

# Electric Vehicle Infrastructure Coordinating Council (EVICC) Meeting

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February 5, 2025



# Agenda

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## Opening

- Roll call, note on meeting minutes, meeting agenda, objectives, administrative updates, introduction of new EVICC consultant (10 min)

## Updates

- Notice of public hearing in utilities' EV infrastructure program mid-term modification filings (5 min)
- Presentation and vote on Public Level 2 Fees and Policies Guide for Owner-Operators (10 min)
- MassCEC curbside charging program (5 min)
- 2024 Massachusetts EV and EV charging data overview (10 min)

## Educational Presentations / Discussions

- Plug In America Presentation on the EV Charging Experience (15 min)
- Overview of Second EVICC Assessment Objectives and Report Outline (5 min)
- Overview of Detailed Outlines for Customer Experience and Business Models EVICC Assessment Sections (10 min)
- Guided Discussion on Customer Experience and Business Model EVICC Assessment Sections (35 min)

## Public Comment



# Meeting Objectives

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- Update on charging resource guide development, overview of 2024 EV and EV charging statistics, and MassCEC mobile charging program
- Reminder of DPU public hearing today on the utilities' EV program filings
- Learn about customer experience with EV charging
- Discuss the outline of the second EVICC assessment

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



# Rules for Presentations / Public Comment

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## **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



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# New EVICC Consultant Introduction



# Administrative Updates

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## In-Person EVICC Public Meetings

- Starting at the April 2 meeting, EVICC meetings will be held in a hybrid format and a quorum of members must be physically present to comply with open meeting law.

## Second Assessment Public Hearings

- EVICC will be holding four in-person public hearings to inform the Second EVICC Assessment in March:
  - Western MA (evening)
  - Central MA (evening)
  - South Shore or South Coast (evening)
  - Boston (mid-day, hybrid)
- EVICC will circulate the dates and times of the public meetings to mailing list once confirmed
- **Discussion question:** do we have specific topics that we'd like input on from the public?

## Additional EVICC Members

- The 2024 Climate Act added a representative from MassCEC and an additional representative from EOED starting February 18, 2025



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# Updates



# DPU Public Hearing Notice

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- The Department of Public Utilities (DPU) is holding a virtual public hearing **today at 3:00 p.m.** on the utilities' EV infrastructure program mid-term modification filings.
  - Relevant dockets:
    - D.P.U. 24-195 (NSTAR Electric Company)
    - D.P.U. 24-196 (National Grid)
    - D.P.U. 24-197 (Unitil)
- Interested stakeholders can attend today's virtual DPU public hearing using the following link: <https://us06web.zoom.us/j/87660410767>.





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# **Electric Vehicle (EV) Charging Station Owner- Operator Resource**

*Public Level 2 EV Charging Station Fees and Policies Guide*



Appropriate usage and additional parking/idle fees at publicly accessible EV charging stations are necessary to ensure optimal usage of EV charging stations and positive customer experiences, both of which are vital to increased EV adoption. Below are typical EV charging structure types and principles for consideration in setting EV charging rates to deliver optimal usage and positive customer experience.<sup>1</sup>

### Recommended Fee Types for EV Charging Stations

**Energy-Based Charging Fee:** A fee based on the total amount of electricity (measured in kilowatt-hours, kWh) used by the vehicle while charging; the fee amount may vary based on time of day. This fee type is preferred for its predictable revenue for station owner-operators and predictable cost to vehicle owners.

**Idle Parking Fee:** Additional fee charged if the vehicle stays plugged in after it's done charging. This fee type encourages drivers to move their cars once charging is complete and is considered a best practice.

### Best Practices for Setting EV Energy-Based Charging Fees

Energy-based fees should be set carefully, balancing affordability for users with the need to cover costs and, as applicable, achieve revenue goals. Multiple factors should be considered when setting an energy-based fee, including local electricity rates, operational expenses, and the competitive landscape.

#### Benefits of Balanced (i.e., Not Too High or Low) Energy-Based Fees for EV Charging Stations

Benefits if the fee is not too low:

- Encourages drivers with access to home charging to primarily charge at home
- Helps ensure garage orphans (people without home charging) can access stations
- Reduces congestion so that public resources are available for drivers when needed (e.g., long trips, etc.)
- Financially supports the operation and maintenance of the charging station

Benefits if the fee is not too high:

- Increases site utilization percentage when rates are competitive compared with other options
- Enables garage orphans to transition to electric vehicles without being hindered by high charging costs

By setting energy-based fees thoughtfully, station owners can strike the right balance between affordability, utilization and optionally, profitability — ensuring sustainable and successful operation.

#### How to set an energy-based charging fee:

**1. Start with Local Residential Electricity Rates:** These rates provide a baseline for users' expectations since they are familiar with what they pay to charge their EVs at home and will likely continue to charge primarily at home if public charging rates are no less than their home charging cost.

**2. Incremental Adjustment for Additional Costs:** Charging station owners face additional costs beyond electricity, such as equipment maintenance, network fees, and property expenses. To account for these, the energy-based fee should be incrementally higher than residential rates—but not excessively so.

**3. Avoid Extreme Pricing:** Setting rates too low (e.g., below residential electricity rates) can impact the financial sustainability of charging stations and attract local drivers who would otherwise charge at home. Conversely, rates that are too high (e.g., significantly above residential rates) can deter EV drivers from using the station. High fees reduce station utilization and can lower total revenue despite the higher price.

<sup>1</sup> Signage at publicly accessible EV charging stations is also important to deliver these outcomes. Best practices on station signage design and language will be provided in a separate guidance document.

#### Example 2024 EV Energy-Based Fee Range:

A reasonable range for energy-based charging fees in 2024 was **\$0.30 to \$0.40 per kWh**, depending on local electricity rates and site-specific factors. This range allows for sufficient cost recovery while remaining competitive and appealing to EV drivers. For a specific example calculation, see the supplementary guide "*Determining an Appropriate Energy-Based Charging Fee.*"

### Best Practices for Setting EV Parking/Idle Fees

Implementing parking or idle fees at EV charging stations encourages efficient use of charging infrastructure while promoting equitable access for all users. These fees are typically applied when vehicles remain parked beyond their charging session.

#### Benefits of EV Parking/Idle Fees

- Discourages non-charging EVs from parking in the spots
- Reduces congestion and supports quick turnover for better availability
- Increases public understanding of EV charging etiquette and proper use
- Aligns with sustainability goals by ensuring chargers are used more efficiently
- Ensures station owners are compensated for lost opportunity for charging revenue

Ultimately, parking/idle fees can help address issues such as charger congestion and availability, supporting responsible use of EV charging resources and financial sustainability for charging stations.

#### How to set a parking or idle fee:

A parking/idle fee should start after the vehicle is fully charged or after a preferred amount of charging session time (such as 2 to 6 hours). The fee should be set high enough to cover the lost charging opportunity cost (i.e., the energy-based charging fee converted into a typical per minute or hour amount). It should also be set above any parking fee for non-EV charging spaces, as applicable. This will encourage turnover and discourage drivers from misuse by parking fully charged for extended periods.

**Example 2024 EV Parking/Idle Fee Range:** \$3.00-\$12.00 per hour (levied typically as \$0.05 to \$0.20 per minute)

#### Best Practice:

Implement a grace period (e.g., 15-30 minutes) after charging is complete before the idle fee starts, so drivers have time to move their vehicles. Communicate fee change through signage / messaging. Consider potential adverse customer experience of high idle fees; use a daily cap of fees above example range.

### Alternative Fee Types

There are alternative approaches to charging service fees, each with unique considerations and applications. Three common alternative fee types, their use case scenarios, and potential impacts are outlined below. These fees are not typically recommended unless there is a clear policy rationale, such as enabling novel applications.

• **Parking Time Fee:** How long the vehicle is parked and connected (charging or not) measured in minutes or hours. This fee is not tied to the amount of energy provided, creating potential inequities between charging and equivalent gasoline costs based on an EV's charging capabilities.

• **Connection Fee:** A set fee for connecting to the charger, no matter how much energy you use or how long you charge. This fee type can discourage use.

• **Flat Fee:** A single fixed amount charged per session, regardless of time or the energy used. This fee can result in inconsistent charging revenue and inequities between charging and gasoline costs.

Examples of time-based and flat fees to book charging services are emerging and may be appropriate. Such fees should be clearly communicated and converted into likely or actual, after-the-fact energy-based fees.



## Determining an Appropriate Energy-Based Charging Fee



This document provides an example calculation for setting fair and sustainable energy-based fees for electric vehicle (EV) charging stations. An appropriate fee ensures financial sustainability for station owners while remaining attractive to EV drivers. Below are key points explaining the rationale and process for determining these fees.

### Key Points

- **Align with User Expectations:** Start with local residential electricity rates to establish a baseline, as EV drivers compare public charging costs to home charging.
- **Account for Operating Costs:** Incrementally increase fees above residential rates to cover additional expenses, including maintenance, network fees, and site costs.
- **Maintain Balance:** Avoid rates that are too low, which could attract home chargers and impact station sustainability, or too high, which could deter users and reduce utilization.
- **Target Range:** A suggested range for 2025 is \$0.30 to \$0.40 per kWh, balancing cost recovery with competitiveness.

### Sample Calculation: Setting an Energy-Based Charging Fee

To determine an appropriate per kWh fee:

#### 1. Start with Local Residential Electricity Rates

Massachusetts average residential electricity rate (2024): \$0.29 per kWh

#### 2. Add Incremental Adjustment for Costs

Estimate additional costs (e.g., maintenance, network fees, property expenses)  
Incremental adjustment: \$0.08 per kWh.\*

\*How was this estimated?

- 1. Annual Costs:** Include network fees (\$1,200) and maintenance (\$500) totaling **\$1,700 annually**.
- 2. Projected Energy Sales:** Assume **12.5% average utilization** for two Level 2 chargers (7.2 kW) operating eight (8) hours/day combined, resulting in **21,024 kWh/year**.
- 3. Incremental Adjustment Formula:** Divide total costs by annual energy sales to calculate the adjustment per kWh.

$$\text{Incremental adjustment} = \frac{\text{Total Additional Costs}}{\text{Annual Energy Sales}}$$

Formula:

#### 3. Calculate Total Energy-Based Fee

Add the residential rate to the adjustment:  
Charging fee =  $0.29 + 0.08 = \$0.37$  per kWh

#### 4. Confirm Alignment with Recommended Range

The calculated fee of \$0.37 per kWh falls within the reasonable 2024 range of \$0.30 to \$0.40 per kWh.

### Summary

Setting an appropriate per kWh charging fee ensures a balance between cost recovery and user appeal. A well-calculated fee, like \$0.37 per kWh, enables station owners to cover operational costs, attract EV drivers, and encourage public charging use. By aligning fees with user expectations and site-specific needs, operators can promote EV adoption and maintain financial sustainability.



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# **Vote on Adoption of Public Level 2 EV Charging Station Fees and Policies Guide**



# On-Street Charging Solutions Program



# Program Overview

## BARRIERS

- ▶ Access to charging is a significant barrier to EV adoption for renters, residents of multi-unit dwellings, residents of low-income housing, and residents without a dedicated garage, driveway, and/or parking space



## PROGRAM GOALS

- ▶ Increase access to On-Street Charging and reduce barriers to EV adoption in Environmental Justice Communities (EJCs) throughout the Commonwealth;
- ▶ Pilot innovative On-Street Charging models (pole-mounted, streetlight, pedestal mounted) that can be replicated and scaled across MA; and
- ▶ Develop a guidebook to support municipalities deploying similar curbside charging programs

## PROGRAM TEAM

- ▶ Commonwealth Electrical Technologies, Leidos
  - [Evcharging@comelectrical.com](mailto:Evcharging@comelectrical.com)

# Municipalities Can Apply for 1 of 2 Services

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## Pathway 1: Feasibility Study

**Up to 25  
municipalities**  
will receive EV  
charging station  
planning support  
& feasibility  
studies ***at no cost***

**OR**

## Pathway 2: Implementation

**Up to 15  
municipalities**  
will receive EV  
charging station  
installation at up  
to three sites ***at  
no cost***

# Target Participants

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- All Massachusetts Municipalities are encouraged to apply
- Municipalities selected for participation will be scored on various criteria, included but not limited to:
  - Percentage of Environmental Justice Communities
  - Percentage of renters
  - Geographic location
  - Available on-street parking near multi-unit dwellings
  - Must be able to adhere to accelerated program timeline (Nov 2024-Dec 2026)



# Upcoming Deadlines + Resources

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## ➤ Municipal Application

- Due **Friday, February 14<sup>th</sup> at 5:00 PM ET.**

## ➤ If selected, Memorandum of Understanding signed **March '25**

## ➤ For more information, please visit MassCEC's On-Street Charging Solutions Webpage

- Application materials
- Webinar recordings

## ➤ Contact Information

- [Evcharging@comelectrical.com](mailto:Evcharging@comelectrical.com)
- [Cleantransportation@masscec.com](mailto:Cleantransportation@masscec.com)

**Thank you!**

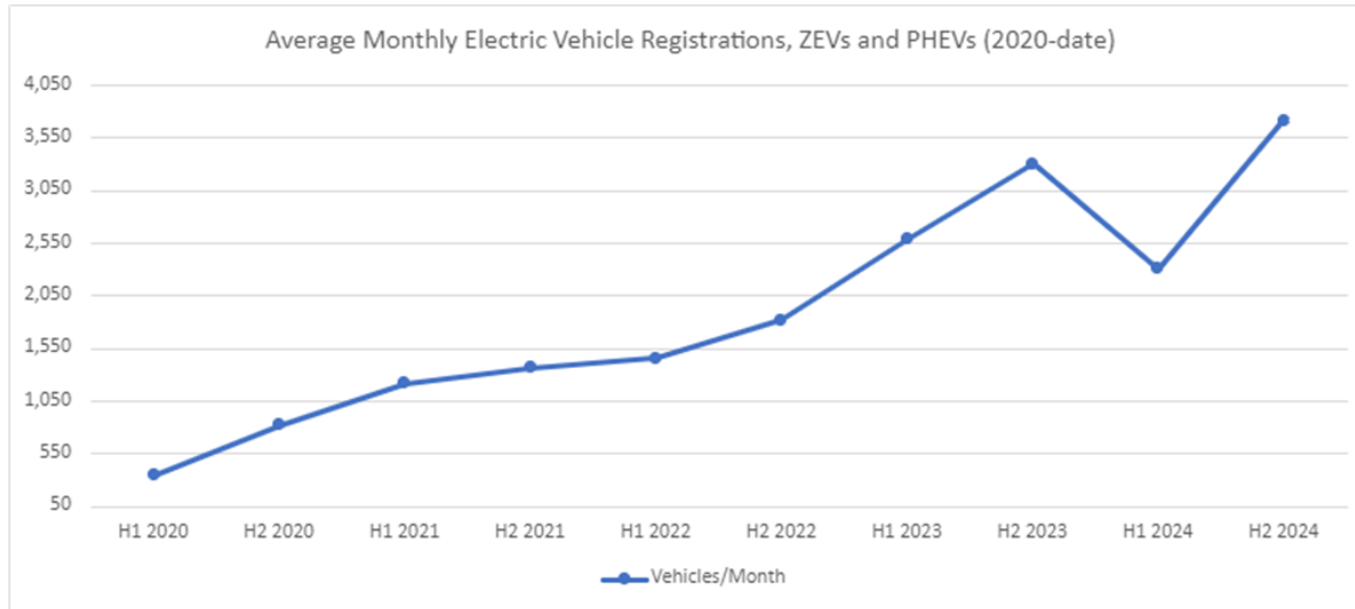




# 2024 State EV Registrations

## EV Deployment Takeaways

- 140,000 registered EVs is slightly below 2024 target of 150,000; positive overall trend



		Total Active Registration	2024 New Registrations
Vehicle Registrations  *includes medium- and heavy-duty target	Light duty battery electric (BEV) and hydrogen fuel cell	89,633	24,078
	Light duty plug-in hybrid electric vehicle (PHEV)	50,331	11,901
	<b>Total light duty including PHEV</b>	<b>139,964</b>	<b>35,979</b>
	Medium and heavy-duty BEV and hydrogen fuel cell	301	208
	Medium and heavy-duty PHEV	2	0
	<b>Total medium and heavy-duty including PHEV</b>	<b>303</b>	<b>208</b>

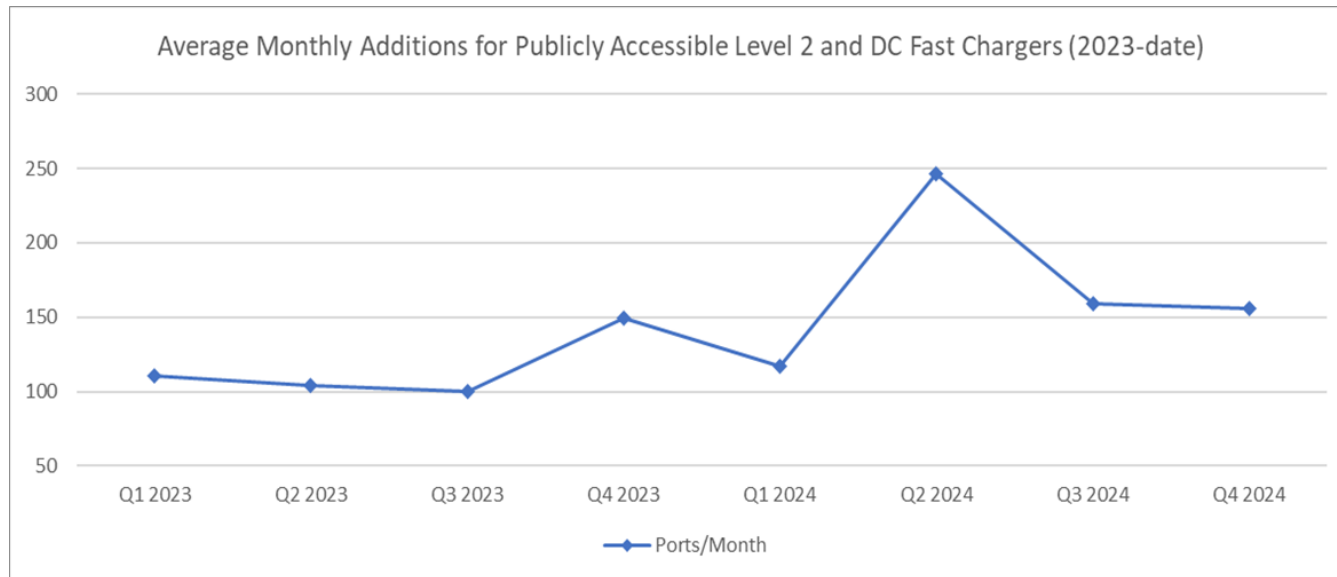
- November 2024 was the single highest month for light-duty EV registrations at 6,377
- If the November and December 2025 registration rate is maintained (~5,500 per month), MA will have ~205,000 registered light-duty EVs on the road by the end of 2025
  - The 2025/2030 Clean Energy and Climate Plan (CECP) target for the end of 2025 is 200,000



# 2024 State EV Charging Deployment

## EV Charger Deployment Takeaways

- Fast charger deployment continues to track CECP targets
- MA is likely on track with Level 2 charger deployment as well, as the CECP target includes workplace charging
  - MA does not comprehensively track workplace chargers; thus, a more appropriate target omits that category
  - EEA will explore updating these targets in the Second EVICC Assessment



		Total Installed	2024 Installations	2024 Target* (Extrapolated from CECP)	Est. Revised 2024 Target** (Based on Preliminary Analysis for Assessment)
Public Charging Ports (# of ports)	Public Level 2 Chargers	7,727	1,653	2,304	1,300
	Public DC Fast Chargers	1,075	382	408	300
	Public Chargers (all types)	8,802	2,035	2,712	1,600

\*CECP Target is 15,000 total chargers in 2025; First EVICC Assessment used to extrapolate 2024 Target  
 \*\*Illustrative example; any updated targets would be made prospectively

- [Alliance for Automotive Innovation Third Quarter 2024](#) report shows Massachusetts is the furthest along in deploying charging infrastructure amongst Advanced Clean Cars II states



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# Presentations



# The EV Charging Experience

February 5, 2025

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## About **Plug In America**

**Plug In America is a national nonprofit organization with a mission to accelerate the transition to affordable and accessible plug-in vehicles and charging through **education, advocacy and research.****

Through our work, we hope to see our vision—a transportation future free of fossil fuels—become a reality.

# Driver Experience: Overall EV Satisfaction

~90%

of EV drivers answered that it is likely that their next vehicle purchase will be an EV.



## 2024 Plug In America Annual Survey Insights

**FIGURE 10:**

Percentage of Tesla fast charger users that labeled each fast charging experience as a 'major' or 'moderate' concern

AMENITIES AVAILABLE AT CHARGING STATIONS	57.1%
CHARGING COST IS TOO HIGH	44.8%
NOT ENOUGH CHARGERS AT EACH LOCATION	44.4%
CHARGERS ARE BLOCKED BY ICE VEHICLES OR NON-CHARGING EVs	40.9%
CHARGING LOCATIONS ARE TOO FAR APART	39.7%
CHARGING SPEED IS TOO SLOW	34.4%
CHARGERS ARE NON-FUNCTIONAL OR BROKEN	31.4%
CHARGING LOCATION FEELS UNSAFE	26.5%
STATIONS LACK CREDIT CARD READERS	12.6%

**FIGURE 11:**

Percentage of non-Tesla fast charger users that labeled each fast charging experience as a 'major' or 'moderate' concern

CHARGERS ARE NON-FUNCTIONAL OR BROKEN	91.8%
NOT ENOUGH CHARGERS AT EACH LOCATION	86.1%
CHARGING LOCATIONS ARE TOO FAR APART	79.7%
CHARGING SPEED IS TOO SLOW	71.7%
AMENITIES AVAILABLE AT CHARGING STATIONS	70.0%
CHARGING COST IS TOO HIGH	68.6%
CHARGERS ARE BLOCKED BY ICE VEHICLES OR NON-CHARGING EVs	60.4%
STATIONS LACK CREDIT CARD READERS	45.3%
CHARGING LOCATION FEELS UNSAFE	41.7%

# 2024 Public Charging Experience Survey Insights

## Driver Experience: Charging Availability

38%

of EV drivers said that **they are satisfied** with the quantity of public chargers near them.

Less than **30%** of respondents who primarily use fast-charging networks like Electrify America, ChargePoint, and EVgo said they are satisfied.

## Driver Experience: Charging Reliability

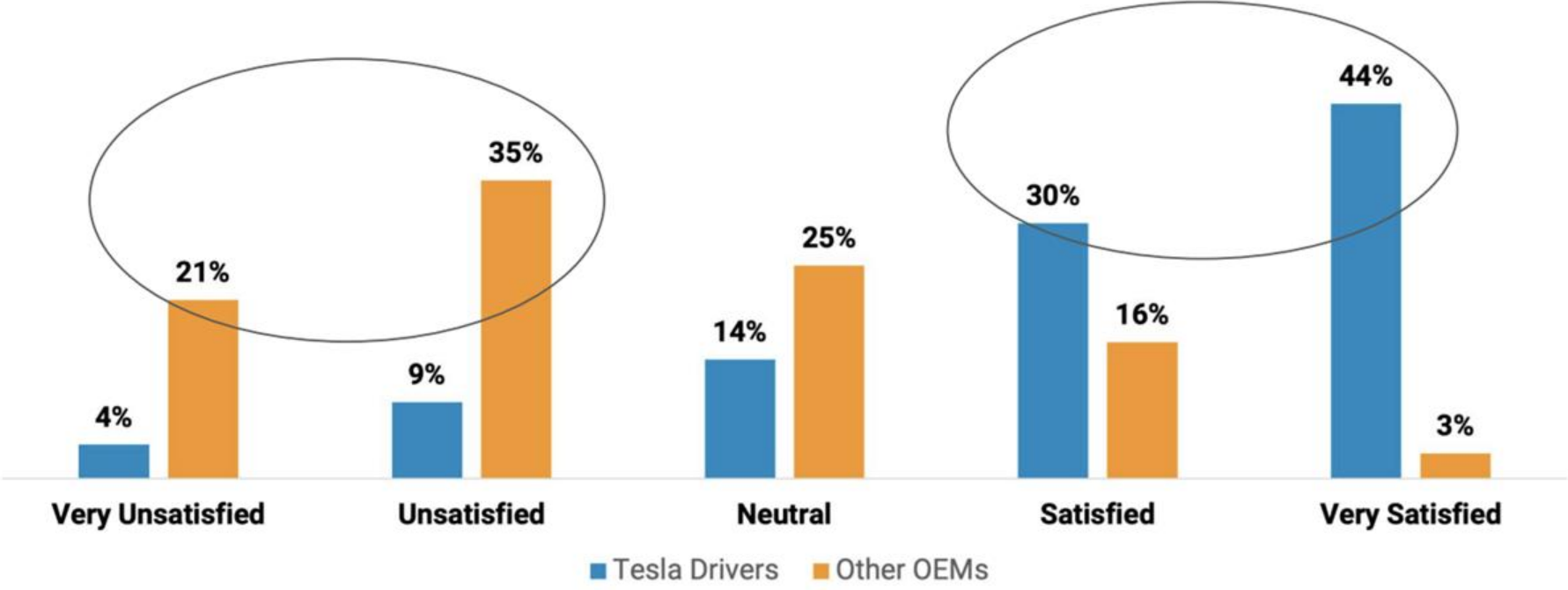
40%

of EV drivers overall said that **they are satisfied** with public charger reliability.

Broken and nonfunctional chargers are the biggest public charging issue.

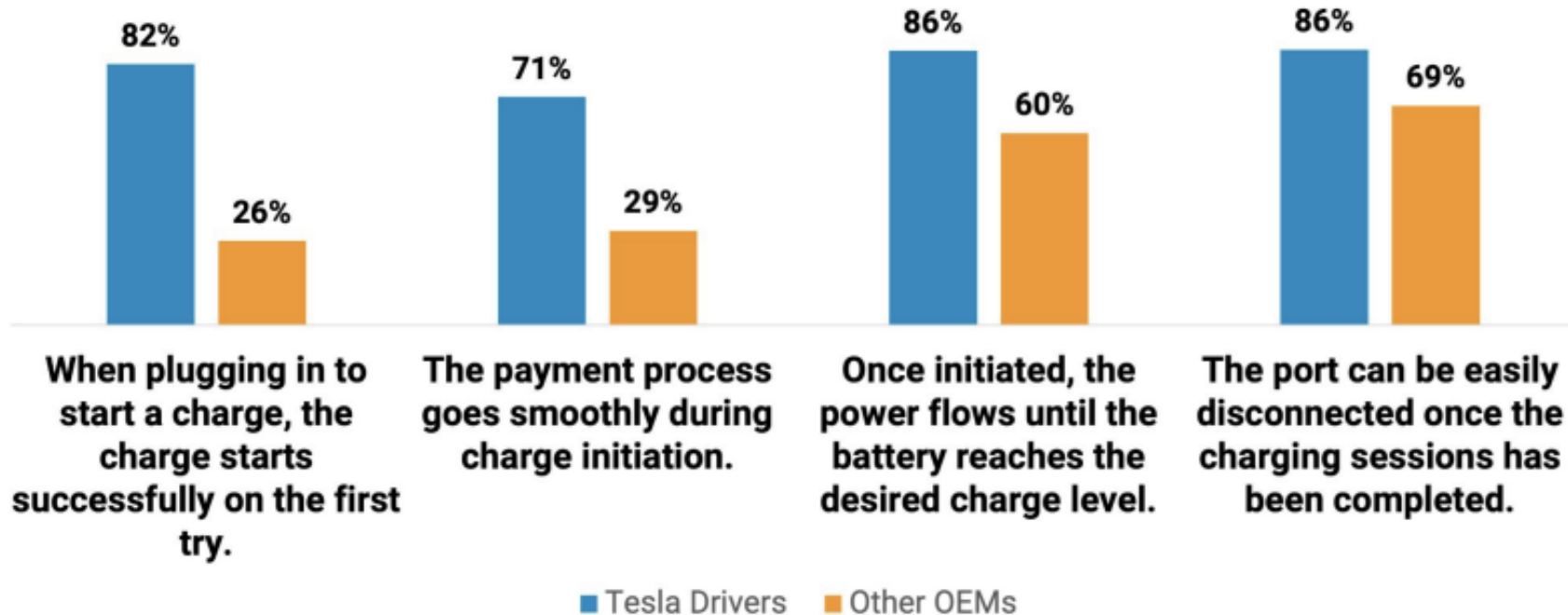
# Driver Experience: Charging Reliability

How satisfied are you with public charger reliability?



# Driver Experience: Charging Reliability

Which of the following have you consistently experienced at a public charging station in the past year?



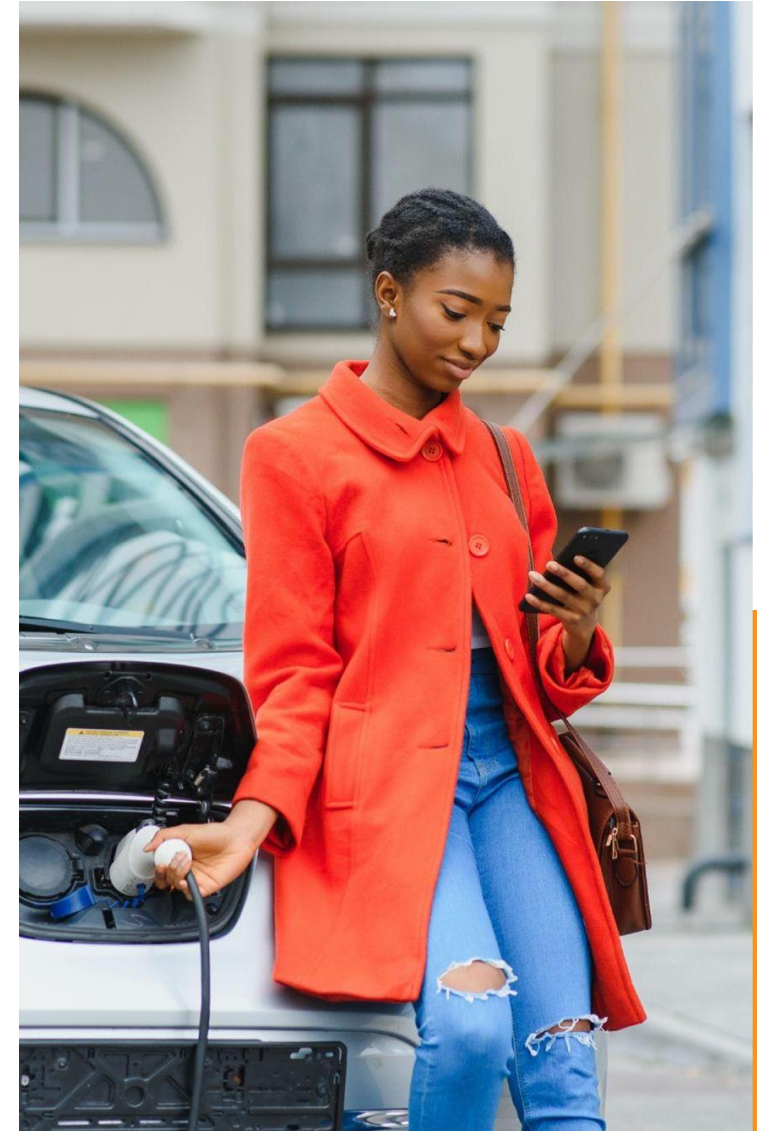
## **Driver Experience:** **Charging Decisions**

### **EV drivers often plan their charging stops before driving.**

Almost half of EV driver respondents said they plan out their stops for charging before getting on the road, with only 9% saying that they decide while on the road.

### **PlugShare is widely used and well-liked.**

PlugShare was cited as the most popular public charging phone app.



## Best in Class Consumer Charging Experience

### ACCESS

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Comprehensive charging location deployment

Sufficient chargers at each location

Affordable and transparent pricing

### RELIABILITY

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99% uptime

Timely maintenance and repair

Customer support

### SEAMLESS PAYMENT

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Plug & Charge

Variety of payment options

No app membership requirement

### SAFETY AND AMENITIES

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Clean and well-maintained locations

Safety features (lighting, etc)

Co-location with or creation of amenities

**DRIVER EDUCATION AND AWARENESS**





**Questions?**

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# Second Assessment of the Electric Vehicle Infrastructure Coordinating Council (EVICC)

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*Due August 11, 2025*



# First EVICC Assessment

- [The First Assessment](#) was filed on August 11, 2023
- **Takeaways**
  - Additional EV charging infrastructure is needed to meet the Commonwealth’s climate goals
  - Customer charging experience needs improvement
  - Massachusetts should prioritize charger access for “garage orphans”, renters, and rural communities
- **Follow-On Work**
  - Analysis of fast chargers for multi-unit buildings and long-distance trips, and associated grid impact ([See Synapse analysis](#))
  - State and federal program clearinghouse (MassCEC)
  - Curbside charging, three other new MassCEC programs
  - Environmental Justice community siting resource(s)
  - Medium- and heavy-duty fleet charging analysis
  - Assessment of the role of private vs. public entities





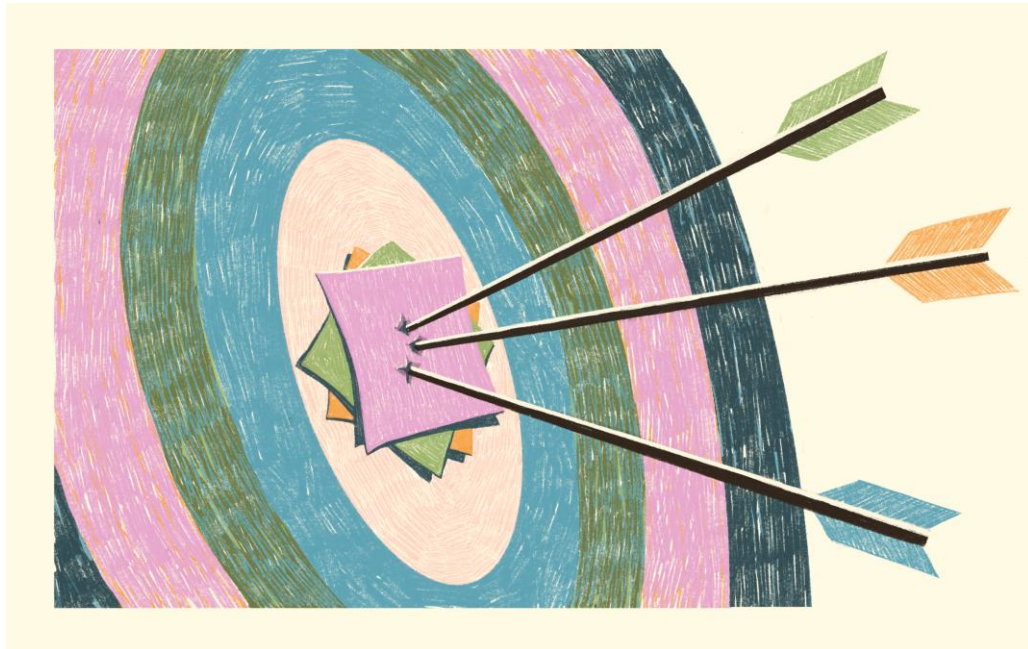
## Second Assessment Objectives

- The Assessment will provide a **clear roadmap** for *how* Massachusetts plans to deploy the necessary EV charging infrastructure to meet the state's climate goals and other policy objectives ***through 2035***.



## Second Assessment Objectives (cont.)

- **The Assessment will provide this roadmap by clearly laying out:**
  - The current state of EV charging in Massachusetts;
  - The likely endpoint to meet the Commonwealth’s policy goals; and,
  - EVICC’s recommendations on how to get from here to the desired endpoint.



- **Each recommendations will identify:**
  - Which state agency or agencies will support / lead implementation; and,
  - The role of local/regional governments, private companies, and electric utilities.
- **The Assessment will also highlight:**
  - The interrelation with the state’s Clean Energy and Climate Plan (CECP) for 2025 and 2030; and,
  - The role of EVICC in coordinating recommendation implementation.

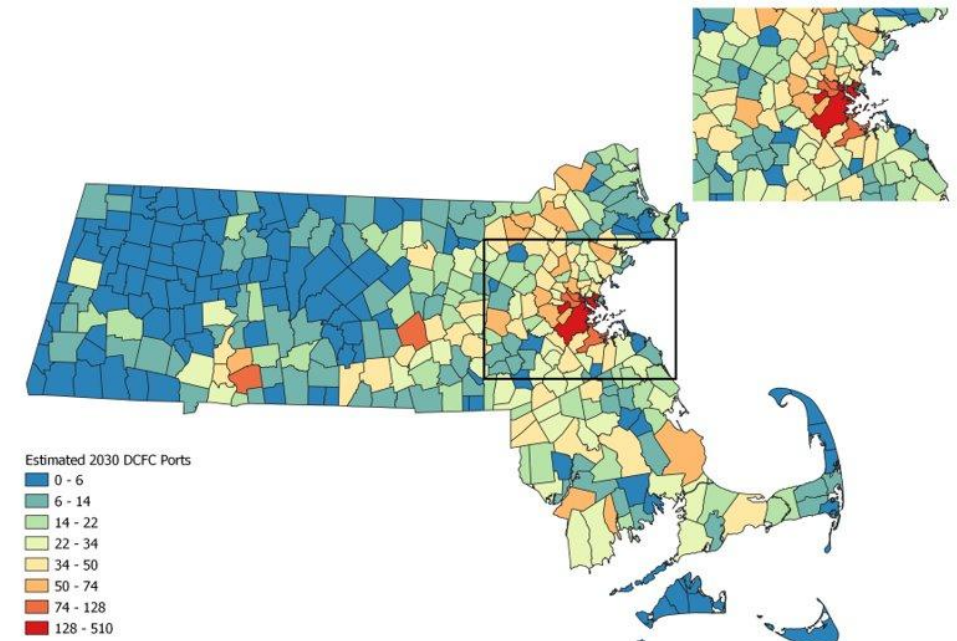




## New Technical Analysis

- As EVICC moves from its First Assessment, the technical analysis must, necessarily, become more granular.
  - EVICC will develop strategies to address areas for improvement identified by the Second Assessment.
- The Second Assessment will include, as **time, resources, and data availability** allow:
  - Analysis of statewide public, multi-family, workplace, and medium- and heavy-duty EV charger deployment and pace of deployment compared against the Commonwealth's goals;
  - A granular evaluation of the type and location of EV chargers needed, focused on multi-family dwellings w/o off-street parking, EJ and rural communities, and medium- and heavy-duty fleets;
  - Identification of geographies that require greater deployment and/or pace of deployment; and,
  - Identification of electric distribution feeders that may require upgrades to accommodate electrification regardless of managed charging strategies.

(Section 103 of the [2024 Climate Act](#) added additional process commencing after the Second Assessment to further address)





# Overview of Draft Assessment Outline

1. **Executive Summary:** Clearly conveys the state's plan to meet 2030/2035 EV charger needs and EVICC's recommendations
2. **Purpose and Context:** EVICC background; policy background; and development of Second Assessment
3. **Current EV Charging Programs and Initiatives**
4. **EV Charger Deployment**
5. **Electric Grid Impacts and Managed Charging**
6. **Consumer Charging Experience**
7. **EV Charging Technology and Business Model Innovation**
8. **Summary/Conclusion**
9. **Appendices**
  - Detailed 2030 and 2035 EV charger needs projections methodology
  - One-page summary of existing state EV-related programs by program type (e.g., make-ready, vehicle, and charger incentive programs)
  - Charging fee principles, inclusive of common fee structures and level of fees, and other educational materials for EV charging customers and EV charger site hosts
  - EJ Community Siting Guide
  - Summary status of recommendations from First Assessment
  - Information on non-infrastructure EV programs and initiatives (e.g., MOR-EV, Accelerating Clean Transportation (ACT) School Bus, state employee domicile EV policy, etc.)



**Today's Discussion**



## Consumer Charging Experience Section

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- **User experience objectives**
- **Overview of key customer experience considerations and why they matter, including the current (real and perceived) state of each consideration**
- **Summary of current and proposed charger reliability, registration, data sharing, and operational standards**
  - Overview of best practices
  - Summary of current state and federal legislative and regulatory requirements
  - State program requirements
  - Other states
- **Background on EVICC technical committee**
- **Summary of existing consumer resources**
  - Charger apps and website resources for customers
- **Recommendations**





## Consumer Charging Experience Section (cont.)

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- **Discussion Questions:**

- Are these the right “user experience objectives”?
  - **Drivers:** A seamless and intuitive charging process enhances satisfaction and encourages EV adoption. Complicated interfaces or unreliable services can deter potential users.
  - **Station Owners:** Positive user experiences attract repeat customers and build brand loyalty, potentially increasing revenue.
  - **Policy Makers:** Ensuring accessible and user-friendly charging supports adoption goals by promoting EV usage.
- Are these the right “key consumer experience considerations”? Is there anything that we should add?
  - Reliability
  - Data sharing
  - Charger registration
  - Consumer disclosure and payment
  - Operational standards
  - Other consumer protections
    - ADA compliance
    - Parking spacing
    - Charge fee types
    - Signage



## Consumer Charging Experience Section (cont.)

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- **Discussion Questions:**

- Are we missing any charger apps or website resources that should be highlighted to customers?
  - Charging Network Apps (e.g., PlugShare, ChargePoint): Provide real-time information on charger locations, availability, and user reviews
  - Navigation System Integration (e.g., Tesla, Google Maps): Enables seamless route planning with charging stops
  - Subscription Services (e.g., Electrify America Pass): Offer discounted rates and exclusive access to networks
  - Customer Support Lines: Provide assistance for technical issues or billing questions
  - Educational Materials (e.g., how-to guides, tutorials): Help new EV drivers understand charging processes and options
  - Government Resources and Incentives Information
    - EV pages on MassCEC’s Clean Energy Lives Here website and call center
    - EV Charging Station Owner-Operator Resources developed by EVICC Technical Committee
- Are there any recommendations that we should explicitly be exploring?
  - For example: working with Google and others to ensure that EV charging data is available on common map apps
  - For example: develop guidance for site owners on the types of chargers best suited for different applications
- Anything else that should be included in this section?



# EV Charging Technology and Business Model Innovation

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- **Overview of current charging business models**
  - Summary of model types
  - Benefits and barriers of current models
- **Overview of novel business models**
  - Examples of novel models and the challenges they address
  - Benefits and barriers of new models
- **Overview of emerging EV charging technologies**
- **Concerns and potential solutions for EV charging business models**
- **Recommendations**



## EV Charging Technology and Business Model Innovation (cont.)

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- **Discussion Questions:**

- Are these the right categories of “current charging business models”?
  - Host-Owned
  - Public Ownership
  - Utility-Owned
  - Charge Point Operator (CPO)
  - Franchising, Advertising & Sponsorship
  - Charging as a Service (CaaS)
  
- Are these the right categories of “novel business models”? Any that we should add?
  - Turnkey Solutions
  - Dynamic Pricing Strategies
  - Mobile Charging Services
  - Energy-as-a-Service



## EV Charging Technology and Business Model Innovation (cont.)

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- **Discussion Questions:**
  - Are these the right categories of “emerging EV charging technologies”?
    - Battery innovations
    - Charging technology advances
    - Customer experience enhancements
    - Smart charging solutions
    - Storage integration
    - Renewable energy integration
  - Are these the right categories of “concerns and potential solutions”? Any that we should add, subtract, or combine?
    - Infrastructure Costs
    - Energy Pricing
    - Utilization Rates
    - Revenue Streams
    - Consumer Convenience
    - Interoperability
    - Grid Dependency
    - Government Incentives
    - Technology Evolution
    - Battery Advancements
    - Sustainability
    - Cybersecurity
    - Supply Chains



## EV Charging Technology and Business Model Innovation (cont.)

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- **Discussion Questions:**

- Are these the right categories of “recommendations”?
  - Partnerships
  - Pricing
  - Data management
  - Siting
  - Standards and policy alignment
  - Financing
- Are there any recommendations that we should explicitly be exploring within the above categories?
- Anything else that should be included in this section?



## Second Assessment Work Schedule

- **February 2025:** Assessment outline completed, and drafting of select sections begins
- **March 2025:** Public hearings are held for Assessment input
- **By May 1, 2025:**
  - Assessment analysis completed
  - Agencies complete assigned sections
- **June-July 2025:** EVICC members review Assessment
- **August 11, 2025:** Second EVICC Assessment sent to the Legislature
- **August 2025:** Public webinar on Second Assessment





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# Public Comment