NARUC Electric Vehicles State Working Group

UTILITY-OWNERSHIP MODELS AND BEST PRACTICES FOR EVSE

NOVEMBER 18, 3:00 - 4:30 PM ET

Welcome

EV SWG Chair

Commissioner Katherine Peretick, Michigan Public Service Commission

EV SWG Vice Chair

Commissioner Milt Doumit, Washington Utilities and Transportation Commission

EV Commission Staff Leads

Benjamin Baker, Maryland Public Service Commission

Steve Olea, Arizona Corporate Commission

NARUC Staff

Danielle Sass Byrnett

Margerie Snider, Jessica Diaz

Agenda

Feel free to enter questions into chat at any time

3:00 PM	**Welcome and Announcements**
3:05 PM	**Moderators:** Al Freeman, MI PSC and Aaron Cahen, WA UTC **Speakers:** • Jason Ball, LBNL • Christine Holland, PNNL • Wilfried Kabre, PNNL • Brittany Tarufelli, PNNL
4:05 PM	**Member Discussion**
4:15 PM	**NARUC 2026 Work Product Topics: Discussion & Voting**
4:30 PM	**Adjourn**

Next EV SWG Meetings:

December 16, 3:00-4:30 pm ET
Proactive Infrastructure Investments & Planning

January 13, 3:00-4:30 pm ET
Member Roundtable

Upcoming Partner & NARUC EV Events

- **NASEO-AASHTO Eastern U.S. EV Charging Infrastructure Regional Meeting**
  December 9-10, 2025 in Washington, DC - https://naseo.org/event?EventID=9521
- **NARUC Winter Policy Summit** including EV Workshop on Affordability & Load Growth
  February 8-11, 2026 in Washington, DC
- **Alliance for Transportation Electrification Annual Meeting**
  March 5-6, 2026 in Washington, DC

If travel costs are a barrier to you attending one of these partner events, contact Danielle to discuss the possibility of a NARUC travel stipend.

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NARUC – Utility Ownership Models for Electric Vehicle Supply Equipment

Jason Ball

Marcus De La Rosa

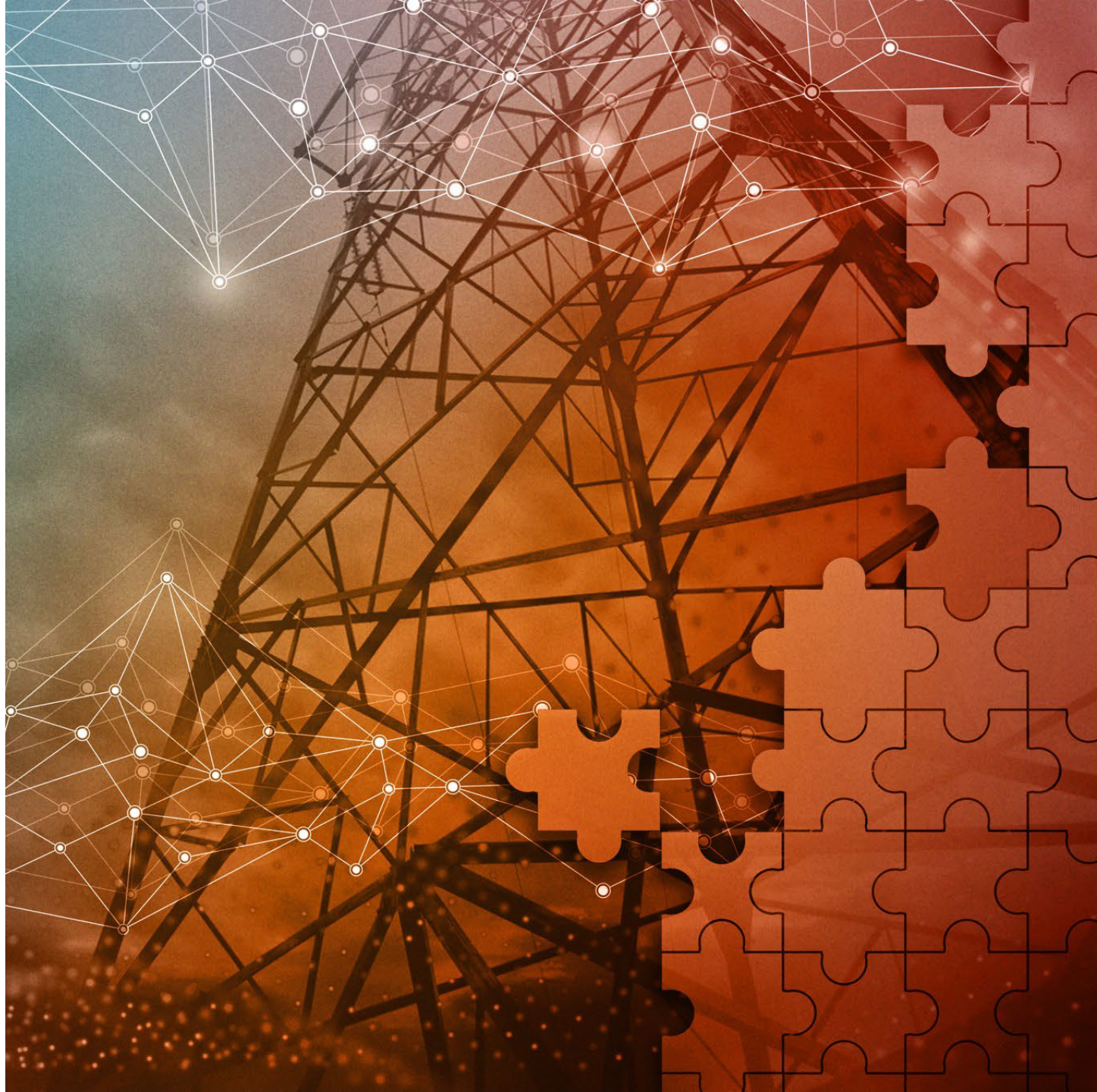
Prathit Dave

Christine Holland

Wilfried Kabre

Brittany Tarufelli

November 18, 2025



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Project Overview

This technical assistance supports the NARUC EV State Working Group by providing a "deep dive" on Electric Vehicle Supply Equipment (EVSE) ownership models and lessons learned.

The State Working Group is looking for an inventory of approaches regarding decision data and approval patterns, program evaluation, cost impacts, and innovative approaches to encourage EVSE deployment.

Agenda

- Project Overview
- Landscape of Reviewed Policies
- Slide format for topical overviews: metrics, trends, best practices
- Evaluation and Reporting Requirements
- Stakeholder Coordination
- Economic Considerations
    - Criteria for Program Engagement
    - Rate and Incentive Design
    - Costs and Funding Paths

Landscape of Reviewed Policies

Overview of Reviewed Policies

- Basis for the report content
- 15 States
- 64 distinct utility-owned EVSE programs
- 97% of programs were approved or approved with conditions
- 58% are still active

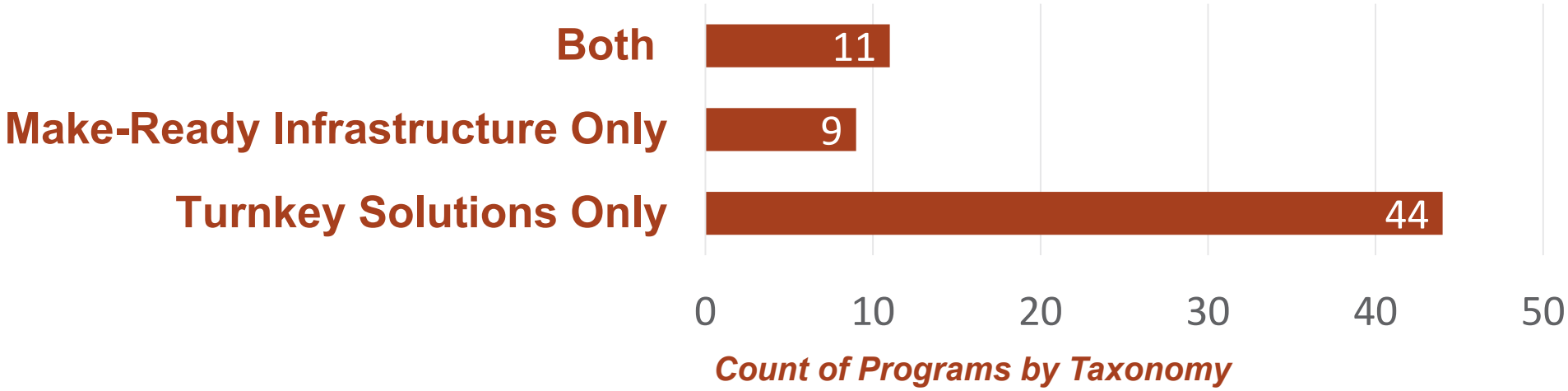
Taxonomy of Utility-Owned EVSE Programs

The Turnkey Model

- **What is it:** The utility owns, operates, and maintains the *entire* charging station.
- **Primary Goal:** To address market failures and build infrastructure where the private sector won't invest.
- **Challenge for Regulators:** Avoiding unfair competition and ensuring a level playing field.

The Make-Ready Model

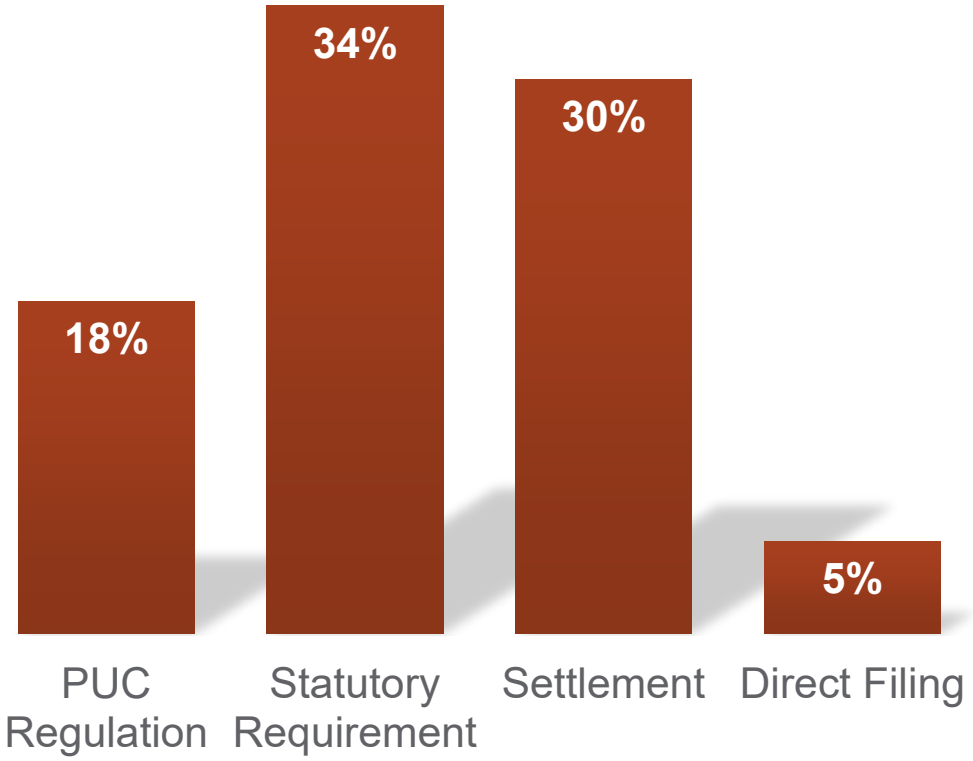
- **What is it:** The utility owns the electrical infrastructure up to the charger, but a private entity owns the charger itself.
- **Primary Goal:** To reduce upfront installation costs for private site hosts and stimulate a competitive market.
- **Challenge for Regulators:** Fairly allocating infrastructure costs and the risk of stranded assets to all ratepayers.



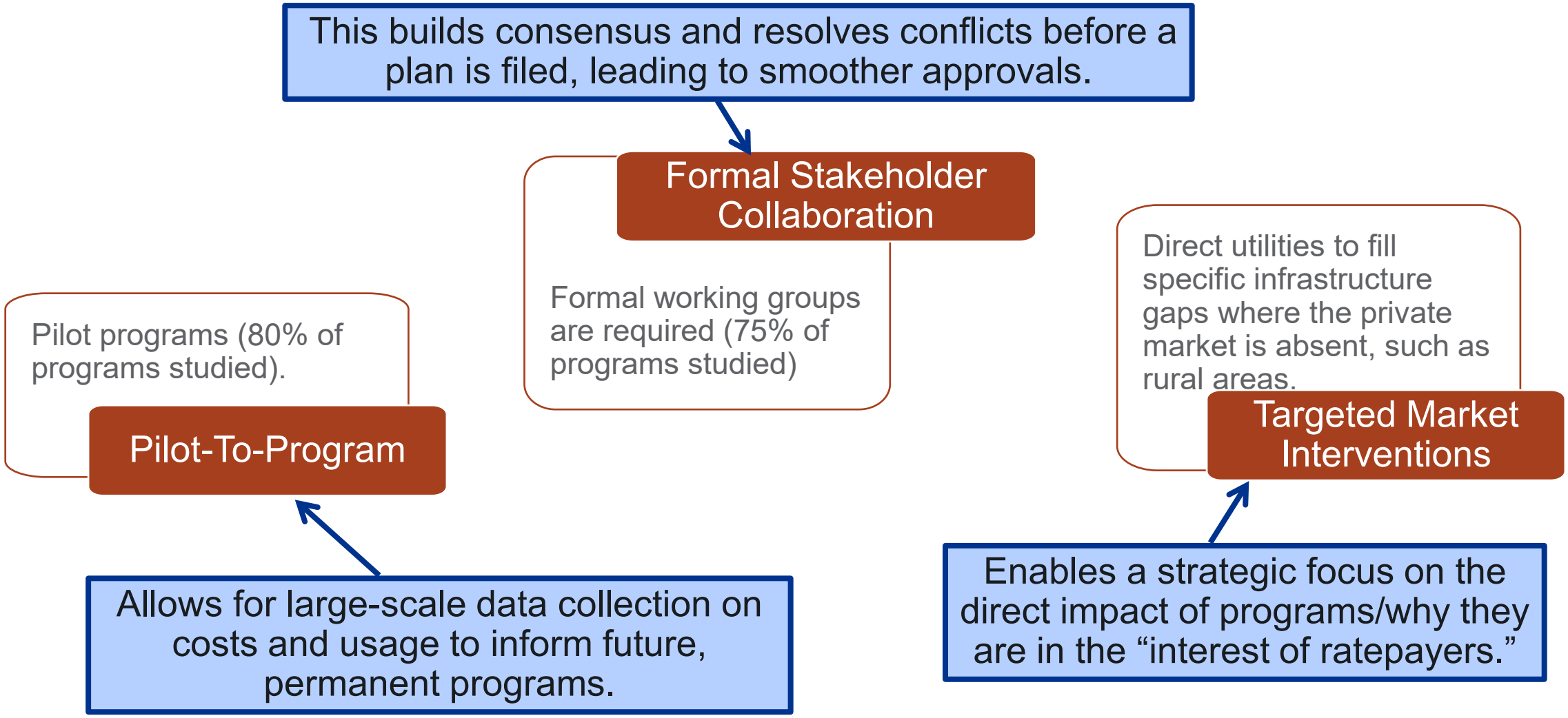
Primary Drivers of Program Creation

- **Regulation Driven by PUCs**
  - Direct, proactive regulation by state PUCs accounts
- **Statutory Requirements**
  - Explicit requirements from state governments
- **Utility Settlements**
  - Utility settlements which involved the creation or expansion of EVSE programs
- **Direct Filings by Utilities**
  - Direct action taken by a utility without one of the other requirements present

Breakdown of Program Drivers



Regulatory Strategies: How Programs are Structured



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Topical Overviews

Topical Overview Slide Format

After the landscape review of policies used to create this presentation, the three main topical categories: Evaluation and Reporting, Stakeholder Coordination, and all Economic Considerations, will follow the same format:

- **Metrics** – introduction of topics being discussed
- **Trends** – general trends, patterns and examples of metrics viewed from the subset of policies
- **Best Practices** – suggestions of potential best practices based on the subset of policies reviewed

Evaluation and Reporting Requirements

Metrics

- PUCs use reporting requirements not only to track infrastructure deployment but to assess whether EVSE investments are advancing public policy goals
- What metrics are used is dependent on what outcomes PUCs want to track
- Because this will vary State to State there is no “best” or “correct” reporting metric or series of metrics

Trends

Reporting Frequency and Duration

- Annual, Semi-Annual, Quarterly, single report, multiple reports for set time (5 years for pilot for example)

Standardization of Data

- PSC/PUC outlines components that each report must contain
- Use of standardized templates

State examples:

- California: standardized template for reporting metrics & combined IOU annual reporting
- Florida: no template – each IOU submits unique report

Third Party Evaluations

- % of program funds dedicated to third party review of reports

Advanced Metering and Interval Data

- Load profiles, peak demand, start/stop times, plug in duration.
- Metrics used to better understand demand patterns and support planning

Customer Metrics

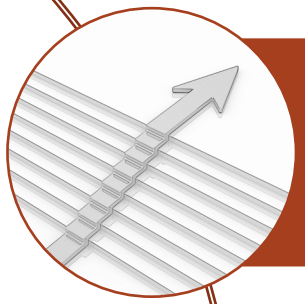
- Demographic tracking and deployment areas
- Metrics used to better understand technology deployment and support planning

Reporting Date	Latitude	Longitude	Customer using existing service connection	Count of EVSE energized	Count of ports energized	Public charging available	Site is ADA compliant	Year until which data will be collected

Descriptions | Location data | Cost data | Load data | ME&O data | +

https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/infrastructure/transportation-electrification/resources-and-reporting

Best Practices



Standardize Reporting Process.

- This ensures utilities interpret their reporting obligations, similarly, reducing ambiguity and enhancing data quality.
- Without uniformity commissions face an administrative burden when trying to compare implementation outcomes.

Choose Metrics specific to your Goals.

- Interval data resolution is important for designing future programs such as demand response.
- Affordability metrics are needed to assess adoption goals and program effectiveness.

Oversight and Transparency.

- Independent evaluators bring objectivity, methodological rigor, and public credibility to the evaluation process.
- Transparency promotes accountability and program effectiveness.

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Stakeholder Coordination

Metrics – Stakeholder Coordination

Overview:

- Navigating complex regulatory requirements for infrastructure development requires stakeholders and utilities to coordinate with utility commissions or other oversight bodies
- Robust stakeholder processes are a key enabler for beneficial and cost-effective EVSE deployment

- **Evaluation Metrics**
  - We examine EVSE policies and programs across the United States to examine trends in stakeholder coordination processes and identify best practices
  - Best practices in this section were identified from key policy frameworks or requirements that encouraged active stakeholder coordination on salient programmatic elements of EVSE deployment
  - Best practices were evaluated from several dimensions using a **case study approach,** evaluating metrics such as:
    - ✓ Does a state require a robust stakeholder process to present progress, gather results, and provide feedback?
    - ✓ How does a state engage their stakeholders?
    - ✓ How does stakeholder engagement impact a state's EVSE policies and programs?

Trends (Overview)

Stakeholder Coordination

States used **stakeholder engagement frameworks** to advance their transportation system, driven by key themes such as aligning strategies with state transportation goals, addressing market barriers, and optimizing public and system-wide benefits

These frameworks aligned stakeholder engagement with broader policy objectives

- Pivotal in allowing stakeholders to identify and mitigate barriers to EV deployment

By prioritizing stakeholder engagement, states delivered widespread benefits

- Including improved grid utilization, strategic deployment of EVSE, and cost-saving opportunities for ratepayers, utility systems, and the environment.

To implement these frameworks, states had different approaches and strategies, such as holding public workshops or panels, establishing workgroups or committees, and soliciting feedback during public comment periods or on draft straw proposals and white papers

- Iterative processes helped sustain engagement through regular reviews, evaluations, and updates informed by stakeholder input
- Outreach and education initiatives were used to enhance public awareness and encourage widespread EV and EVSE adoption

Trends (in Detail)

Stakeholder Coordination

Policy Frameworks with Defined Stakeholder Engagement

State regulatory commissions developed overarching policy statements or frameworks with defined stakeholder engagement

State*	Example
MD	The Maryland PSC developed an EV working group—in coordination with other state agencies and utilities—to address EV adoption-related issues and implement a coordinated, statewide EV portfolio. The workgroup engaged stakeholders through structured proceedings, hearings, and requests for stakeholder comments
MN	The Minnesota PUC convened a public workshop featuring national and local EV experts. The Minnesota PUC then developed an ongoing stakeholder process with a broad and diverse range of participants to enable stakeholder input
NY	The PSC's framework emphasizes benefit-cost analyses to assess ratepayer, system, and societal benefits of the proposed EV infrastructure development. New York PSC staff collaborated with stakeholders to identify and address immediate and long-term actions to best support EV market growth, including the development of working groups with robust stakeholder engagement requirements
CA	The CPUC developed a long-term transportation policy framework requiring several touchpoints for stakeholder engagement, including stakeholder feedback in the development of a Program Handbook and an annual roundtable as a venue for stakeholder input and review of data

Enabling Stakeholder Input from Program Design through Reporting

State regulatory commissions fostered programmatic stakeholder involvement through coordinating with stakeholders on program design, cost-effectiveness, access to EVSE, and other pertinent elements of EVSE deployment

State	Example
NY	Programmatic stakeholder input from the development of working groups, meetings facilitated by working groups, and comments on straw proposals and presentations was used to identify and address immediate and long-term actions to support EV market growth and ensure that utilities' EV readiness framework was capable of meeting future market development
CA	California has provided ongoing opportunities for stakeholders to engage with the planning processes, voice concerns, comment on proposals, participate in workshops, and identify barriers to EVSE deployment and EV adoption. The stakeholder engagement process started off with an OIR, followed by a prehearing conference, a scoping memo and ruling, and multiple workshops, all of which encouraged stakeholder input

*OR and IL and other states also have notable examples captured in the report

Best Practices

Stakeholder Coordination

Developing an overarching EVSE policy or framework to define replicable stakeholder engagement practices for each EVSE program allows for robust pathways for stakeholder engagement

Fostering programmatic stakeholder involvement from program design through reporting allows stakeholder input on standards and best practices for EVSE deployment

Engaging stakeholders early and often, including in the vetting of proposals before commission review, can reduce barriers to adoption of EVSE infrastructure

Engaging stakeholders throughout the process allows for targeted outreach to identify unique challenges and community-specific needs, ensuring greater adoption of EVs and EVSE infrastructure

Stakeholder input may lead to more cost-efficient approaches and optimized rate designs

- Insufficient stakeholder engagement may result in missed opportunities such as reduced grid efficiency, limited utility rate benefits, slower EV adoption, and unaddressed barriers to EVSE implementation

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Economics

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Economic Criteria for Program Engagement

Metrics – Criteria for Program Engagement

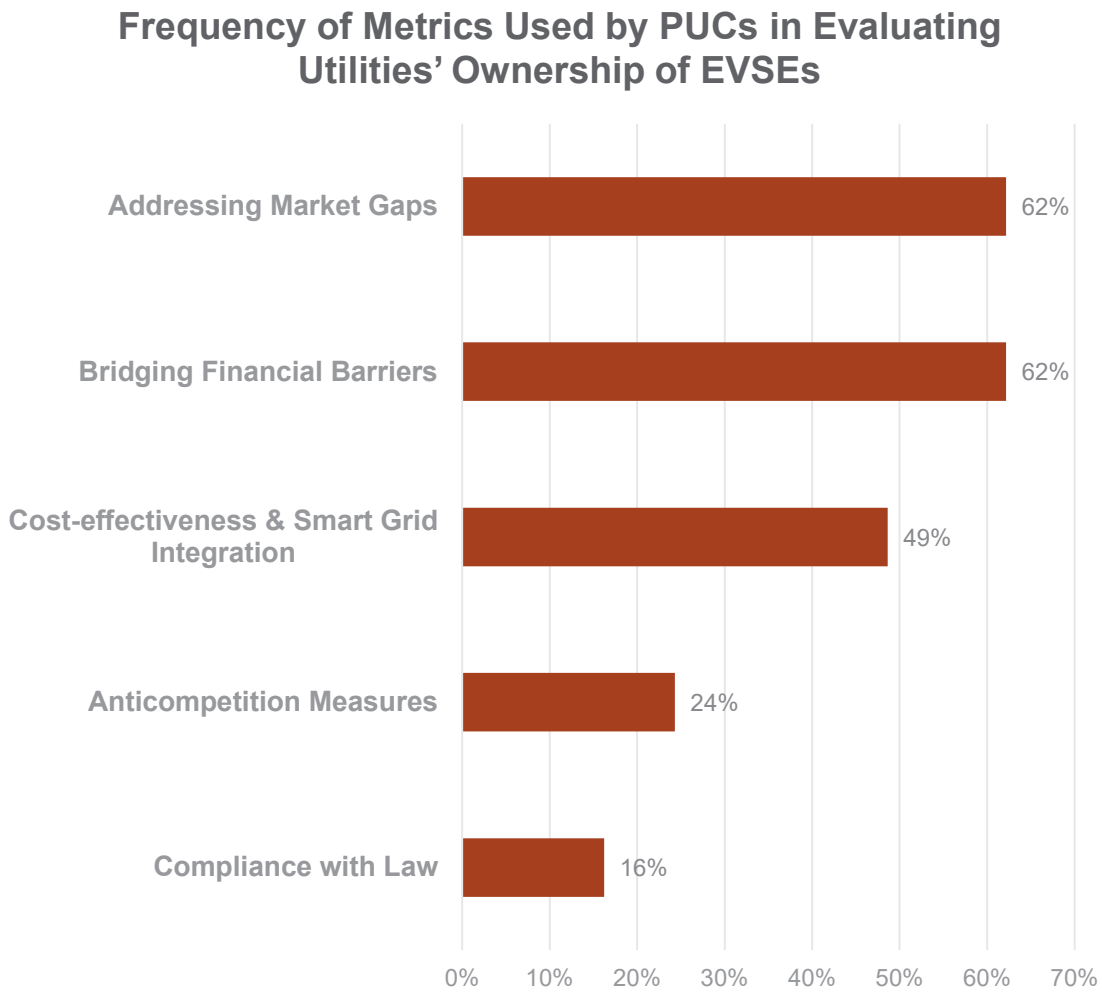
- Reviewed utilities' EVSE program engagement by PUCs in several states to understand some of the main economic drivers or considerations behind utility EVSE ownership

- PUCs essentially justify utilities' investment in and ownership of EVSEs by assessing whether the programs:
  - ❖Address market gaps,
  - ❖ Bridge financial barriers and de-risk investments for the private sector,
  - ❖Incorporate anticompetition prevention measures,
  - ❖Are primarily driven by law or policy,
  - ❖Promote cost-effectiveness and the smart grid integration of EVs and EVSEs

- The metrics used depend on the PUCs, the EVSE programs, and the specific market context of the state

Trends

- **Addressing Market Gaps & Financial Barriers**
  - Generally, EVSE programs are evaluated on their ability to address market gaps and mitigate financial barriers. In 62% of cases, PUCs referenced these metrics and justified the utilities' ownership of EVSEs based on them
- **Compliance with Law**
  - Utilities' EVSE programs may be approved by the PUCs, primarily to comply with the law (e.g., Senate Bill 448 in Nevada). It is the least common justification avenue, occurring in only 16% of cases
- **Cost-effectiveness and smart grid integration of EVs and EVSEs**
  - Constitute a common evaluation metric appearing in 49% of cases. This metric is often used in pilot programs' evaluations
- **Provision for anticompetitive measures**
  - Though used in only 24% of the cases, the PUCs that used this metric emphasized its importance in the assessment



Best Practices for Economic Criteria for Program Engagement

1. Define Cost-Effectiveness

Many states emphasize the need for EV charging infrastructure programs to be cost-effective. A first step would be to define the meaning of cost-effective

2. Determine the Criteria for Cost-Effectiveness

After defining cost-effectiveness, develop a set of criteria to use to assess the cost-effectiveness of a program

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Economics – Rate and Incentive Design

Metrics - Rates and Incentive Design

Adapting traditional ratemaking principles for the unique challenges of Electric Vehicle (EV) load growth is a core challenge for regulators. This section explores four common programs:

- **The "Chicken-or-Egg" Problem: Costs and Data**
- **Who Pays: Issues in Cost Allocation**
- **Managing Load: Passive Signals vs. Active Control**
- **Demand Charge Dilemmas**

The “Chicken-or-Egg” Problem: Costs and Data

Cost of service is based on historical data, but when historical data doesn’t exist or isn’t mature it creates two challenges

Challenge 1: Capital Investment vs. Operational Expense

Capitalizing Costs (Adding to Rate Base)

- ✓ Enables large-scale, long-term investments
- ⚠ Places long-term financial risk on the entire ratepayer base.

Expensing Costs (Direct Pass-Through)

- ✓ Lowers the total cost for ratepayers
- ✓ Increases transparency in spending.
- ⚠ Can cause "rate shock" from short-term surcharges
- ⚠ Removes the traditional financial incentive for cost discipline.

Challenge 2: The Lack of Data for Cost Based Rates

Use Preliminary Market-Based Rates

- ✓ Allows infrastructure deployment to begin
- ✓ Generates essential data on usage, costs, and driver behavior
- ⚠ Risks market distortion if utility prices undercut private investment

Who Pays: Issues in Cost Allocation

- **The "User-Pays" Model**
  - **Principle:** Program costs are recovered *only* from the EV drivers who use the charging stations.

Fairly allocates costs to those who directly benefit, preventing cross-subsidy but can create high prices for early adopters, which slows down market growth.

- **The "Socialized Costs" Model**
  - **Principle:** All ratepayers contribute to program costs, regardless of EV ownership.

Spreads costs broadly and can lower overall rates for everyone by improving grid utilization but risks unfairly charging non-participants if system-wide benefits do not materialize.

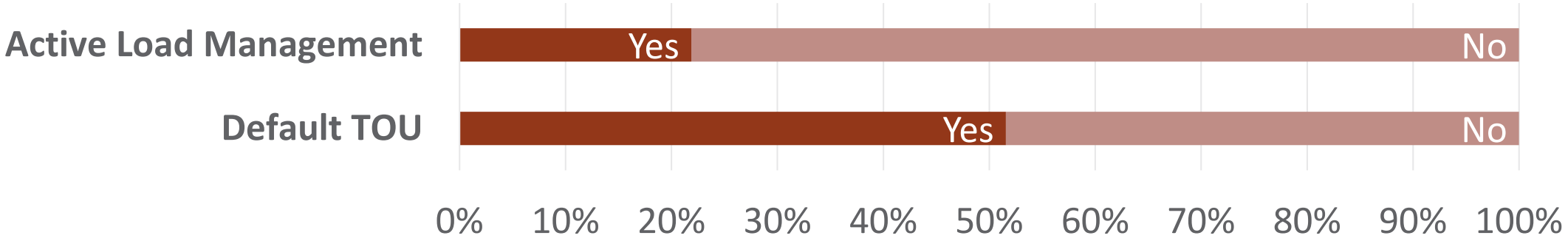
Examples of Key Tools: Accounting Mechanisms & Allocation Methods

Utility (State)	Accounting Mechanism Type
PG&E (CA)	One-way Balancing Account
Otter Tail Power (MN)	Deferred Accounting
Rocky Mountain Power (UT)	Two-way Balancing Account
BGE (MD)	Separate Rate Class
Duke Energy (FL)	Regulatory Asset

Utility (State)	Allocation Mechanism Type
National Grid (MA)	Distribution Revenue Allocator
SCE (CA)	Equal Cents per kWh [Distribution Rates]
New York Utilities (NY)	Transmission and Distribution Revenues
Maryland Utilities (MD)	Creation of a Separate Rate Class for EV Charging Stations
Minnesota Power (MN)	Direct User-Based Cost Recovery
Rocky Mountain Power (UT)	Participation Payments

Managing Load Trends: Passive Signals vs. Active Control

- **Option 1: Passive Management**
  - **Tool:** Time-of-Use (TOU) rates that use simple price signals to encourage off-peak charging.
  - **Effectiveness:** Very high. Simple TOU rates shift most of the charging to off-peak hours with minimal customer confusion.
- **Option 2: Active Management**
  - **Tool:** Direct utility control of chargers (Vehicle-to-Grid or V2G).
  - **Effectiveness:** Uncertain. Still in the pilot stage with technical hurdles but shows high potential to reduce energy costs.

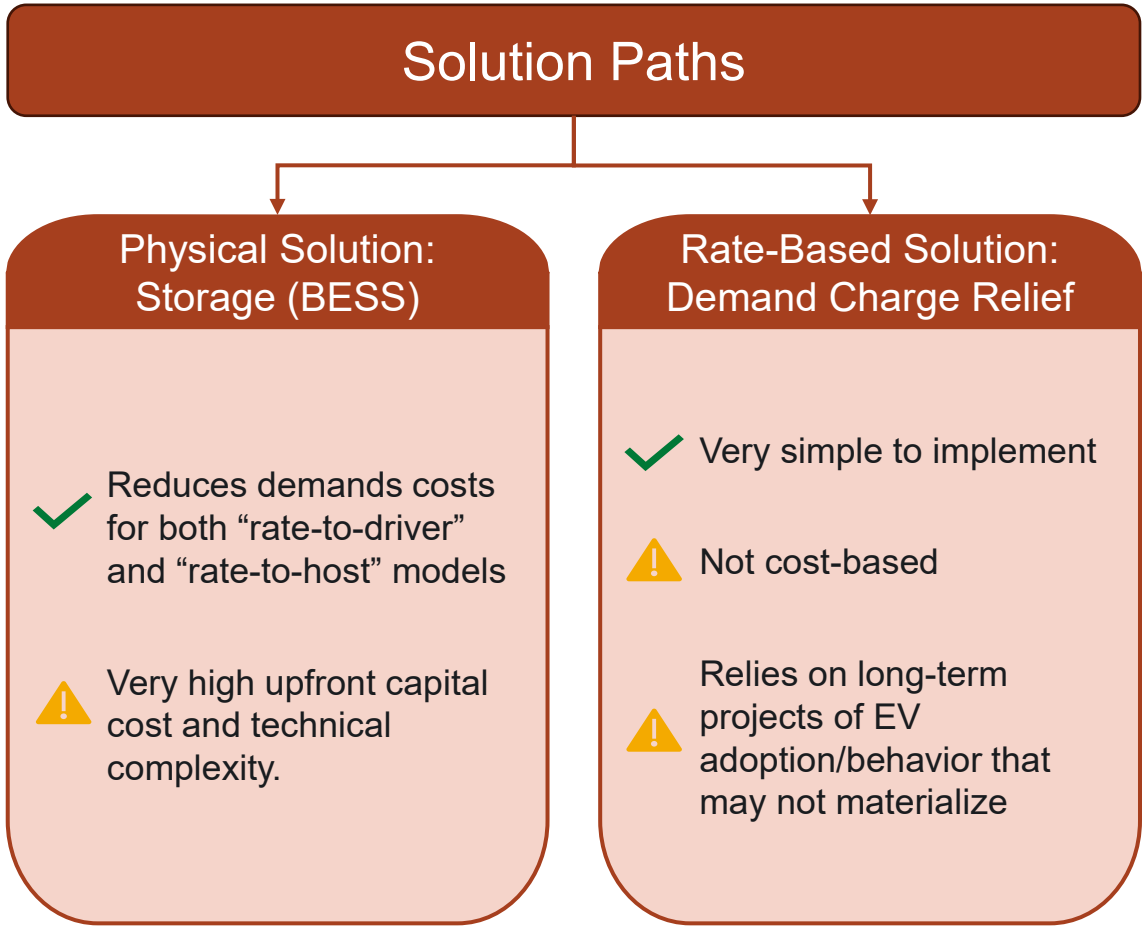


Breakdown of Programs with Active Load Management and Default TOU

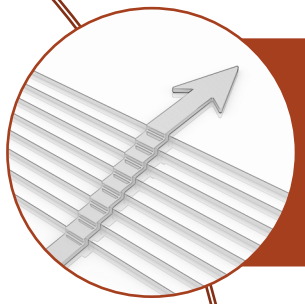
Demand Charge Dilemmas

The Problem: Demand charges are based on the single highest peak of power usage in a month.

- DCFC stations have **high power draw but low and unpredictable usage**, making demand charges a huge portion of their operating costs (up to 86% in Avista's pilot).
- This makes public fast charging financially unstable for private operators.



Best Practices for Rate Design



Employ a Phased Approach to Cost Recovery.

- Phase 1: **De-Risk by using pilots** with strict ratepayer protections.
- Phase 2: Transition to cost-based rates with **data-drive off ramps.**

Prioritize Simplicity and Customer Experience.

- Make **simple TOU rates the default foundation** for all EVSE programs.
- Leverage **host-based rates** to allow site owners to absorb rate complexity while offering simple pricing to drivers.

Deploy Advanced Solutions Strategically.

- Target active load management/V2G for high-value cases like **commercial fleets** rather than broad deployment.
- Treat demand charge relief as a **temporary, surgical tool** to de-risk early investment, not a permanent subsidy.

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Economics – Funding Mechanisms

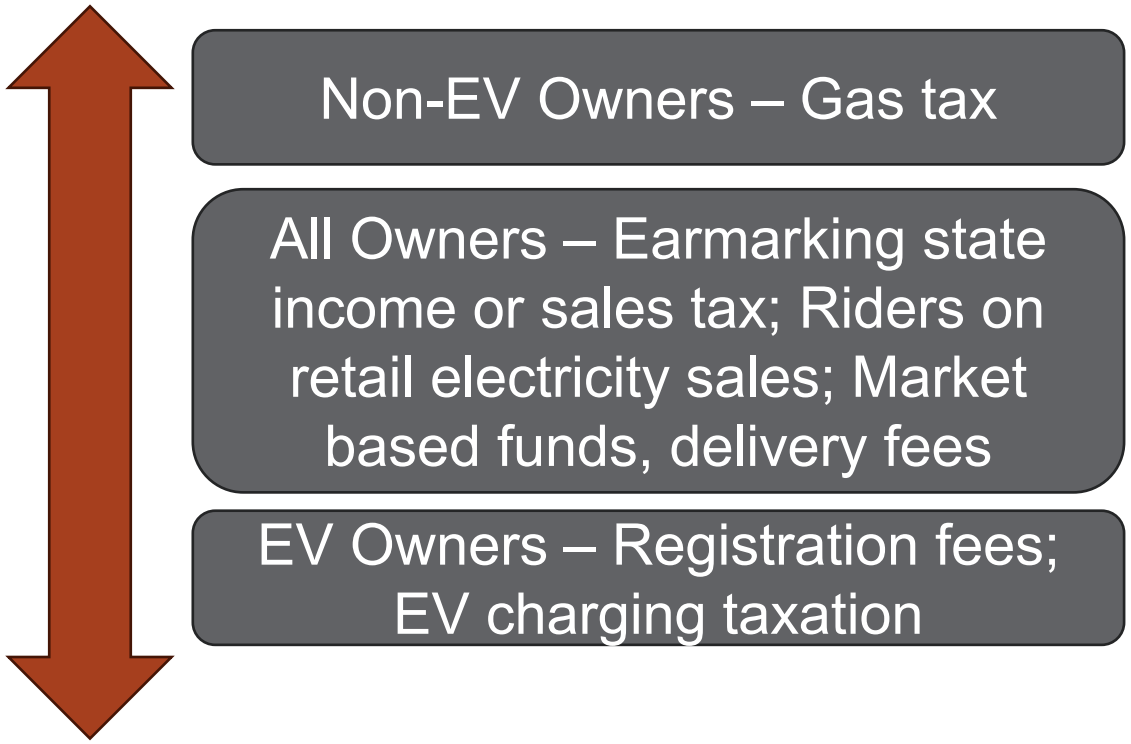
Metrics – Funding options

- Reviewed utility approaches pertaining to types and sources of funding for EVSE programs

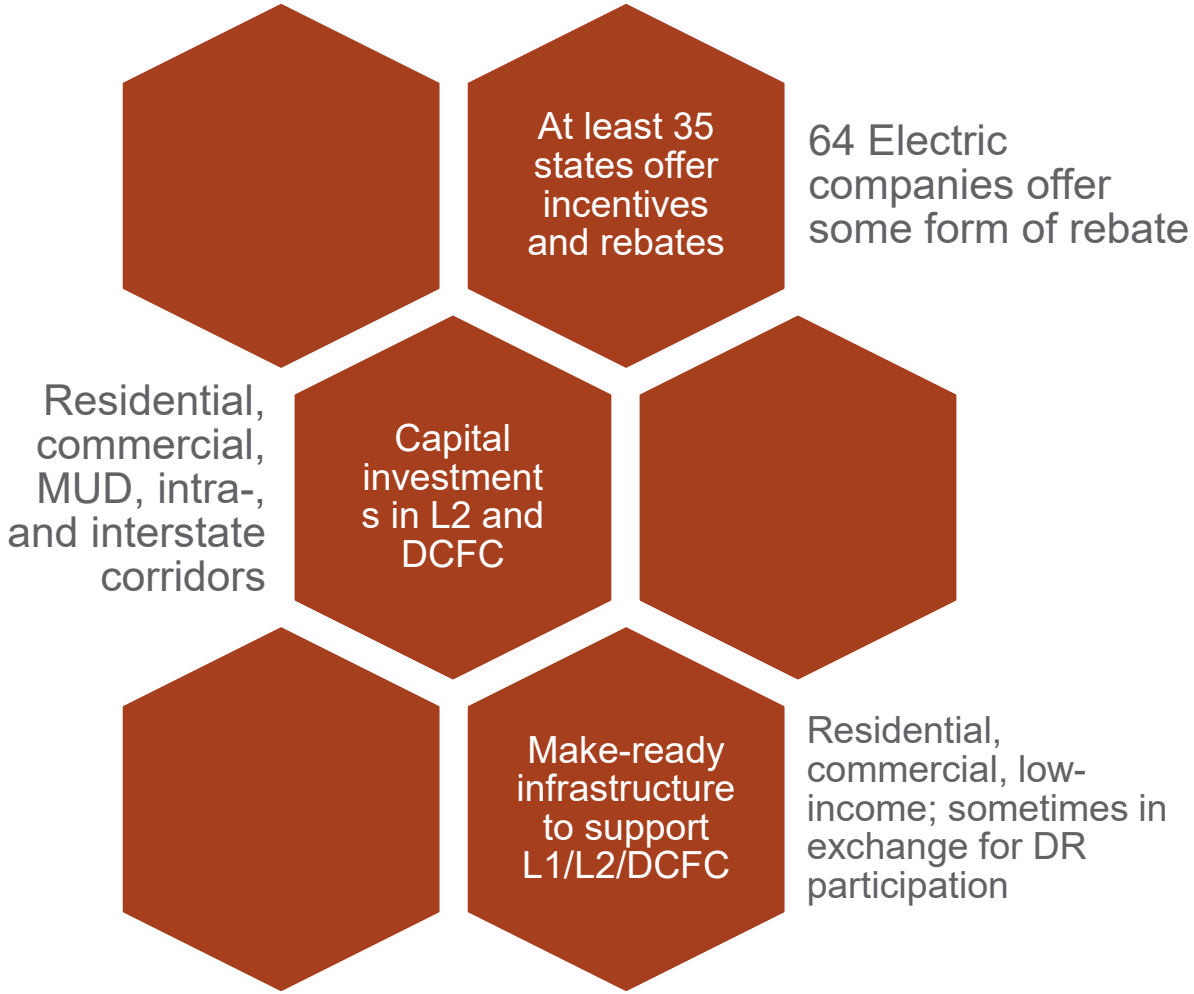
Major types of financial EVSE programs:

- ❖ Incentives and rebates; some are graduated by income
- ❖ Low-cost loans/revolving loans
- ❖ Infrastructure provisions, such as distribution system upgrades

Spectrum of who paid for EVSE programs:



Trends – Types of funding and mechanism



Types of funding examples:

- Xcel Energy's "Public Fast Charging Portfolio" – mixed ownership program for commercial fleets and workplace charging. Excel covers make-ready costs up to the customer meter. Third-party owner covers remaining costs for DCFC. For L2, Excel provides and charges monthly service fee to cover costs.
- BG&E offers up to 50% of L2 and DCFC charger costs 2019 – 2021; currently offers $30k rebates (L2 and DCFC) to MUD owners.
- Oregon Department of Transportation's Community Charging Rebates (CCR) $100M over 5 years. L2 chargers at public sites, workplaces, and MUD. $3.5 - $6.2k/charging port, or 75% of eligible costs.
- Colorado Energy Office – Recharge program – offers low-cost loans for residential and commercial installation.
- Connecticut Green Bank Smart E-Loans program – partnership with local contractors and lenders to offer low-interest loans for EV charging infrastructure.

Best Practices for Funding Mechanisms

1. Sustained funding may not be able to rely on traditional fossil fuel taxation, as consumption is declining. Whereas EV adoption is increasing rapidly.

2. State will have to decide the value of publicly funded projects, i.e. is it a public good, to determine what level of funding is needed, which may help determining who will pay, i.e. all funder, or simply potential users.

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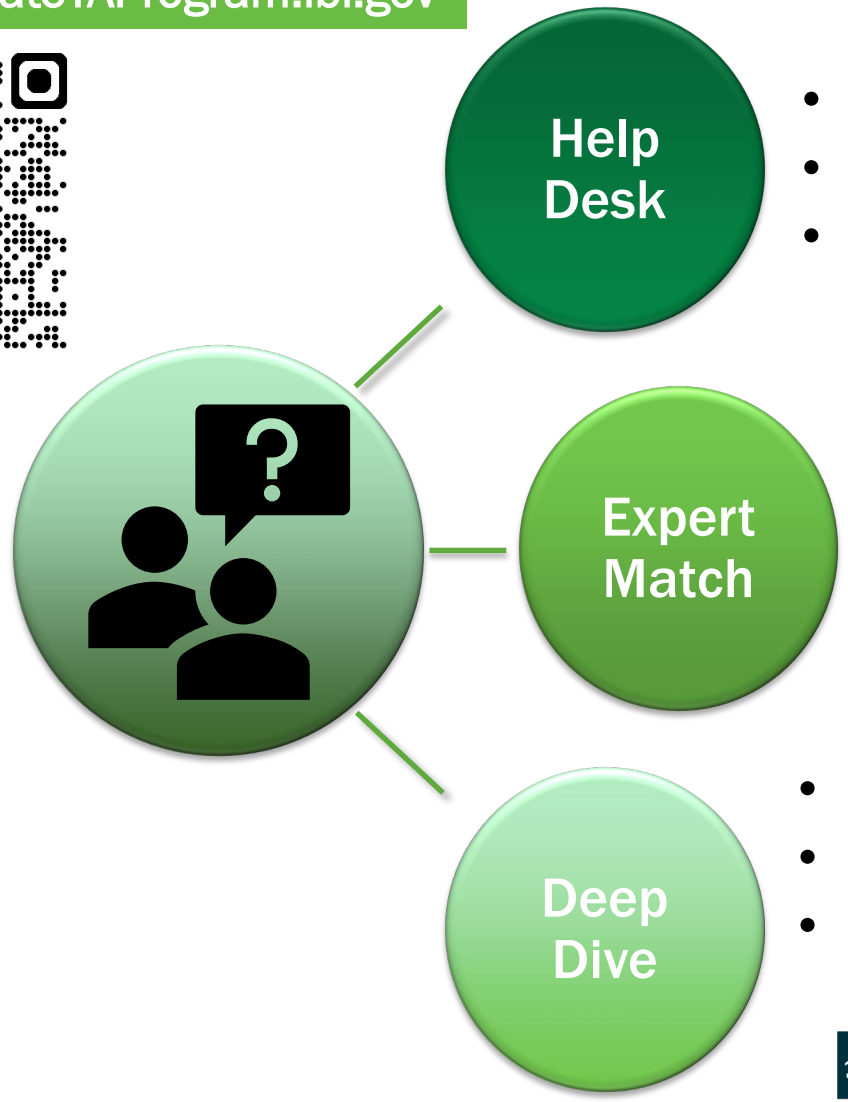
Thank you!!

Contact: Christine.holland@pnnl.gov

State Technical Assistance Program

https://StateTAProgram.lbl.gov



- Online intake form w/ rolling review
- SME provides up to **4 person-hours of support**
- Intake form and support available now

- Online intake form w/ rolling review
- SME provides up to **100 person-hours of support**
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- Detailed application form in planned ~6-month cycle
- Team of SMEs provide **100+ person-hours of support**
- Detailed online application available soon

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Member Discussion Questions

- In your state:
  - Are there currently utility-owned EVSE programs?
  - Are there any practices you heard during today's presentation that you would like to explore further?

Potential Topics for 2026 NARUC Work Products

1. Approaches for supporting streamlined EV charger siting (e.g., hosting capacity maps)
2. Best practices in public charger energization
3. Preparing for and energizing large EV loads (e.g., depot charging, flexible interconnection, make-ready programs)
4. Tracking EV investments across commission proceedings
5. Emerging trends in harmonizing data and reporting on EV charging (e.g., programs, up-time, NEVI)
6. Anything else?

Next EV SWG Meetings

Proactive Infrastructure Investments & Planning:
December 16, 3:00-4:30 pm ET

Member Roundtable:
January 13, 3:00-4:30 pm ET

FIND ALL PAST RECORDINGS AND PRESENTATIONS:

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