

1. Executive Summary

Background

In 2022, as part of [An Act Driving Clean Energy and Offshore Wind](#) (2022 Climate Act), the General Court of Massachusetts established the Electric Vehicle Infrastructure Coordinating Council (EVICC) as a first-of-its-kind initiative to centralize and coordinate the Commonwealth's electric vehicle (EV) charging efforts. EVICC was created in recognition of the vital role that EV charging plays in Massachusetts' transition to a clean energy economy. That role has been expanded as part of [An Act Promoting a Clean Energy Grid, Advancing Equity, and Protecting Ratepayers](#) (2024 Climate Act), which requires EVICC, among other new responsibilities, to support a new grid planning process for transportation to ensure that the grid of the future can meet charging needs.

Massachusetts' primary clean energy transition planning documents, the [Clean Energy and Climate Plans \(CECPs\)](#) for 2025/2030 and 2050, establish economy-wide limits and sector-specific sublimits for reducing greenhouse gas emissions. For the transportation sector, an emissions sublimit of 34% below 1990 levels was set for 2030, and 86% for 2050. To achieve these sublimits, Massachusetts must transition nearly all vehicles to zero-emissions (i.e., battery EVs, plug-in hybrid vehicles, and fuel cell vehicles)

by 2050. This includes transitioning significant portions of medium- and heavy-duty vehicles, like commercial and public transit fleets. In the near term, the Commonwealth will need 200,000 EVs, both battery electric and plug-in hybrid vehicles, on the road by 2025 and 900,000 light-duty EVs on the road by 2030 to achieve this sublimit.

A robust network of available and reliable EV chargers is vital to ensuring this level of EV adoption, as a robust EV charging network empowers consumers to feel comfortable in making the switch. Unfortunately, despite the steady expansion of EV charging networks, limited availability of chargers is still perceived as one of the biggest barriers to EV adoption. A recent survey by J.D. Power and Associates found that the top three factors cited by active vehicle shoppers as a barrier to EV adoption were related to charging infrastructure.¹

Thus, EVICC's role in developing a comprehensive plan to build an equitable, interconnected, accessible, and reliable EV charging network throughout Massachusetts, in partnership with government actors, private industry, and the public, is vital to the achievement of the state's climate requirements.

¹Autoweek Staff, "J.D. Power Finds Charging Access Biggest Deterrent to EV Adoption," Autoweek, February 28, 2025, <https://www.autoweek.com/news/a63965563/ev-charging-access-jd-power-study/>.

Auto Remarketing Staff, "J.D. Power Report: Public Charging Still the Biggest Issue Stopping EV Adoption," Auto Remarketing, February 28, 2025, <https://www.autoremarketing.com/ar/analysis/j-d-power-report-public-charging-still-the-biggest-issue-stopping-ev-adoption/>.

Assessment Overview

The publication of the Second EVICC Assessment comes at a challenging time for EV charging deployment nationwide due to federal policy changes, as well as market and cost uncertainties. The future of California's rules phasing out of the sale of new gasoline-only vehicles, which Massachusetts and several other states have adopted, are at risk of elimination (See Chapter 2 for more on the California rules) and the United States Congress authorized the elimination of tax incentives for EVs starting September 30, 2025, and EV charging starting June 30, 2026.^{2,3}

Massachusetts remains a national leader in deploying EV charging, ranking 4th amongst all states in public EV chargers per capita. Massachusetts has also made considerable progress in deploying charging since the Initial EVICC Assessment, with public EV charging increasing over 50% since August 2023. However, this Assessment also finds that the current pace of EV charger deployment needs to triple in order to support the numbers of EVs that the CECPs project are needed by 2030 to meet Massachusetts' emissions reduction limits.

Given the current headwinds and the need to increase the pace of deployment, the Second EVICC Assessment lays out several actions to enable Massachusetts to continue to build a robust EV charging network that meets the Commonwealth's needs.

In general, these actions will require the Commonwealth to:

- **Be more strategic** in employing public funds, leveraging private funding, and utilizing the electric grid by prioritizing high-impact charging opportunities and minimizing grid costs;
- **Increase the efficiency** of current charger incentive program offerings and remove common barriers to charger deployment;
- **Be proactive** in planning for future EV charging, grid infrastructure, and future funding sources; and,
- **Significantly improve** the EV charging experience for drivers.

Together, these improvements will **enhance affordability**, accelerate charger deployment in the **areas of greatest need**, and **give Massachusetts drivers confidence** in making the switch to EVs. These strategic actions, organized into eight focus areas, can be found later in the Executive Summary and in Chapter 8.

²One Big Beautiful Bill Act, Pub. L. 119-21 (2025), <https://www.congress.gov/bills/119/congress/house-bill/1>. See [Columbia Law summary](#).

³Notably, however, Massachusetts continues to have access to funding from multiple federal programs, including nearly \$50 million from the National Electric Vehicle Infrastructure (NEVI) Formula Program to deploy EV chargers along primary transportation corridors and \$1.2 million from the Charging and Fueling Infrastructure (CFI) Grant Program to deploy EV chargers at state parks and other Department of Conservation and Recreation facilities (See Chapter 3 for more on NEVI and CFI).

Where we are – Current charging station deployment in Massachusetts

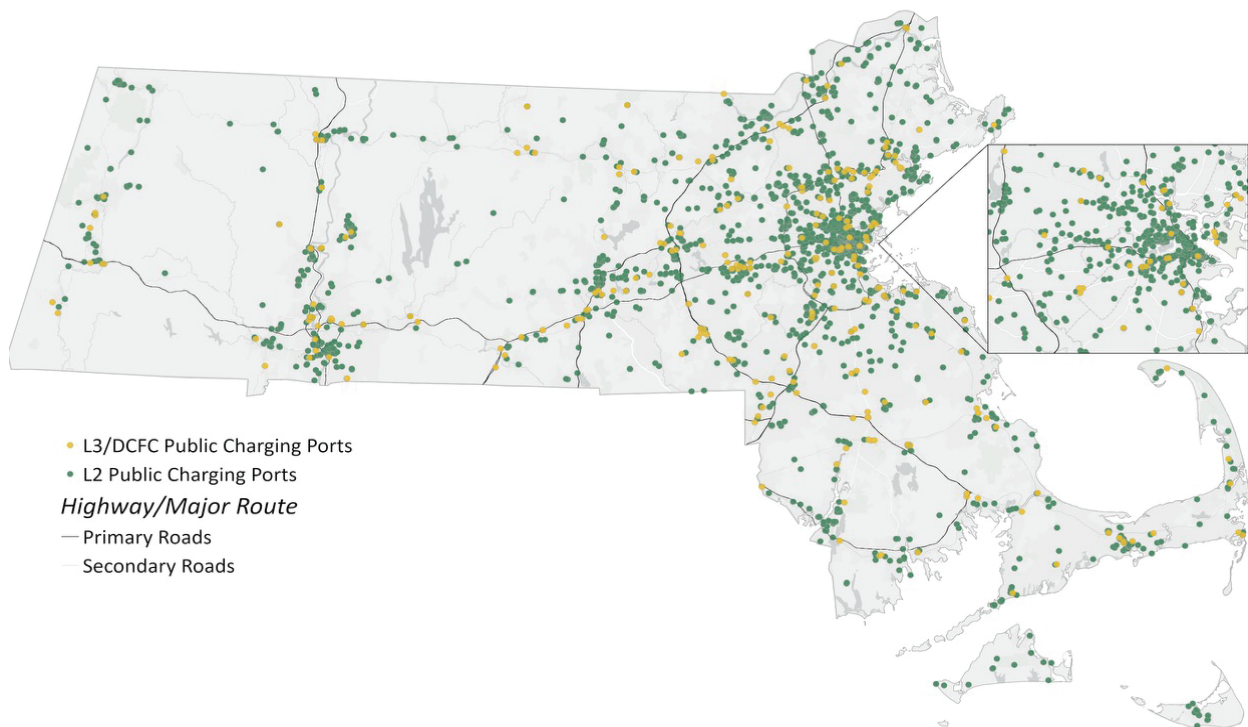
Public Charging

As of May 2025, there were 9,413 publicly accessible charging ports (i.e., chargers open to all members of the public) operating in Massachusetts, with over 8,000 Level 2 charger ports and over 1,200 fast charging ports.⁴ The overall distribution of publicly accessible charging stations⁵ in Massachusetts is shown in Figure 1.1.

Massachusetts deployed nearly 50% more publicly accessible EV charging ports in 2024

than in 2023,⁶ with a 169% increase year-over-year in publicly accessible fast charging port deployments (382 versus 142). If 2024 deployment rates continue, the number of publicly accessible fast charger and Level 2 ports deployed in Massachusetts at the end of 2025 will closely mirror the 2025 CECP EV charger benchmarks (i.e., 1,300 publicly accessible fast chargers and 9,500 publicly accessible Level 2 chargers).⁷

Figure 1.1. — Publicly accessible charging stations in Massachusetts



⁴Fast charging ports are commonly referred to as direct current fast chargers or DCFCs. “Fast charging” and “DCFC” are used interchangeably throughout the Assessment. Level 2 and DCFCs are defined in Chapter 2. A discussion on the difference between public and private chargers is included in Chapter 7.

⁵Station” typically refers to a bank of chargers next to one another. The term “charger” can be used to refer to charging infrastructure that includes one or more charging “ports.” In general, the Assessment uses “charger” to mean one charger “port.”

⁶Approximately 1,400 total publicly accessible charging ports were installed in Massachusetts in 2023, comprising 142 fast charging ports and 1,248 Level 2 ports. Approximately 2,000 total publicly accessible charging ports were installed in Massachusetts in 2024, comprising 382 fast charging ports and 1,653 Level 2 ports.

⁷The CECP EV benchmark for 2025 for all publicly accessible and workplace charging is 15,000 ports. Applying the ratio of publicly accessible fast chargers from the 2030 projections in this Assessment to the 2025 benchmark of 15,000 yields an estimate of roughly 1,300 fast chargers and 9,500 Level 2 chargers. 1,075 publicly accessible fast chargers and 1,727 publicly accessible Level 2 chargers were deployed as of January 1, 2025. 382 public fast chargers and 1,653 public Level 2 chargers were deployed last year. If the 2024 pace of deployment continues, more than 1,400 public fast chargers and 9,300 public Level 2 chargers will be deployed by January 1, 2026.

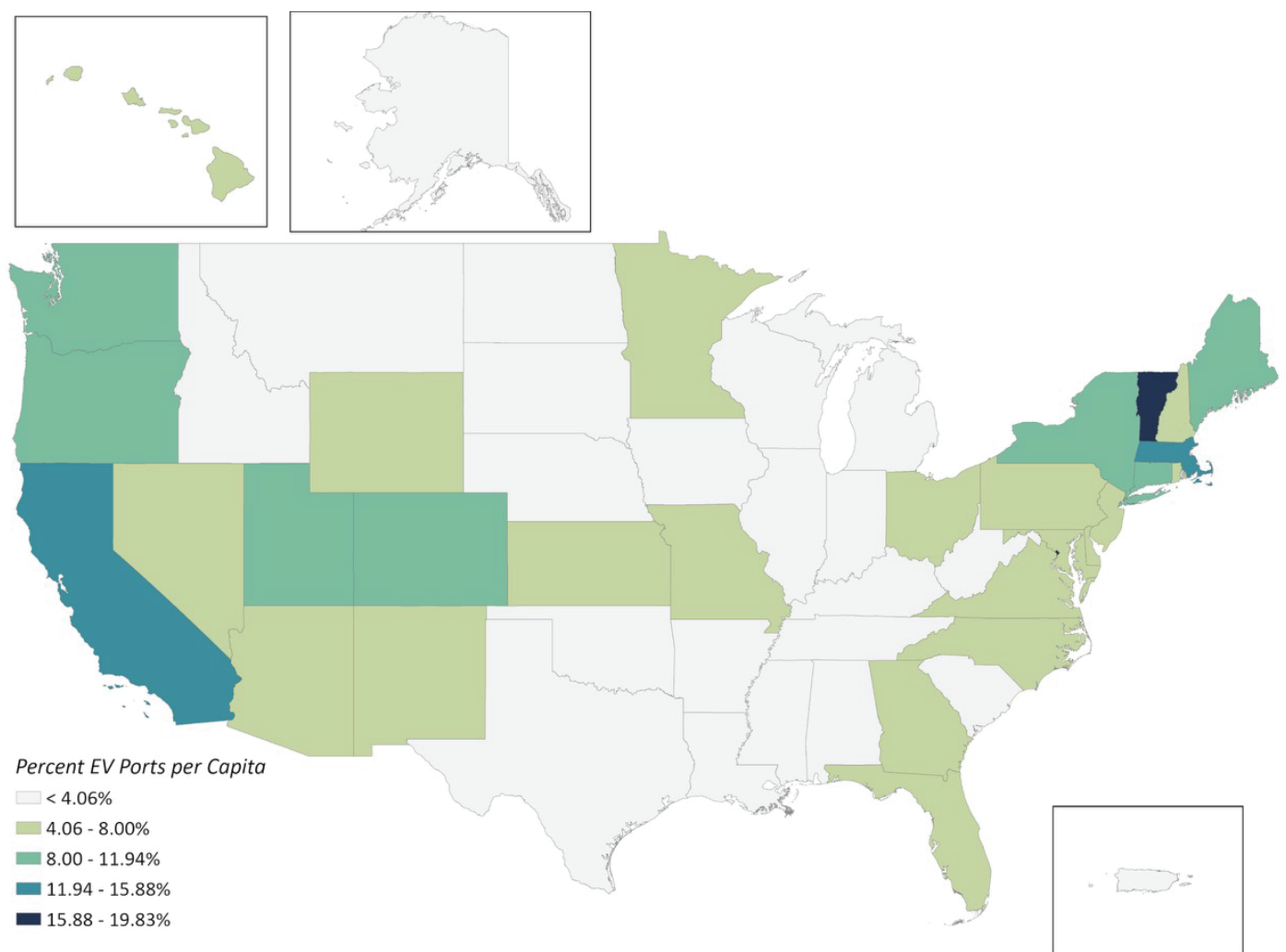
Other Charging Infrastructure

Massachusetts has also deployed 14,229 charging ports in single- and multi-unit dwellings and for use at workplaces and by fleets through state-funded programs. The state does not currently have reliable data on the number of charging stations that are not funded by state programs or reported through the U.S. Department of Energy’s [Alternative Fuels Data Center](#), so it is likely that many residential, workplace, and fleet charging ports have been deployed that are not captured in these totals.

Peer Jurisdiction Comparison

Massachusetts ranks 4th in terms of EV charging ports per capita compared to other states across the country, behind Vermont, Washington D.C., and California. Figure 1.2 shows EV chargers per capita across all states.

Figure 1.2. Public charging ports per capita by state



Where we are – Current charging station deployment in Massachusetts

Massachusetts' existing EV charging infrastructure incentive programs have been incredibly successful to date and often serve as examples across the country. Massachusetts has programs in place or under development to support nearly every aspect of EV charging, including programs that (i) support EV charger deployment, both at scale and in targeted use cases, (ii) prove and scale novel business and technology models to unlock further private funding, and (iii) provide tailored customer support services to reduce soft costs and address barriers, along with (iv) other programs and initiatives to reduce the electric grid impacts of EV charging and proactively plan for future grid infrastructure to accommodate EVs. Table 1.2, on the next page, provides a comprehensive summary of state-funded programs and other efforts grouped by the above categories.

The majority of public charging stations in Massachusetts have benefited from these programs. Table 1.1, below, shows that approximately 68% of all public charging ports have received funding from these programs and federal programs, indicating the important role incentive funding has played in deploying EV charging infrastructure in Massachusetts to date.⁸

“State-funded programs” is used in this Assessment to refer to programs administered by a state agency or the state’s investor-owned utilities, Eversource, National Grid, and Unitil (also known as electric distribution companies or EDCs). These programs are typically funded by revenue allocated from the state budget, legal settlements, or revenue collected from charges paid by EDC customers.

Table 1.1. Public charging ports funded by state- and federally-funded programs⁹

Program	Level 2 Ports	DCFC Ports	Total Ports
MassEVIP	2,502	179	2,681
Eversource	1,842	154	1,996
National Grid	1,509	197	1,706
Total State-Funded Ports	5,853	530	6,383
Total Public Ports	8,193	1,220	9,413
% of Public Ports Receiving State Funding	71.44%	43.44%	67.81%

⁸Some [Municipal Light Plants](#) also offer charging incentives, which are not included in this data.

⁹ Table 1.1 excludes state programs that do not fund publicly accessible chargers, like LBE and DCAMM programs, and others that do not collect data about public accessibility and charger type, like the Green Communities Grants. Table 1.1 does not account for chargers that received funding from multiple programs, likely overstating the percentage of chargers supported by state-funded programs.

Table 1.2. Summary of EV charger programs in Massachusetts¹⁰

Concerns	Charger Types	Use Case	Incentive / Grant	Program Administrator ¹¹
Scaling Deployment				
MassEVIP	Level 1 or 2	Public access, multi-unit dwellings, workplaces, and fleets	Y	MassDEP
Investor-Owned Utility Programs ¹²	Level 2 or fast charging	Public access, multi-unit dwellings, workplaces, and fleets	Y	National Grid, Eversource, and Unitil
Targeted Deployment				
Range anxiety				
National Electric Vehicle Infrastructure (NEVI) Formula Program	Fast charging	Major transportation corridors (also known as Alternative Fuel Corridors or AFCs)	Y	MassDOT
Service Plazas	Fast charging	Major transportation corridors	N - contractual obligations of minimum EV chargers for plaza operator(s)	MassDOT
Specific Use Cases				
Investor-Owned Utility Programs	Level 2	Single-family residential to address Level 2 cost barriers	Y	National Grid, Eversource, and Unitil
Green Communities	Level 2	Municipal charging	Y	DOER
Leading by Example Division (LBE) / Division of Capital Asset Management and Maintenance (DCAMM)	Level 2	State charging	Y	DOER/ANF
Charging and Fueling Infrastructure (CFI) Grant Program	Grant dependent (typically Level 2 or fast charging)	Grant dependent (e.g., state parks, MBTA park-and-rides, etc.)	Y	Grant dependent (e.g., DCR, MBTA, etc.)

¹⁰The information contained in Table 1.2 is simplified for clarity. Future availability and design of the programs listed in this table will vary based on factors specific to each program including, but not limited to, the availability of funding and regulatory authorization. The existing MassCEC programs are limited in time, scope, and funding and are scheduled to sunset after MassCEC issues guides to scaling each EV charging application. Chapter 3 and Appendices 2 through 6 provide additional details on the programs included in Table 1.2, including hyperlinks to the program websites.

¹¹MassDEP = Massachusetts Department of Environmental Protection, MassDOT = Massachusetts Department of Transportation, DOER = Massachusetts Department of Energy Resources, ANF = Massachusetts Executive Office of Administration and Finance, DCR = Massachusetts Department of Conservation and Recreation, MBTA = Massachusetts Bay Transportation Authority, and MassCEC = Massachusetts Clean Energy Center

¹²The investor-owned utility programs vary by utility. For details on the programs offered by each utility, see the "Investor-owned utility programs" section of Chapter 3 and Appendix 3.

Concerns	Charger Types	Use Case	Incentive / Grant	Program Administrator
Proving + Scaling New Models				
Creating Replicable Models				
On-Street Charging Solutions	Level 2	Residential charging for EV drivers without off-street charging	Y	MassCEC
Ride Clean Mass: Transportation Network Company (TNC) Charging Hubs Program	Level 2 or fast charging	Charging for rideshare drivers	Y	MassCEC
Vehicle-to-Everything	Level 2	Utilizing EVs as a grid resources	Y	MassCEC
Mobile Charging for Medium- and Heavy-Duty (MHD) Vehicles	Level 2 or fast charging	Novel charging solution for MHD fleets to address common barriers	Y	MassCEC
Accelerating Clean Transportation for All Round 2 (ACT4All 2)	Level 2	Multiple equity focused novel applications / business models (See Chapter 3 for more details)	Y	MassCEC
Support Services				
Utility Fleet Advisory Services Program	N/A	Public fleets in Eversource and National Grid territory	N - provides technical assistance to help overcome common barriers	National Grid and Eversource
Mass Fleet Advisor	N/A	Private fleets in Eversource and National Grid territory, all fleets elsewhere	N - provides technical assistance to help overcome common barriers	MassCEC
Other Programs + Initiatives				
National Grid's Off-Peak Rebate Program (Minimizing Grid Impacts)	Level 2	Residential and fleet EVs	Y - monthly rebate for charging during certain hours	National Grid
Eversource and Unitil's Proposed Managed Charging Program (Minimizing Grid Impacts)	Level 2	Residential EVs	Currently under review in D.P.U. 24-195 and 24-197 (If approved, would provide monthly rebates for charging during certain hours)	Eversource and Unitil
Section 103 Process	Process authorized in Section 103 of the 2024 Climate Act to work with the investor-owned utilities to identify potential grid upgrades to accommodate future EV charging.			

Where we need to go - Estimates of EV charging infrastructure to meet 2030, 2035 CECP EV adoption

The Second EVICC Assessment finds that approximately 46,300 and 105,000 publicly accessible charger ports would be needed in 2030 and 2035, respectively, to support the CECP EV benchmarks, which were established to achieve the state's transportation sector emissions sublimit.¹³ In 2030, the number of publicly accessible chargers is expected to be split between 5,500 fast charging ports and 40,000 Level 2 ports. The projection for 2035 is 10,500 fast charging ports and 92,000 Level 2 ports.

In total, this report estimates that approximately 800,000 public and private chargers in 2030 and

1.55 million public and private chargers in 2035 would support the state's EV adoption targets for 2030 and 2035, respectively. As discussed in Chapter 2, these estimates serve as the updated 2030 EV charging benchmarks, as this Assessment uses a more advanced methodology and more up-to-date data than the CECP.

Table 1.3 provides a summary of the estimated number of EV charging ports in 2030 and 2035 that would support the CECP EV adoption benchmarks, with the notable addition since the Initial EVICC Assessment of an estimate of chargers needed to support MHD EVs.

Table 1.3. Estimated EV chargers by category and charger type for 2030 and 2035 CECP vehicle projections¹⁴

Category	Charger Type	Port Count		2035 EV/Port Ratio	Source
		2030	2035		
Single-Family	Level 1	216,000	373,000	5.4	EV Pro Lite
	Level 2	482,000	945,000	2.1	EV Pro Lite
Multi-Family ¹⁵	Level 1	8,000	18,000	22.5	EV Pro Lite
	Level 2	18,000	45,000	8.9	EV Pro Lite
Workplace	Level 2	18,000	47,000	51.7	EV Pro Lite
Public	Level 2	40,000	92,000	26.4	Observed ratios
	DCFC ¹⁶	5,500	10,500	230.4	Observed and modeled ratios
Medium- and Heavy-Duty ¹⁷	Private	6,500	17,000	1.9	Modeled ratios
	Public DCFC ¹⁸	800	2,500	13.9	Modeled ratios
Total		794,800	1,550,000		

¹³These estimates depend on a variety of factors that may change over time and, therefore, should not be interpreted as the precise number of EV chargers necessary to enable achievement of the CECP EV benchmarks. Rather, these numbers provide a general indication of the direction, pace, and scale of EV charger deployment needed if the CECP EV vehicle adoption benchmarks are realized.

¹⁴The analysis provided in this report was conducted by the technical consultants to EVICC, Synapse Energy Economics, the Center for Sustainable Energy (CSE), and Resource Systems Group (RSG).

¹⁵"Multi-family housing", "multi-family dwelling", and "multi-unit dwelling" are used interchangeably throughout this Assessment.

¹⁶In 2030, this Assessment estimates that 45 percent of DCFCs will serve multi-family housing and 55 percent will serve long-distance travel. In 2035, this Assessment estimates that 57 percent of DCFCs will serve multi-family housing and 43 percent will serve long-distance travel.

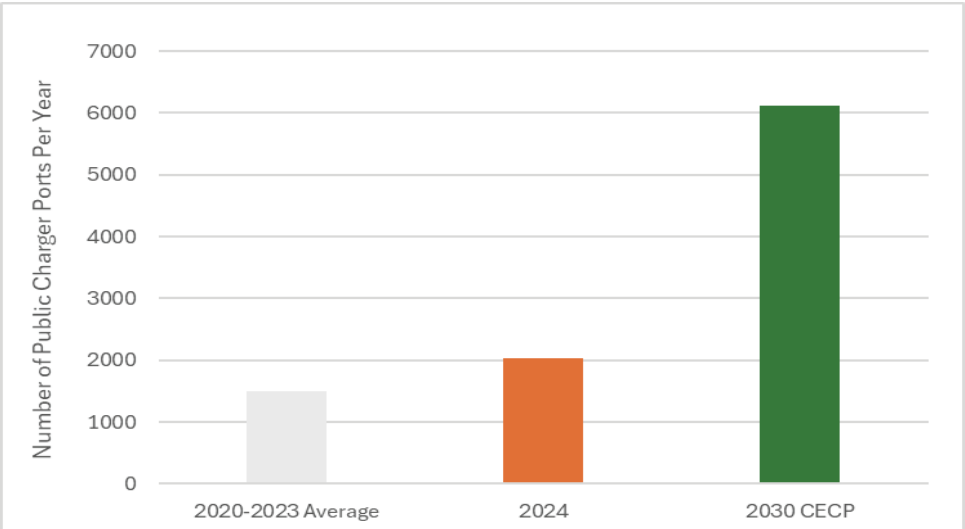
¹⁷MBTA's current bus and fleet locations are included in the medium- and heavy-duty estimates.

¹⁸The "public DCFC" included under the medium- and heavy-duty category is incremental to the "DCFC" chargers included under the public category.

Achieving these deployment levels would require deployment of over 6,000 charging ports annually through 2030.¹⁹ In 2024, Massachusetts deployed roughly 2,000 EV charging ports. Massachusetts would need to triple the current

rate of EV charger deployment through 2030 to achieve the benchmarks set in the CECP, as shown in Figure 1.3.

Figure 1.3. Historical, annual public EV charger deployment versus annual deployment needed to meet 2030 CECP benchmarks



Where we need to go – Priority deployment areas and state program alignment

More important than the forecast of future EV charging infrastructure are the state’s priorities and strategy for building EV charging infrastructure. Clear priorities and a coordinated strategy to effectuate those priorities will ensure that public funding is optimized and progress towards a robust EV charging network continues regardless of federal policy and market uncertainty or future EV adoption rate.

This Assessment calls for state-funded programs to focus on EV charging opportunities that have the highest value for Massachusetts drivers and where state-funded programs can have the greatest impact. In general, this

means targeting high-value public and fleet charging opportunities (See Chapter 4). The administrators of state-funded programs should also consider whether, if, and how they can support EV charging opportunities that maximize emissions reduction benefits (e.g., MHD fleet electrification and EV chargers for rideshare drivers) and multiple high-value use cases (e.g., fast charging along major corridors that also supports charging for residents without off-street parking or on-street charging). State-funded efforts should also seek to ensure an equitable buildout of EV charging infrastructure across the Commonwealth, particularly in areas or for customers that have historically had limited

¹⁹6,200 charging ports per year is an average over the six-year period and should not be interpreted as the benchmark in any one year as annual deployment rates are likely to increase over time.

access to EV charging infrastructure (i.e., rural communities, communities with [environmental justice populations](#),²⁰ tenants of multi-unit dwellings without off-street parking, and MHD vehicles).

The Second Assessment recommends that existing state and utility programs and initiatives continue to fund EV charging infrastructure for public use, multi-unit dwellings, workplaces, and fleets (e.g., EVIP and the EDC programs) with the following improvements to better align with high-value EV charging opportunities and to better unlock private funding:²¹

- **Minimize eligibility overlap;**
- **Improve customer communications** and publicly available information;
- Target **high-value DCFC opportunities** that, where possible and practical, serve both light- and medium-duty vehicles and multiple use cases (e.g., overnight residential

charging, rideshare and food delivery vehicle electrification, etc.); and,

- Ensure **funds are utilized on intended use cases**, where necessary and practical.

The Second Assessment also recommends that the following gaps in the EV charging network and existing program offerings be prioritized moving forward:

- Ensuring a baseline of **fast charging along secondary transportation corridors;**
- **Scaling on-street charging and charging at public transit parking lots in residential areas** to support residents without off-street EV charging, particularly in municipalities without existing on-street charging programs; and,
- **Deploying MHD fleet charging, including charging for transit fleets, at or near where fleet vehicles are housed**, both for individual fleets and at depots to serve multiple fleets.

Where we need to go – Electric grid implications of EV charging

Increased deployment of EVs and EV charging infrastructure increase electricity demand, impacting distribution and transmission grids. Building new electric grid infrastructure is expensive; thus, understanding the drivers of potential electric grid upgrades, ways to mitigate those upgrades, and alternative solutions if

an upgrade cannot be avoided will be vital to ensuring that transportation electrification is as cost-effective as possible. Managed charging is a vital tool in mitigating these costs and, if used effectively, can enable EV charging to reduce utility rates for other customers (See, e.g., [2024 Synapse analysis](#)).

²⁰An environmental justice population is a neighborhood where one or more of the following criteria are true: (a) the annual median household income is 65 percent or less of the statewide annual median household income; (b) minorities make up 40 percent or more of the population; (c) 25 percent or more of households identify as speaking English less than “very well”; (d) minorities make up 25 percent or more of the population and the annual median household income of the municipality does not exceed 150 percent of the statewide annual median household income.

²¹Importantly, the identified improvements and priority gaps to address serve as guideposts for future actions. It will take time and careful consideration for new and existing programs to align with the priorities and recommendations included in this Assessment.

The Second EVICC Assessment models four different scenarios to estimate the potential peak electricity demand of EV charging infrastructure deployment in 2030 and 2035 using EV adoption levels from the CECP. The four scenarios use the same projections of EV charging infrastructure in 2030 and 2035,²² but vary the degree to which consumers manage their EV charging to mitigate grid constraints (See Chapter 5 for more information). A summary of the outputs of the four scenarios is provided in Table 1.4.

The Second EVICC Assessment also provides an early analysis of the potential grid impacts of peak EV charging loads in 2030 and 2035 using the same four scenarios. The EVICC technical consultants analyzed whether projected EV charging would result in individual distribution feeders²³ exceeding 80% of rated capacity, which is the typical utility threshold to evaluate a feeder upgrade (See Chapter 5). Table 1.5 summarizes the results of the grid impact analysis in 2030 and 2035.

Table 1.4. 2030 and 2035 demand from EVs during peak hours

Year	Scenario 1 – Unmanaged (MW)	Scenario 2 – Flat Charging (MW)	Scenario 3 – Status Quo (MW)	Scenario 4 – Technical Potential ²⁴ (MW)
2030	1,635	1,092	1,521	253
2035	4,225	2,846	3,435	501

Both Tables 1.4 and 1.5 represent high-level analysis that lacks the benefit of the utilities’ technical and more nuanced understanding of their electric distribution systems. The results provided in the tables should be used as a starting point to engage with the utilities and

stakeholders on subsequent processes to better understand the potential electric distribution system impacts of transportation electrification (See the “Section 103 Process” discussion in Appendix 8).

Table 1.5. Overloaded Distribution Feeders in 2030 and 2035

Year	Scenario 1 – Unmanaged	Scenario 2 – Flat Charging	Scenario 3 – Status Quo	Scenario 4 – Technical Potential ^{level 14}
2030 count	288	200	265	41
% of Total Feeders*	11%	8%	10%	2%
2035 count	611	465	535	97
% of Total Feeders*	23%	18%	20%	4%

* Total feeders = 2,628

²²Scenario 1 assumes that EVs do not participate in managed charging programs. Scenario 2 assumes that EVs are charged as evenly as possible, creating a flat load curve. Scenario 3 assumes that the effectiveness and participation rate remains the same as 2024. Scenario 4 explores the outcome of fully managed flexible load.

²³A feeder carries electricity from a transmission substation after the voltage is stepped down from above 115 kV to 4-35 kV to distribution circuits that directly serve customers. Distribution circuits typically operate at even lower voltages (e.g., 120 V, 208 V, 240 V, and 480 V). Feeders and circuits are also referred to as primary and secondary distribution.

²⁴Scenario 4 is not practically possible, but serves to highlight the value of managed charging efforts.

Where we need to go – Improving the driver experience

Positive consumer experience with EV charging infrastructure is key for all stakeholders. A successful EV charging network experience considers complementary needs of diverse stakeholders.

- For drivers, an accessible, reliable, and seamless charging process enhances satisfaction and encourages EV adoption. Complicated interfaces or unreliable services can deter potential users.
- For station owners, positive user experiences attract repeat customers and build brand loyalty, potentially increasing revenue.
- For policymakers, ensuring accessible and user-friendly charging supports adoption goals by promoting EV usage.

Stakeholders and the public have identified a number of consumer experience concerns

including, but not limited to, charger reliability, the number of mobile applications needed to locate available and reliable charging infrastructure and to pay for charging services, consistent and accurate customer information, consistent charging experience and charger types, physical accessibility at charging stations, and the lack of roadway signage for charging stations.

The Second Assessment identifies issuance of the charger uptime regulations, including working with industry stakeholders on the development of such regulations and ensuring implementation of the statutory real-time data, and proliferation of the “Plug & Charge” model, which lets users start charging your EV just by plugging it in, as key to improving the EV charging experience.

Where we need to go – EV charging technology and business model innovation

As the EV charging industry grows, diverse business models have emerged to meet varying needs across the public and private sectors. These models balance financial risk, site host control, user experience, and network scalability in different ways, each presenting its own advantages and limitations.

Current EV charging business models offer a range of approaches to infrastructure deployment and management. However, these models often require significant upfront investment and ongoing maintenance responsibilities. As the EV market evolves, innovative business models are emerging to address the limitations of traditional charging infrastructure. These novel approaches aim to enhance flexibility, optimize energy usage, and improve accessibility for a broader

range of users. However, these models also face challenges, including regulatory complexities, technological integration hurdles, and the need for consumer education to ensure widespread adoption and trust in new systems.

Novel business models like Charging-as-a-Service, which offers turnkey solutions with minimal upfront costs for site hosts and long-term operations and maintenance support, are promising. The Power Purchase Agreement (PPA) model provides similar turnkey solutions and was instrumental in scaling deployment of rooftop solar in the 2010s. Finding ways to support the growth of Charging-as-a-Service and similar, turnkey business models will be key to unlocking additional private investments in the future.

How we plan to get there – Massachusetts’ strategic plan for an equitable, interconnected, accessible, and reliable EV charging network

Massachusetts has made significant progress on the development of an equitable, interconnected, accessible, and reliable EV charging network in recent years. However, in the short-term, it is imperative that EV charger deployment continues to grow despite the federal and market headwinds, that improvements are made to the customer experience, and that private funding is further leveraged. In the long-term, EV charger deployment will need to significantly increase to meet the Commonwealth’s climate requirements.

This Assessment provides insights and analysis into the future of EV charging in Massachusetts. Based on those insights and analysis, in addition to EVICC member input over the past year and public comments at the monthly EVICC meetings and public hearings on the Second EVICC Assessment, EVICC developed the following set of strategic actions to shape the future of EV charging initiatives in Massachusetts.

These actions are organized into eight areas designed to enable Massachusetts’ EV charging programs and initiatives to be more **strategic**, **efficient**, and **proactive**, while also **significantly improving the EV charging experience**.

More Strategic

1. Prioritizing Value

New and existing incentive programs designed to deploy EV charging will target the highest value charging opportunities, while also ensuring equitable deployment across the Commonwealth.

2. Unlocking Private Funding

Massachusetts will leverage private industry and funding to a greater degree by, among other efforts, enabling new EV charging business models.

3. Minimizing Grid Impact

EVICC will work with the utilities to ensure that programs and technologies are deployed to minimize the need for electric grid upgrades to accommodate EV charging. These efforts should target the highest value opportunities and be incorporated into all proactive planning efforts.

Improve Efficiency

4. Enhancing Current Programs

Administrators of existing programs will work to improve the efficiency of and coordination between programs to enhance the customer experience and stretch current funding further.

5. Reducing Barriers

EVICC will develop additional resources, among other efforts, for municipalities and potential EV charging site hosts to address barriers to deployment.

Be Proactive

6. Proactive Planning

EVICC will work with state agencies and stakeholders to execute on strategic, long-term planning efforts to ensure efficient EV charging infrastructure deployment, including through implementation of Section 103 of the [2024 Climate Act](#).

7. Sustainable Funding

EVICC will work with relevant stakeholders to explore new models to fund EV charging initiatives that leverage existing funding pathways and reduce the reliance on funding from EDC customers in the long term.

Significantly Improve the Charging Experience

8. Improving Customer Experience

Massachusetts will develop and implement tangible solutions to improve the customer experience with EV charging, including through regulations to establish minimum reliability standards, consumer price and fee structure transparency, and charging station signage.

Specific actions within these categories are included below. Ultimately, these actions will ensure that Massachusetts is well-positioned to continue its progress in deploying EV charging and provide the flexibility to effectively adapt to changing circumstances.

It is important to note that these actions are the most impactful, new efforts that EVICC

recommends advancing over the next two years; it does not capture all of the ongoing EV charging work in the Commonwealth. In fact, these actions will only be successful in achieving the intended outcomes if current programs and initiatives continue as anticipated. Additionally, actions will be prioritized based on their potential impact and available resources. Not all of these strategic actions will be fully accomplished over the next two years.

Last, while these actions largely focus on what state agencies and the legislature can do, municipalities and private actors are equally as important in realizing Massachusetts' EV charging goals. More than any other group, these two will be responsible for deploying charging infrastructure. Municipalities have the particularly important role of ensuring that residents without off-street parking have access to EV charging in public spaces. The EV transition cannot happen without empowering and partnering with private actors, such as developers and EV charging companies, and municipalities.

Recommended Actions

Prioritizing Value

- **Agency Action:** Explore the creation of an initiative focused on deploying fast charging stations along secondary corridors. (Lead(s): EEA; Support: MassDEP, MassDOT, DOER, EOED²⁵, and the EDCs)
- **Agency Action:** Develop additional initiatives to support MHD EV charging, including exploring deploying charging hubs near fleet depots and industrial zones and piloting MHD charger-sharing reservations paired with other solutions

to reduce common fleet charging barriers.

(Lead(s): EEA and MassDEP; Support: MassCEC, MassDOT, DOER, and the EDCs)

- **Agency Action:** Identify locations that could serve multiple high-value EV charging use cases including, but not limited to, (a) fast charging hubs along major transportation corridors to support long-distance travel, rideshare drivers, and residential charging and (b) charging stations at public parking lots, e.g., municipal and transit

²⁵Executive Office of Economic Development (EOED)

lots, to serve daily trips and residential charging. *(Lead(s): EEA; Support: MassDEP, MassDOT, MBTA, DOER, and the EDCs)*

- **Agency Action:** Establish partnerships with state, municipal, and stakeholder organizations to conduct tailored outreach and ways to package existing incentive programs to high-value EV charging opportunities, potentially including (i) grocery stores, (ii) big box stores,

(iii) small businesses in city centers, (iv) popular vacation and tourism destinations (e.g., hotels and resorts in the Berkshires and on Cape Cod), (v) public parking lots, e.g., transit and transportation hubs, and (vi) MHD fleets that could financially benefit from electrifying (e.g., last mile delivery and service industry vehicles). *(Lead(s): EEA; Support: EOED, MassDEP, DOER, MassDOT, MBTA, and municipal governments)*

Unlocking Private Funding

- **Agency Action:** Build on the success of MassCEC's existing innovative EV charging infrastructure programs and ACT4All, Round 2 innovative charging projects by providing resources and lessons learned to help further unlock the potential of these business and technology models. Simultaneously, look for new opportunities to test and help scale other

innovative business models. *(Lead(s): MassCEC; Support: EEA)*

- **Agency Action:** Explore ways to further unlock the Charging-as-a-Service and similar business models for publicly accessible charging. *(Lead(s): EEA; Support: MassCEC)*

Minimizing Grid Impacts

- **Agency Action:** Explore additional, innovative rate designs, novel incentive structures, and customer engagement strategies, such as active managed charging or campaigns to increase participation rates in existing managed charging programs, to maximize the practical potential of managed charging to avoid grid upgrades and minimize grid-related costs in areas that are projected to face grid constraints by 2030 or 2035. *(Lead(s): DOER and the EDCs; Support: EEA and DPU, as appropriate)*
- **Agency Action:** Develop a long-term managed charging strategy, defining program benefits, cost-effectiveness metrics, and incentive

structures, and integrating lessons learned from pilot projects and industry best practices into broader implementation. Such strategy should include relevant metrics that provide meaningful insight into the progress in developing and implementing the comprehensive strategy. *(Lead(s): DOER and the EDCs; Support: EEA and DPU, as appropriate)*

- **Agency Action:** Incorporate anticipated load reductions resulting from managed charging programs into distribution system planning efforts and plans. *(Lead(s): The EDCs; Support: DOER, EEA, and DPU, as appropriate)*

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- **Agency Action:** Work with EV charger developers to identify existing procedural and technical barriers to utilizing solar and storage technologies to support EV charging and efficient use of existing grid infrastructure and, subsequently, engage with the EDCs to explore potential solutions to the identified barriers. *(Lead(s): DOER; Support: EEA, MassCEC, DPU, as appropriate, and the EDCs)*
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- **Agency Action:** Continue ongoing coordination to identify and execute next steps related to EV load management planning and vehicle-to-everything (V2X) load dispatch capabilities. *(Lead(s): DOER and EEA; Support: MassCEC, DPU, as appropriate, and the EDCs)*

Enhancing Current Programs

- **Agency Action:** Better align MassEVIP and the EDC EV charger incentive programs by coordinating customer eligibility and program requirements to improve the customer experience and more efficiently disburse available funding. *(Lead(s): MassDEP and the EDCs; Support: EEA and DOER)*
- **Agency Action:** Ensure that future iterations of existing state-funded EV charging programs appropriately prioritize the high-value use cases identified in the Second Assessment, support development of EV charging infrastructure that serves multiple high-value use cases, where possible and appropriate, and utilize the [Guide to the Equitable Siting of Electric Vehicle Charging Stations in Environmental Justice Populations](#) as applicable. *(Lead(s): Program Administrators, i.e., MassDEP, MassCEC, DOER, and the EDCs; Support: EEA, MassDOT, MBTA, and DPU, as appropriate)*

- **Agency Action:** Leverage existing initiatives and coordination efforts to improve customer information on and access to MassEVIP, EDC, DOER, and other EV charger incentive programs. *(Lead(s): EEA; Support: MassCEC, MassDEP, and the EDCs)*
- **Agency Action:** Improve customer communications of existing incentive programs including, but not limited to, quicker response times, greater clarity on program rules and processes, and information on pending program applications, as applicable and appropriate, and public access to information on current program funding status and other relevant information to improve transparency and help stakeholders plan future EV charging infrastructure deployment more effectively. *(Lead(s): MassDEP and the EDCs; Support: EEA, DOER, DPU, as appropriate)*

Reducing Barriers

- **Agency Action:** Collaborate with the legislature and relevant stakeholders to explore ways to standardize local EV charger permitting to reduce EV charger deployment delays, including developing model ordinances. *(Lead(s): EEA and DOER)*
- **Agency Action:** Develop resources to reduce barriers for municipalities, potential EV charging site hosts, and other EV charging stakeholders similar to the [Public Level 2 EV Charging Station Fees and Policies Guide](#) including, but not limited to, guidance on how municipalities can utilize the Second EVICC Assessment, more detailed Level 2 fee guidance and DCFC fee guidance, information on EV charging station operations, maintenance, and networking, and demand charge information and best practices. *(Lead(s): EEA and EVICC member organizations with expertise related to the resource under development)"*
- **Agency Action:** Create a Municipality Resource Committee to support development of resources for municipalities, which will meet on an ad hoc basis. EEA will work with DOER's Green Communities Division and the Metropolitan Area Planning Council to identify potential committee members and others who can help develop and/or review materials and OEJE²⁶ to ensure that representation from community-based organizations and EJ populations are included. *(Lead(s): EEA; Support: DOER, MAPC, and OEJE)*
- **Agency Action:** Create and maintain a public inventory of EV chargers in Massachusetts, to the greatest extent practically possible, to inform the biennial EVICC Assessment. This inventory will leverage existing data sources and future Division of Standards (DOS) registration processes. *(Lead(s): EEA; Support: DOS)*
- **Agency Action:** Develop a public awareness campaign to educate potential EV owners on the basics of EV charging to help overcome the lack of understanding of EV charging and to dispel common misconceptions about EVs and EV charging. *(Lead(s): EEA and MassCEC)*
- **Agency Action:** Improve information sharing on existing EV charging programs and state EV charging initiatives with relevant non-profits and other organizations that may not be aware of or have had limited exposure to EVICC. *(Lead(s): EEA; Support: All EVICC member organizations)*

²⁶Office of Equity and Environmental Justice (OEJE)

Proactive Planning

- **Agency Action:** Create a planning framework for integrating EV charging infrastructure projections into electric distribution system planning through the requirements outlined in Section 103 of the 2024 Climate Act, including identifying potential grid constraints that may be caused by transportation electrification in 2030 and 2035 for further investigation by the EDCs. The framework should include the process by which the EDCs will identify and file for approval with DPU necessary grid upgrades. The framework and grid upgrades should ensure that known, high value charging locations, such as the MassDOT Service Plazas, have sufficient grid capacity to support light-, medium-, and heavy-duty EVs on the timescale needed to meet the Commonwealth's climate requirements. *(Lead(s): EEA and the EDCs; Support: DOER, MassDOT, MBTA, and DPU, as appropriate)*
- **Agency Action:** Assess grid resilience and infrastructure needs for EVs before, during,

and after major weather events and other emergency events with a particular focus on emergency vehicles and public transportation fleets, identifying key reliability gaps and backup power solutions, including off-grid and solar and storage technologies, to inform future planning. *(Lead(s): EEA; Support: DOER, MassDOT, MBTA, the EDCs, and emergency management agencies)*

- **Agency Action:** Continue ongoing coordination to identify and execute next steps related to EV charger interconnection processes. *(Lead(s): EEA, DOER, and the EDCs; Support: MassDOT, MBTA, and DPU, as appropriate)*
- **Agency Action:** Continue ongoing coordination on transportation electrification inputs and strategies for the next Clean Energy and Climate Plan (CECP). *(Lead(s): EEA; Support: DOER, MassDEP, MassCEC, MassDOT, MBTA, DPU, as appropriate, and the EDCs)*

Sustainable Funding

- **Legislative Action:** Work with stakeholders and the legislature to explore sustainable, long-term models to fund EV charging initiatives that leverage existing funding pathways and reduce

the reliance on funding from EDC customers. *(Lead(s): EEA; Support: All EVICC member organizations)*

Improving Customer Experience

- **Legislative Action (Continued from Initial Assessment):** Renew efforts to pass comprehensive “right-to-charge” legislation by expanding on the 2024 Climate Act to include renters. *(Lead(s): EEA)*
- **Legislative Action (Continued from Initial Assessment):** Expand consumer protection regulations for EV chargers by building on the 2024 Climate Act to allow DOS to enforce such regulations and to inspect the accuracy of pricing information through a charger registration process consistent with best practices in other jurisdictions. All data from the registration process must be shared with EEA for inclusion in the charger inventory. *(Lead(s): DOS and EEA)*
- **Agency Action:** Implement a phased approach to regulating the reliability of fast and Level 2 charging, setting minimum uptime standards for fast chargers installed on or after June 1, 2026. Implementation of such regulations should seek to balance the dual objectives of improving the customer EV charging experience and making any new requirements as easy to understand and implement as possible. *(Lead(s): EEA (regulation drafting); Support (as needed): MassDEP, DOER, and DPU (one will be assigned to implement the regulations))*
- **Agency Action:** Develop resources to support improvement of the customer EV charging experience, including, but not limited to, guidance on EV charging station and wayfinding signage. *(Lead(s): EEA; Support: MassDEP, DOER, MassCEC, and MassDOT)*
- **Agency Action:** Explore the development of model local ordinances and other approaches that allow municipalities, property owners, and other government entities to fine internal combustion engine vehicles for parking in EV charging parking spots, consistent with state law. *(Lead(s): EEA; Support: DOER, MassDOT, and MAPC)*
- **Agency Action:** Ensure that the [Guide to the Equitable Siting of Electric Vehicle Charging Stations in Environmental Justice Populations](#) is utilized, as applicable, in the execution of the Second EVICC Assessment recommendations. *(Lead(s): EEA; Support: All EVICC member organizations)*
- **Agency Action:** Investigate best practices and explore potential ways to support implementation of low-income discount rates and other mechanisms to financially support EJ populations in paying for EV charging if and where practical. *(Lead(s): OEJE; Support: EEA and other interested EVICC member organizations)*