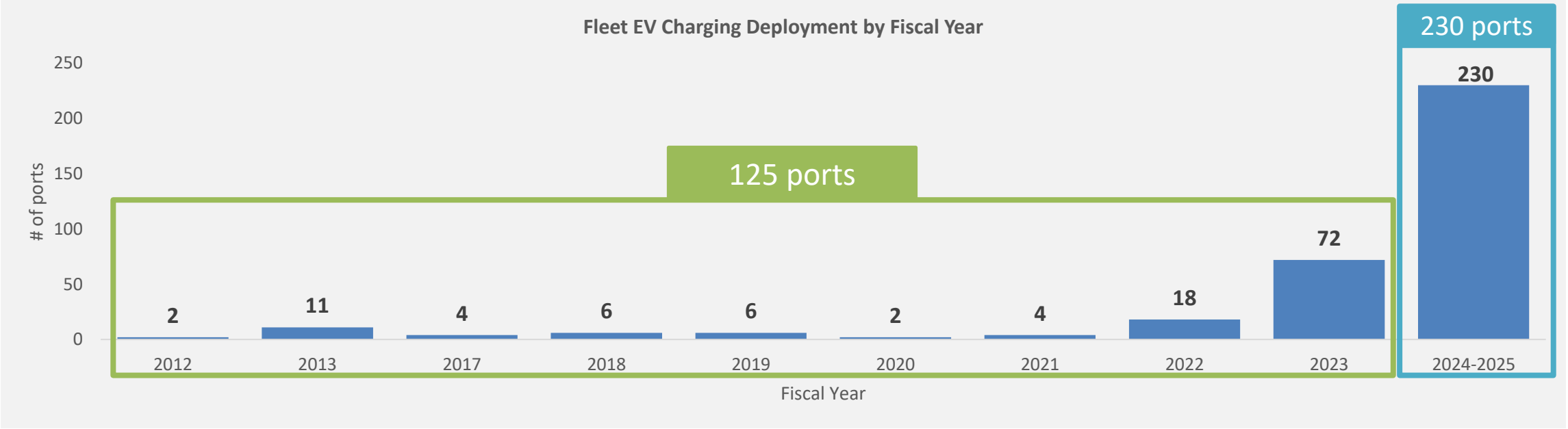
2024 LBE Fleet EV Charging Deployment Grant Results

November 6, 2024

EVSE for State Fleets

- $11 million for state fleet EVSE deployment
  - $9.5 million for DCAMM
    - Funding expected to support deployment of ~150 fleet charging ports
  - $1.5 million for LBE/DOER
    - Funding expected to support deployment of ~80 fleet charging ports

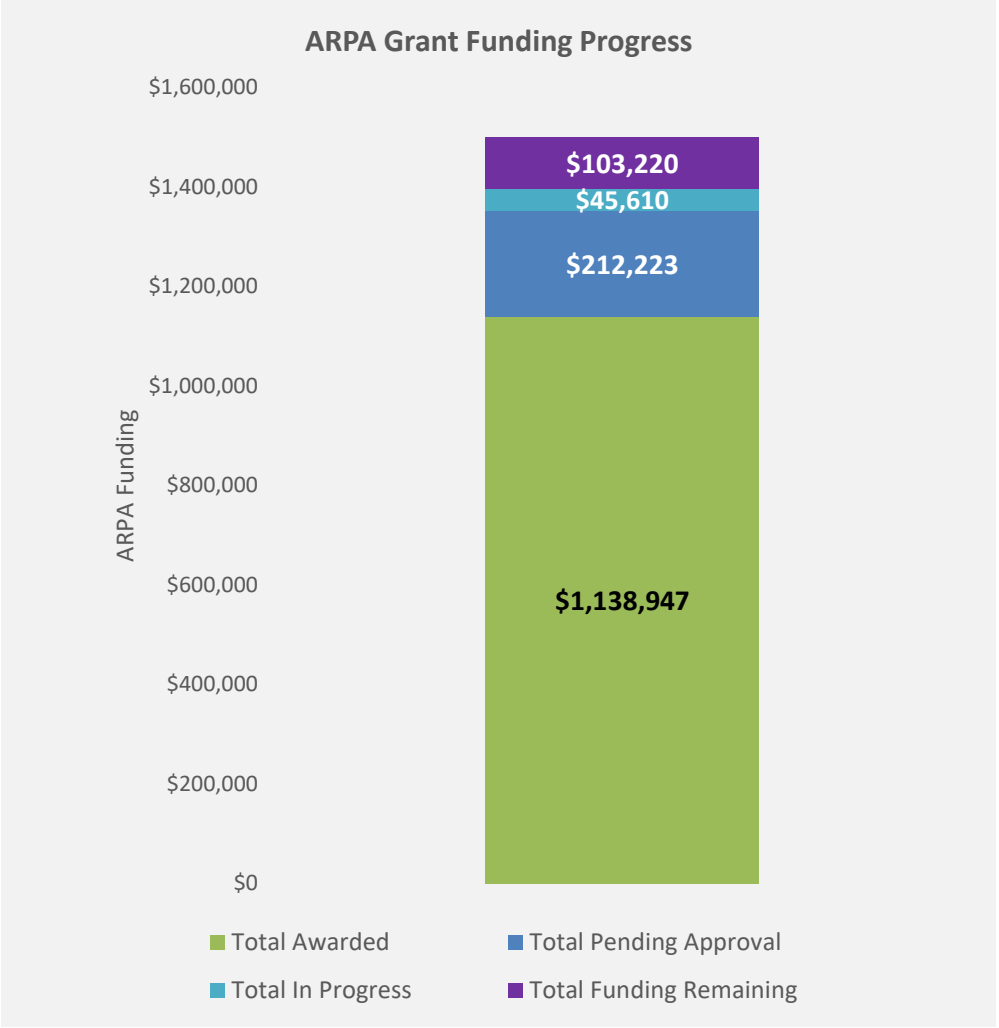
- Supports EO594 Fleet Electrification goals:
  - 5% ZEVs in FY2025 (481 ZEVs)
  - 20% ZEVs in FY2030 (1,923 ZEVs)
- Total minimum # of fleet EV ports deployed through 2025: **355 ports**



Leading by Example EVSE Grants – 2024

Awarded Funding Summary	# of ports	# of make-ready ports	Funding Amount
Total Awarded	67	21	$1,138,947
Total Pending Approval	10	1	$212,223
Total In Progress	4	0	$45,610
Total	**81**	**22**	**$1,396,780**
		Total Awarded Funding Remaining	**$103,220**

LBE has an additional $943,000 in FY25 to support continued fleet EVSE installations



DOER
Massachusetts Department of Energy Resources

LBE Grant Funding Award by Entity

State Entities Awarded LBE Fleet EV Charging Grant 2.0 (2024)				
State Entity	**# of sites**	**# of ports**	**# of make-ready ports**	**Grant Amount**
Division of Fisheries & Wildlife	2	6	2	$73,997
Municipal Police Training Committee	1	2	0	$33,675
Dept. of Public Health	1	2	0	$38,367
Mosquito Control Board	1	8	0	$48,562
Dept. of Developmental Services	9	11	0	$225,924
Health & Human Services	1	2	0	$19,760
North Shore Community College	2	8	5	$173,530
Parole Board	1	2	0	$26,130
Berkshire Community College	1	8	2	$133,161
Municipal Police Training Committee	1	6	0	$158,330
Quinsigamond Community College	1	7	12	$146,323
Mass. Emergency Management Agency	1	5	0	$61,188
Total	**22**	**67**	**21**	**$1,138,947**

DOER
Massachusetts Department of Energy Resources

Average Project Costs for LBE Projects

	Average Cost/Port*
Equipment	$3,345
Installation, labor, & commissioning	$10,770
Networking (3 yrs)	$592
Maintenance & extended warranties (3 yrs)	$947
Average total project cost/port	$16,999

*Costs are for installed ports only and do not include make ready spots

Educational Presentations

OVERVIEW OF TYPICAL CHARGING BUSINESS MODELS

Mark Scribner
Electric Transportation Program Manager
Massachusetts Department of Energy Resources (DOER)
Leading By Example (LBE)

EV CHARGING BUSINESS MODEL CATEGORIES

1. **Host-Owned**: Property owners manage stations for customers or employees.
2. **Public Ownership**: Government-funded installation and operations; public access.
3. **Utility-Owned**: Utility companies own, operate, and maintain stations. **(Note: in MA, only MLPs may legally own/operate)**
4. **Charge Point Operator (CPO)**: Private companies install and manage charging networks; varying division of responsibilities
5. **Franchise**: Franchisees install and operate chargers, typically under a brand.
6. **Advertising & Sponsorship**: Ads fund stations; may be free or have discounted access.
7. **Charging as a Service (CaaS)**: Subscription-based model for installation and management.

HOST-OWNED

- Property owners operate chargers for customers or employees
- Customer loyalty, employee satisfaction, corporate sustainability
- Site host maintains control over access and pricing
- Site host responsible for operation and maintenance*

Example: Select 99 Restaurants in Massachusetts, some since 2012.

* Stations may be stand-alone “plug-and-play” or network software managed under contract with 3rd party provider

PUBLIC OWNERSHIP

- Government-funded installation and operations
- Usually installed in public or community spaces
- Typically focused on equitable public access
- Support municipal goals such as widespread EV adoption

Example: The City of Boston is installing EV charging stations in municipal parking lots and curbside to increase access to public EV charging.

UTILITY-OWNED

- Utility may handle installation and maintenance
- May leverage demand pricing/control for cost management
- Regulatory support may be needed (in MA only MLPs may own)

Examples:

Left: Middleborough Gas & Electric ($0.21/kWh DCFC)

Right: Holyoke Gas & Electric: Level 2 with time-of-use pricing ($0.13 off-peak; $0.40 on-peak)

CHARGE POINT OPERATOR (CPO)

- Private companies manage networked stations
- Revenue from charging fees and subscriptions
- Flexible pricing and management models
- Varied responsibilities of operator vs site host/customer

Examples: Blink, ChargePoint, Electrify America, Shell Recharge, Tesla, etc.

FRANCHISE

- Local businesses buy into branded network
- Support from established charging brand
- Potential revenue-sharing arrangements

Example: Evgo

Picture: Simon Mall, Burlington, MA

ADVERTISING & SPONSORSHIP

- Ad revenue funds free or low-cost charging
- Requires high-traffic locations
- Ideal for retail areas

Example: Volta (acquired by Shell Recharge in 2023)

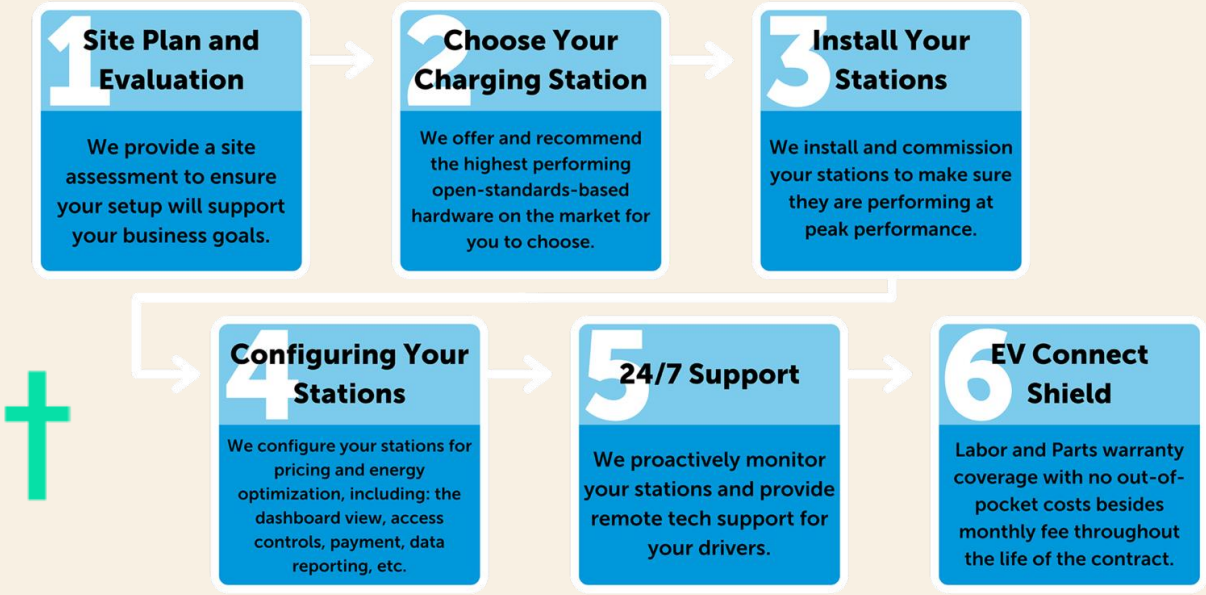
Pictured: Volta, Wareham, MA

CHARGING AS A SERVICE (CAAS)

- Subscription model for full-service charging solutions
- Minimal upfront cost for site owners
- “Turnkey”: Includes installation, operation, and maintenance

Example: EV Connect – Offers to add EV charging stations to a property for as low as $100 per port per month

evconnect



Discussion

East Coast Renewable Energy

UNIVERSAL LEVEL 3 (FAST) CHARGING STATIONS

Currently, National Grid and Eversource have some incredible incentives to install Level 3 (FAST) charging stations.

- You will 100% own and operate the charging stations.
- If you do not want to have to worry about the charging stations, ECR will own and operate and provide a profit share to you.

ECR donates:

- Cost of cloud software for the first five years.
- Extends the warranty on the equipment from two (2) years to five (5) years.

Installer provides a maintenance package, which includes:

- Monitoring the charger weekly.
- Data reporting and site visits twice a year.
- Labor costs during maintenance agreement.
- Dispatching within 24 to 48 of an issue.

FOR MORE INFORMATION:
CALL NICK VALORIE AT 508-400-9236
EMAIL AT NVALORIE@ECRENEWABLE.COM
www.ECRenewable.com

East Coast Renewable Energy

NPV			
	Low Utilization	Mid Utilization	High Utilization
Year 1	$ (1,733.49)	$ 11,370.51	$ 37,578.51
Year 2	$ 6,257.25	$ 31,023.77	$ 80,556.79
Year 3	$ 13,795.69	$ 49,564.58	$ 121,102.34
Year 4	$ 20,907.43	$ 67,055.90	$ 159,352.86
Year 5	$ 27,616.61	$ 83,557.16	$ 195,438.26
Year 6	$ 33,946.03	$ 99,124.38	$ 229,481.09
Year 7	$ 39,917.17	$ 113,810.44	$ 261,596.96
Year 8	$ 45,550.33	$ 127,665.21	$ 291,894.96
Year 9	$ 50,864.63	$ 140,735.75	$ 320,477.97
Year 10	$ 55,878.13	$ 153,066.44	$ 347,443.08

The sample ROI/NPV is based upon the following information based upon an "average" charge.

- Electric rate of $0.25
- Processing fee of $0.05
- Charging cost of $0.50
- Average charge:
  - Low Utilization is 6 people charging per day per port.
  - Mid utilization is 12 people charging per day per port.
  - High utilization is 24 people charging per day per port.

Frequently asked questions:

- How do you qualify for the incentives?
  - We will need to submit a proposal to the electric company for "pre-approval". Once the "pre-approval" is received, we will know; the incentives, number of chargers qualified for the site and terms of the incentive.
- Do I set the prices?
  - If you own the chargers, you will set the prices, if you opt not to own, ECR will set the prices.
- Do I receive 100% of the profits from the system?
  - You will receive 100% of the profit, unless you opt not to own. If we own, we will provide you with a profit share.

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EMAIL AT NVALORIE@ECRENEWABLE.COM
www.ECRenewable.com

East Coast Renewable Energy

Based upon the current incentives offered by both Eversource and National Grid, East Coast Renewable Energy LLC (ECR) can offer you:

Option #1:
Customer owns and operates the charging stations.

- Customer will receive 100% of the revenue, along with 100% of the expenses.
- Example of expenses:
  - ◇ Electric bill
  - ◇ Maintenance
  - ◇ Insurance
  - ◇ Cleaning area
  - ◇ Monitoring.
- Customer will set charging price.
- Customer is responsible for everything.

Option #2:
East Coast Renewable Energy LLC (ECR) owns and operates the charging stations.

- ECR covers all costs.
- ECR sets prices.
- ECR will handle all aspects of the charging stations.
- ECR will purchase the O&M policy from the installer:
  - ◇ Ensuring the charging stations are always in working order.
- Customer will receive a profit share ranging from 25% to 50%:
  - ◇ Range depends on marketing of the charging station.
- Customer will be able to audit the books to confirm the profit share..
- Customer is responsible to clean and monitor charging stations.

As a reminder, the Level 3 incentive is finite. Meaning when the incentive is filled, the option above might not be available.

FOR MORE INFORMATION:
CALL NICK VALORIE AT 508-400-9236
EMAIL AT NVALORIE@ECRENEWABLE.COM
www.ECRenewable.com

INOVIS ENERGY

CHARGE FORWARD

O&M PLAN

Stay Charged, Stay Ahead: Uninterrupted EVSE Service with Charge Forward.

Ongoing Maintenance
Bi-annual site-visits to ensure peak performance, with detailed reports.

Cloud-Based Monitoring
Our cloud-based system keeps a vigilant eye on your stations 24/7, ensuring maximum uptime.

Fast Dispatch Time
Our commitment to a 24 to 48-hour dispatch time means any issues are resolved quickly.

Hassle-Free Labor Warranty
Inovis will provide labor warranty for any parts warranty service.

Data Reporting
With our bi-annual uptime and usage reports, gain valuable insights into your stations' performance.

Price Setting Guidance
Ongoing price-setting recommendations to keep up with competition and industry fluctuations.

HASSLE-FREE UPKEEP

The Charge Forward O&M Plan is your partner in powering electric journeys. Offering more than just maintenance, our program includes bi-annual site checks, continuous station monitoring, and fast response times, ensuring your charging stations are always ready for customers.

CONTACT US

833-464-6624

warranty@inovisenergy.com

www.inovisenergy.com

ADDITIONAL INFORMATION

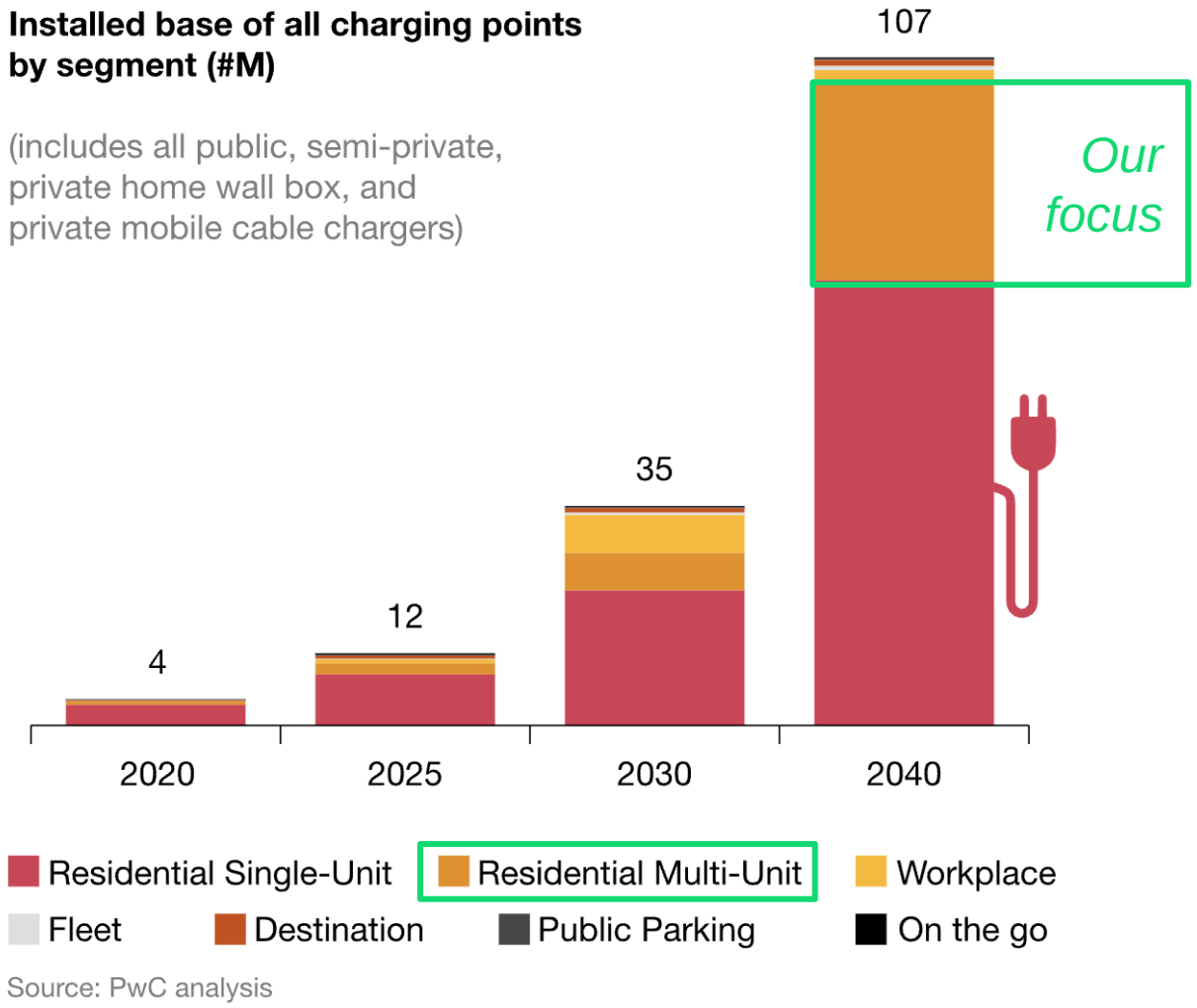
- PHOTOS WILL BE TAKEN AND SUBMITTED WITH BI-ANNUAL REPORTING
- LABOR WARRANTY IS LIMITED TO DEFECTIVE MATERIALS; VANDALISM AND ACTS OF GOD ARE NOT COVERED.
- PARTS WARRANTY IS LIMITED TO 5 YEARS, AND IS STIPULATED BY THE STATION MANUFACTURER

94 Reservoir Park Drive, Rockland, MA 02370

MATCHA

Turnkey EV charging solutions for multifamily

Chris Kluesener - Cofounder & CEO
chris@matchaelectric.com
(617) 286-2355

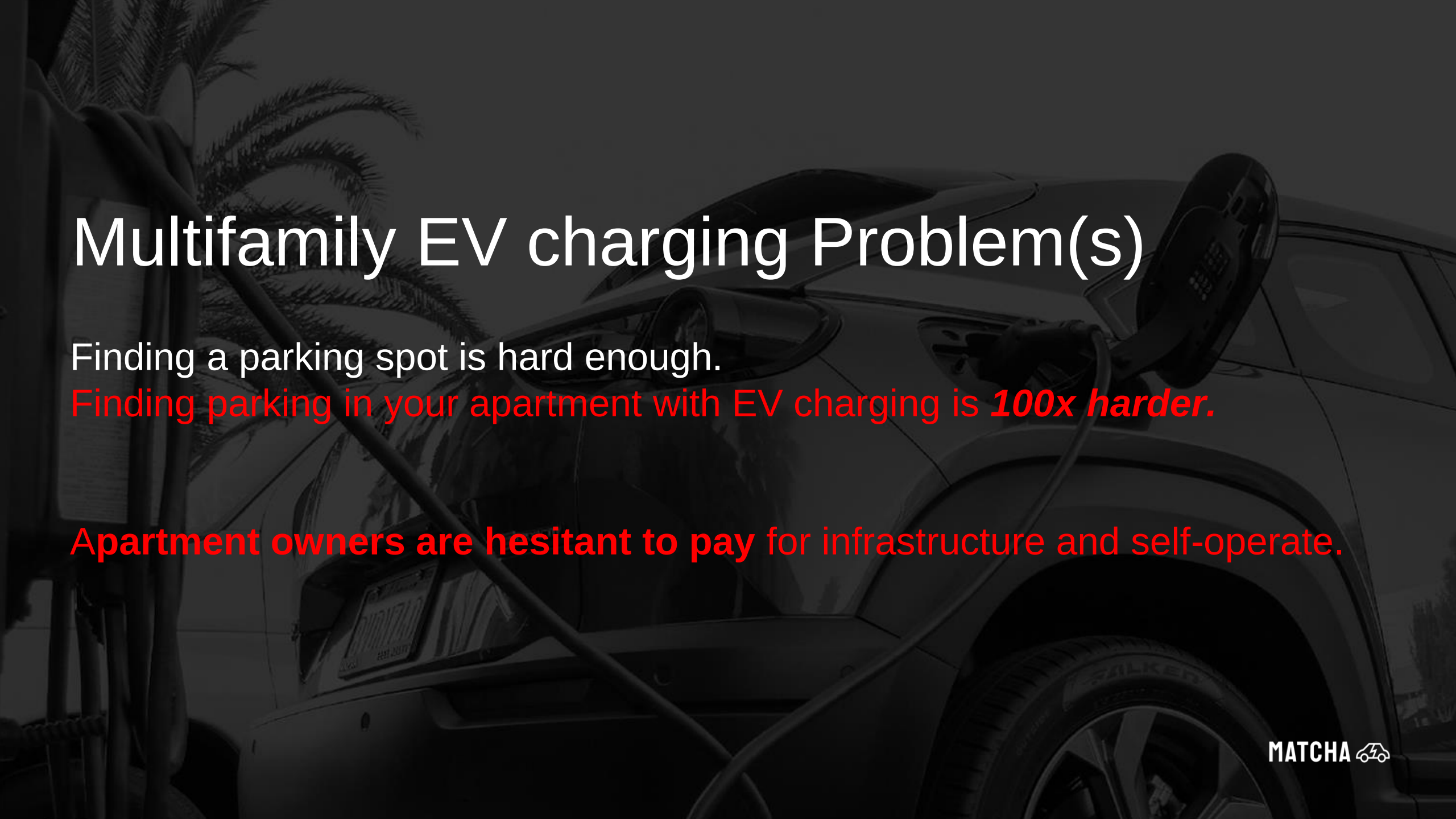


Source: PwC analysis

Multifamily is the **fastest growing and largest** commercial segment

With the **least adoption today** at <2%

MATCHA



Multifamily EV charging Problem(s)

Finding a parking spot is hard enough.
Finding parking in your apartment with EV charging is ***100x harder.***

A**partment owners are hesitant to pay** for infrastructure and self-operate.

MATCHA

MATCHA

Turnkey Multifamily EV Charging

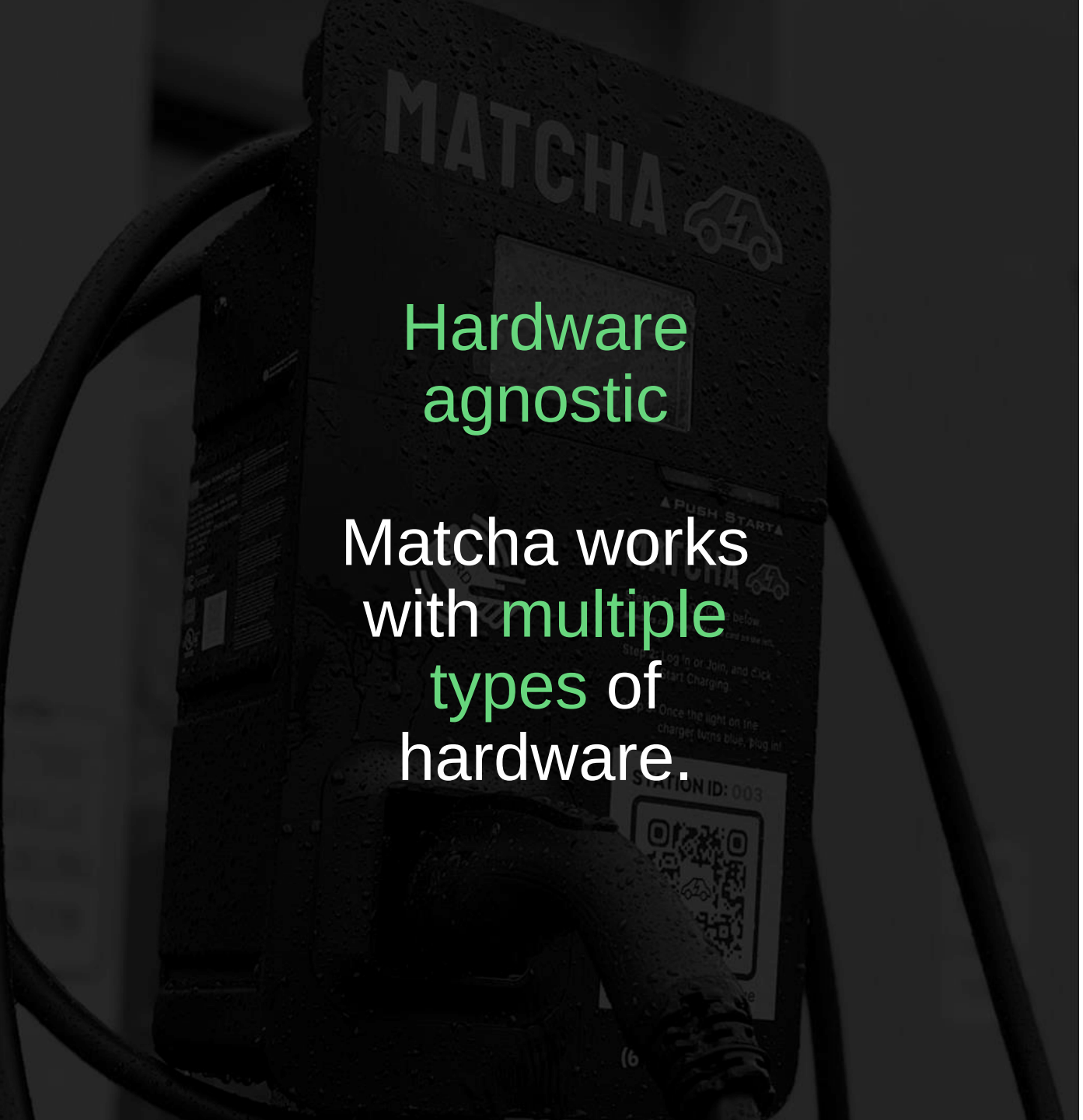
- **Multifamily specific EVSE management software**
- **Hardware agnostic**
- **Vertically integrated -** including installation & maintenance
- **No cost option** - avoids all CapEx and OpEx with **profit share**

Trusted By:

AVIDO URBAN RESPONSIBILITY

ONYXGROUP DEVELOPMENT AND REALTY

CUSHMAN & WAKEFIELD



Hardware agnostic

Matcha works with multiple types of hardware.

ZEROVA

AUTEL®

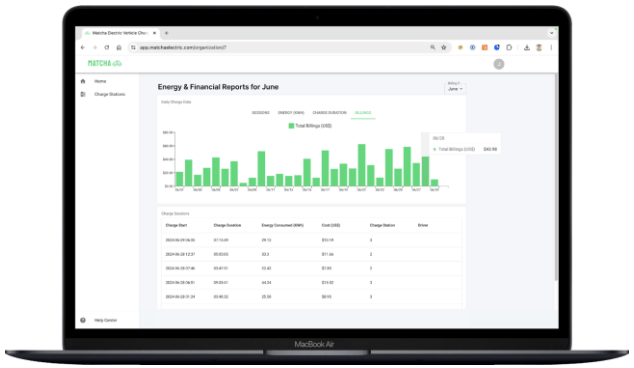
wallbox™

Always adding more!

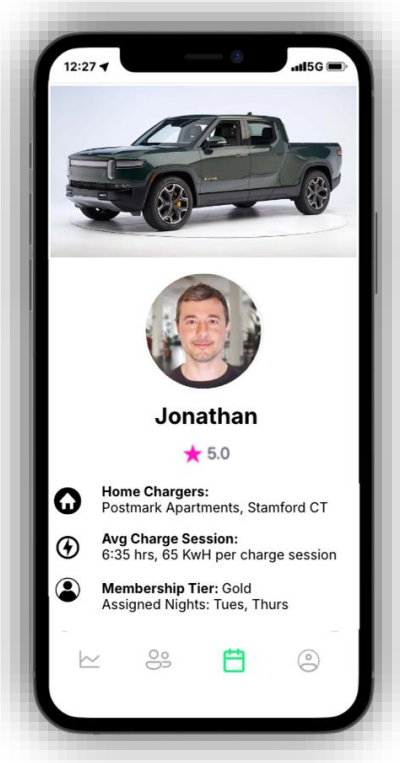
MATCHA

Multifamily software for weekly use among neighbors.

Property Manager Dashboard
Analytics | Pricing
Payouts | Reporting

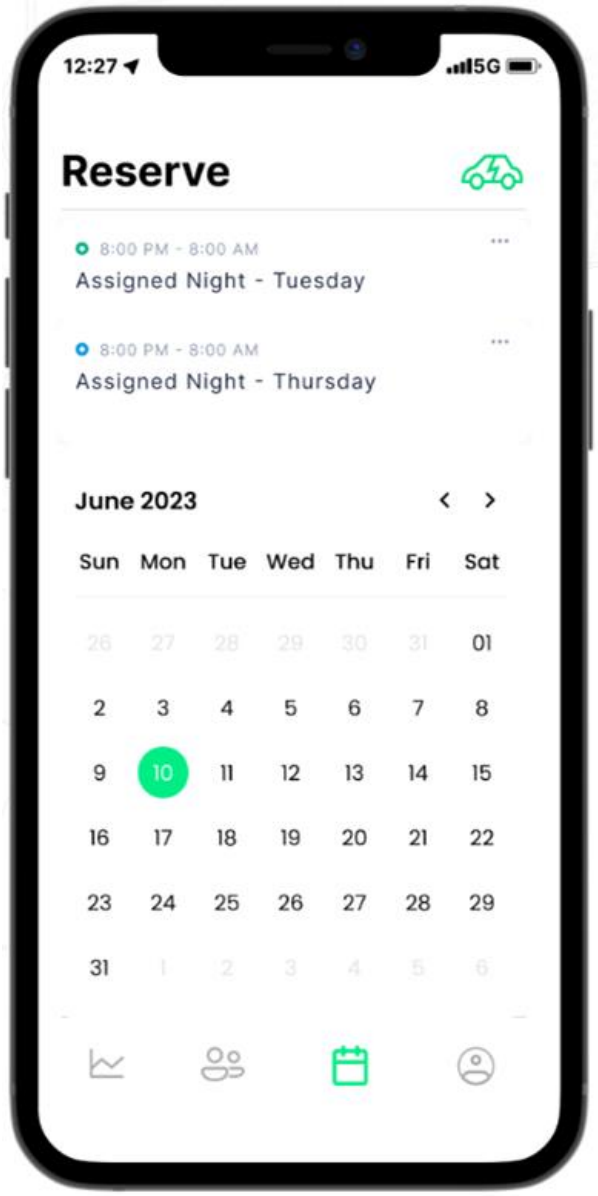


Driver App
EVSE Access | Billing
Notifications | Reservations



Using AI and proprietary algorithms to learn individual charging patterns and dynamically set prices during peak demand or low utilization periods.

MATCHA



The future of EV charging is reservations

Pioneering a modern reservations solution for EV charging.

To reduce friction among neighbors, and increase utilization.

MATCHA

How it works

Apply

Property owners
and Charge Station Operations
apply to join Matcha's network,
with new chargers, or running on
their existing charging stations.

Deploy

Matcha supports the process from
end to end, from planning,
subcontracting, incentive capture,
installation, and ongoing operations
and maintenance.

Charge

Drivers show up and charge
paying for what they use at
transparent rates. For reservation-
enabled chargers, drivers move
their vehicle at the end of their time
block to avoid extra fees.

MATCHA

Works for multiple property types

Apartments

Parking Garages

Hotels

Condos

… and use cases

- New properties
- Retrofits
- Rip and replacement

MATCHA

Benefits for Property Owners & Parking Operators

- Attract & retain tenants
- Increase net operating income
- Comply with building codes
- Demonstrate sustainability values
- Frictionless experience for drivers

Benefits for Drivers and Future EV Drivers

- Get convenient home charging
- Reduce range anxiety
- Save time
- Plan in advance “charge comfort”
- Reduce neighbor infighting

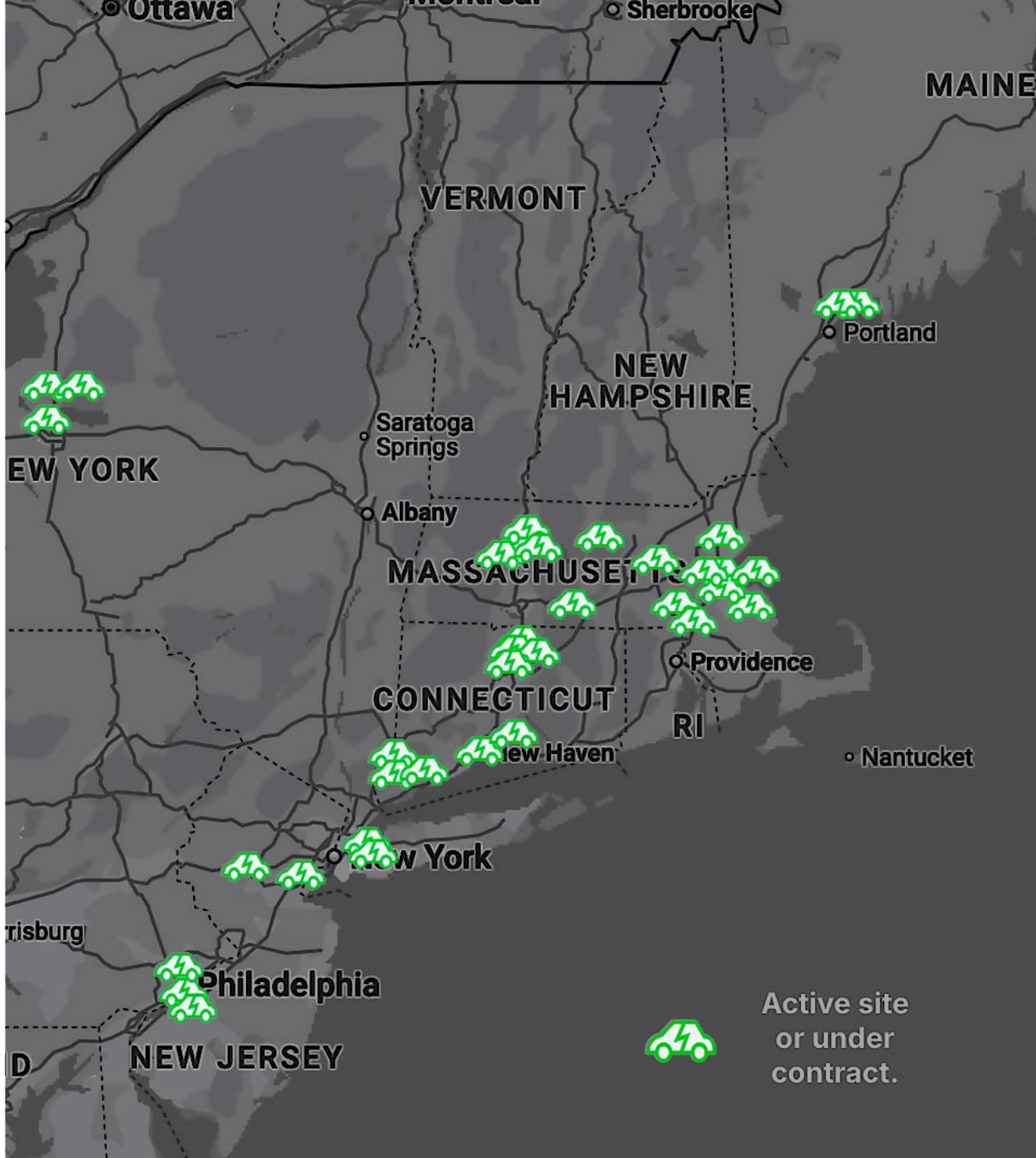
MATCHA

Traction

We are growing quickly across New England, expanding into mid Atlantic, Central, and West Coast.

New grant funding to support growth in Massachusetts!

MASSACHUSETTS CLEAN ENERGY CENTER®



Differentiators

Reservations with an up front price

Matcha is the only system on the market today offering up front pricing for reservations, combining electricity, time, and fees into one price.

Multifamily Specific Solution

Matcha is hardware agnostic and offers a multifamily specific solution for weekly users and mid to long duration parking areas. Works with new or existing stations*.

No cost installation or operations model

Matcha provides an option for select properties to receive FREE chargers with a profit share.

**Compatible L2 chargers only*

MATCHA

Our customers

GREYSTAR™

CUSHMAN & WAKEFIELD

Northside DEVELOPMENT COMPANY

Poweral

GAIA REAL ESTATE

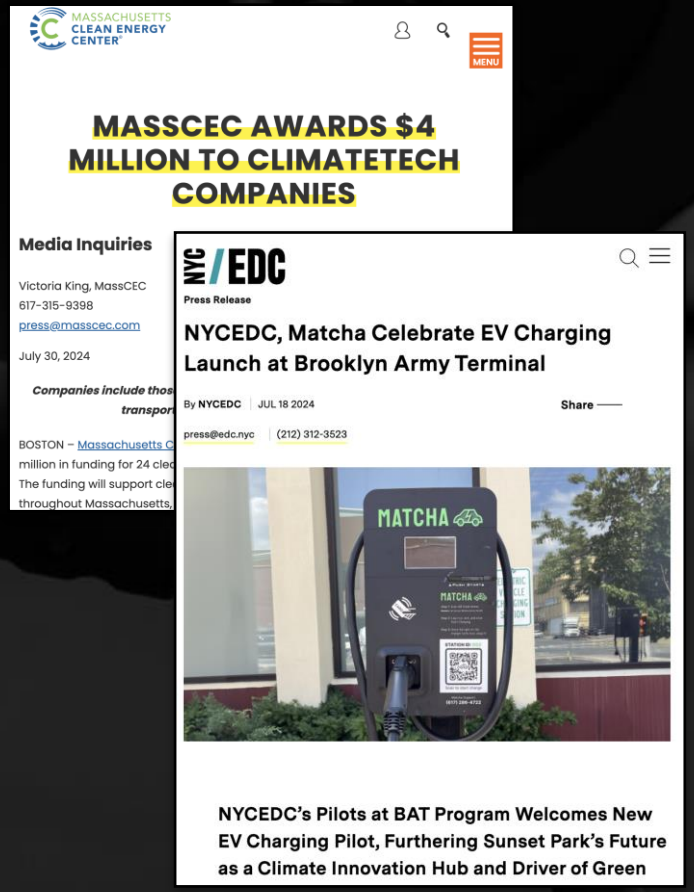
CIVICO URBAN RESPONSIBILITY

OG ONYXGROUP DEVELOPMENT AND REALTY

CHOOSE BOSTON

NYC/EDC

Our press



MASSACHUSETTS CLEAN ENERGY CENTER

MENU

MASSCEC AWARDS $4 MILLION TO CLIMATETECH COMPANIES

Media Inquiries

Victoria King, MassCEC
617-315-9398
press@masscec.com

July 30, 2024

Companies include thos
transpor

BOSTON – Massachusetts C
million in funding for 24 cle
The funding will support cle
throughout Massachusetts,

NYC/EDC

Press Release

NYCEDC, Matcha Celebrate EV Charging Launch at Brooklyn Army Terminal

By NYCEDC | JUL 18 2024 Share

press@edc.nyc | (212) 312-3523

NYCEDC's Pilots at BAT Program Welcomes New EV Charging Pilot, Furthering Sunset Park's Future as a Climate Innovation Hub and Driver of Green

MATCHA

Matcha is on a mission to plug in 100,000 Americans by 2030

What we do:

We're building the world's best solution for multifamily EV charging.

How we do it:

A full stack solution combining smart software, a platform strategy, and 3rd party charging hardware.

Why we do it:

To empower anyone to drive electric even without your own garage.

MATCHA

MATCHA

Thank You

THANK YOU

Mark Scribner

Electric Transportation Program Manager

Massachusetts Department of Energy Resources (DOER)

Leading By Example (LBE)

EV Webpages Project Overview

MassCEC & VEIC

Contact us at CleanTransportation@MassCEC.com

MASSACHUSETTS CLEAN ENERGY CENTER®

EV Webpages Project Overview

Background

- RFP was created to satisfy Bill H.5060: *An Act Driving Clean Energy and Offshore Wind*
  - "SECTION 85. The Massachusetts clean energy technology center shall develop a guide and website to provide information about the costs and availability of electric vehicles […]"
- EV Webpages Program was created to expanded to cover multiple audiences

EV Webpage Scopes

- **Scope 1: Residential Consumer (Clean Energy Lives Here website)**
- Scope 2: Commercial and Private Entities (MassCEC website)
- Scope 3: Vehicle Dealers (MassCEC website)
- Scope 4: Municipal Light Plant Residents (Clean Energy Lives Here website)
- Scope 5: Customer Support for Residential Consumers (Clean Energy Lives Here website)

EV Webpages Design Plan

Drive Electric For Less

With major rebates and incentives, more Massachusetts residents are making the switch to an electric vehicle (EV).

BENEFITS OF ELECTRIC VEHICLES

1

Lower greenhouse gas emissions

Create significantly less greenhouse gas emissions than driving a gasoline-powered vehicle

2

Cost competitive

Create significantly less greenhouse gas emissions than driving a gasoline-powered vehicle

3

No hassle

Reduce time spent on maintenance and eliminate oil changes. Electric vehicles require much less service than gas-powered cars

4

Improve air quality

Reduce the amount of harmful pollutants, like carbon monoxide, nitrogen dioxide, and ground level ozone released into the environment

EV Webpages Design Plan

CUT YOUR FUEL SPENDING, UPKEEP COSTS & EMISSIONS

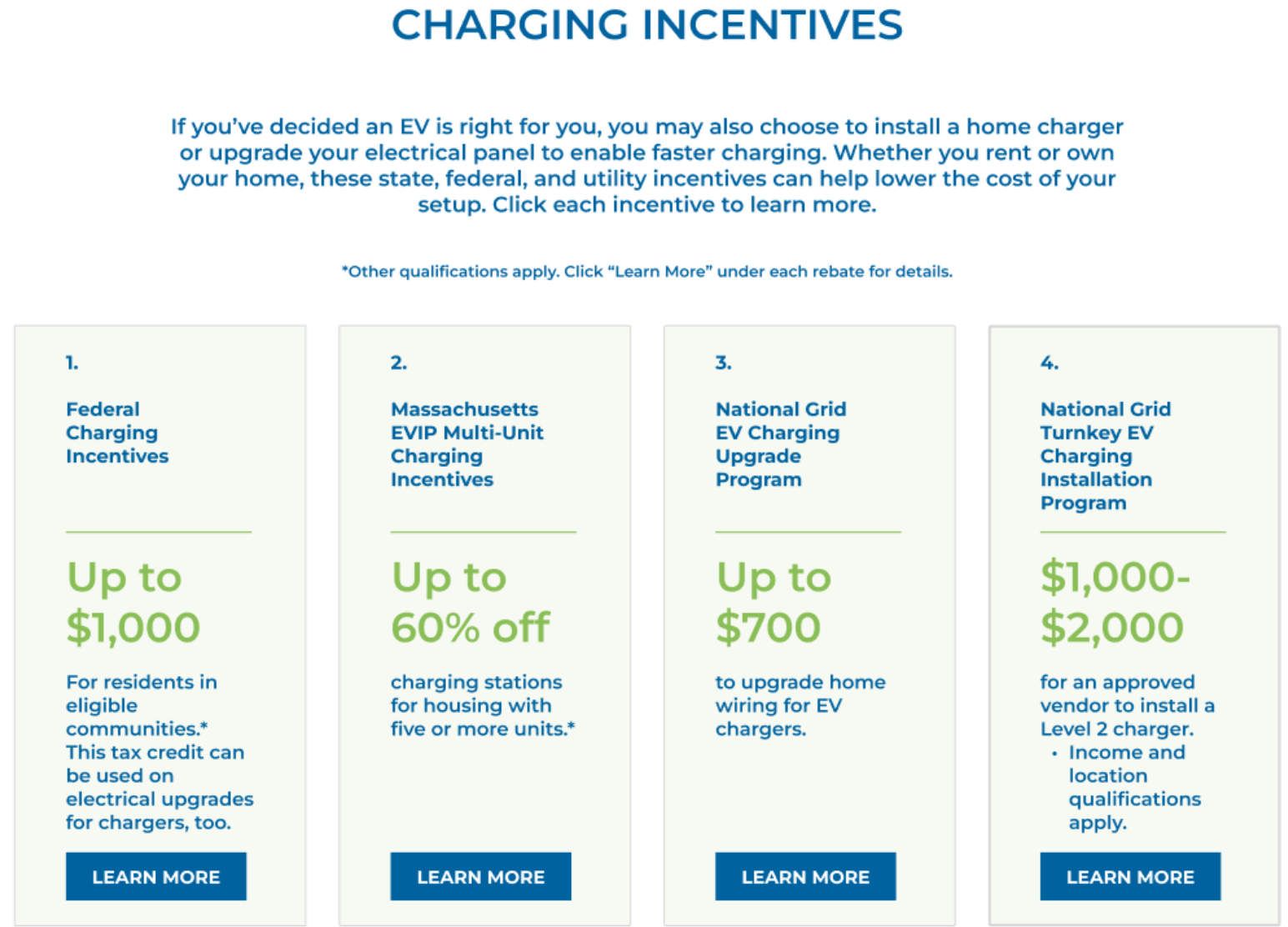
Rebates are just the start of your savings. EVs cost an average of **$786 less** to fuel and maintain *each year.*
Rack up thousands of dollars in savings over time as you lower your carbon footprint.*

	Electric Vehicles	Plug-in Hybrid Vehicles ⓘ	Gas Vehicles
Repairs & Maintenance	$180 annually ⓘ	$315 annually	$412 annually
Gas	$0 annually	$338 annually	$1,436 annually
Charging	$882 annually	$791 annually	$0 annually
Tailpipe Emissions	0 metric tons of CO2e annually	1.8 metric tons of CO2e annually ⓘ	3.8 metric tons of CO2e annually ⓘ
Total Annual Cost of Above	**$1,062**	**$1,444**	**$1,848**

This would take 62.8 tree seedlings over 10 years to offset.

*Annual Costs and Emissions – based on 15,000 miles of driving reflecting MA gas costs, electricity rates, and emissions factors.
Repair and maintenance costs are estimated based on a per-mile calculation from Consumer Reports for the first 50,000 miles of a typical vehicle in each category.

EV Webpages Design Plan



EV Webpages Design Plan

1. MOR-EV Standard Rebate

$3,500 for new vehicles.

Eligibility Overview*

Residents of **all income levels are eligible** if they meet the requirements below:

- The new vehicle is on the **eligible vehicle list**.
- The total MSRP of that vehicle is $55,000 or less.
- They are a resident of Massachusetts (or a business based in Massachusetts).
- They retain ownership of the vehicle or lease for **at least 36 consecutive months** from the vehicle purchase or lease start.
- They agree that any emission reductions generated by the purchased vehicle will **not be used as marketable emission reduction credits**.

Residents must apply for rebates within 90 days of their purchase or lease.

*The above is a summary of eligibility requirements. For the full list, please visit **mor-ev.org/eligibility**

See Full Rebate Details

Information last updated 2024.8.10.

EV Webpages Design Plan

WHICH TYPE IS RIGHT FOR YOU?

Learn the basics of the three main charging types to figure out what's best for your needs.

			
	Level 1: AC Charging	**Level 2: AC Charging**	**Level 3: DC Fast Charging**
EV Compatibility	All modern EVs and plug-in hybrid EVs are compatible.	All modern EVs and plug-in hybrid EVs are compatible.	Only† all-electric vehicles (not hybrid vehicles) are compatible with DC fast chargers. †Most EVs are compatible, with a few exceptions.
Charging Speed	• Between 3-5 miles of range per hour. • EVs take 22-50 hours to reach the recommended 80% charge. • Plug-in hybrid vehicles take 4-12 hours to reach the recommended 80% charge.	• Between 10-20 miles of range per hour. • EVs take 4-10 hours to reach the recommended 80% charge. • Plug-in hybrid vehicles take 1-2 hours to reach the recommended 80% charge.	• Between 180-240 miles of range per hour. • EVs take 20 minutes to 1 hour to reach the recommended 80% charge. • Plug-in hybrid vehicles cannot use this charging type.

			
	Level 1: AC Charging	**Level 2: AC Charging**	**Level 3: DC Fast Charging**
EV Compatibility	All modern EVs and plug-in hybrid EVs are compatible.	All modern EVs and plug-in hybrid EVs are compatible.	Only† all-electric vehicles (not hybrid vehicles) are compatible with DC fast chargers. †Most EVs are compatible, with a few exceptions.
Charging Speed	• Between 3-5 miles of range per hour. • EVs take 22-50 hours to reach the recommended 80% charge. • Plug-in hybrid vehicles take 4-12 hours to reach the recommended 80% charge.	• Between 10-20 miles of range per hour. • EVs take 4-10 hours to reach the recommended 80% charge. • Plug-in hybrid vehicles take 1-2 hours to reach the recommended 80% charge.	• Between 180-240 miles of range per hour. • EVs take 20 minutes to 1 hour to reach the recommended 80% charge. • Plug-in hybrid vehicles cannot use this charging type.
Accessibility ► Visit PlugShare's charging map to see availability near you.	• Almost all EVs and plug-in hybrid vehicles include a free portable Level 1 charging cable. • Level 1 chargers are compatible with standard wall outlets, so they are the most accessible.	• Level 2 chargers are often installed in homes. State, federal, and utility incentives can help offset the costs of setup and (in some cases) wiring upgrades. • Level 2 chargers are commonly available at both paid and free public charging stations.	• Level 3 chargers can only be found at businesses and public charging stations. • They are becoming increasingly more common.
Average Cost to Charge in MA	$0.29 per kWH	$0.25-$0.35 per kWH	$0.40-$0.60 per kWH
Most Common Uses	• These chargers are commonly used for plug-in hybrid vehicles, which have smaller batteries. • They are also used by EV drivers who have short commutes or don't need to drive every day.	• These chargers are the most commonly used by both plug-in hybrid vehicles and EVs. • They are used by EV drivers with long commutes or by drivers who are charging on the road.	• These chargers are rarely used as the main charging method for EV drivers since they're less common and more expensive to use. • However, they're great for extremely long commutes or quick charges in the middle of road trips.

Questions

Public Comment

Thank You