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EVs and Energy Affordability

Information and Technical Assistance for Utility Consumer Advocates

February 4, 2026

RMI is a global, independent nonprofit organization of over 600 diverse experts working to accelerate the clean energy transition. We are transforming the global energy system to secure a clean, prosperous, zero-carbon future for all.

Agenda

Resources for Consumer Advocates

- Grid planning,
- Analytical tools,
- Focused research,
- Case studies,

Advocate – Utility Convenings

- Jan 2026 convening report out,
- Learnings and next steps,

Webinar Series

- Four upcoming webinars,
  - ***First webinar February 26!***

Technical Assistance

- Types of support available:
  - Analytical capacity-building,
  - Targeted TA,

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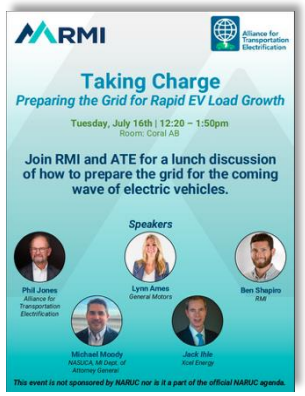
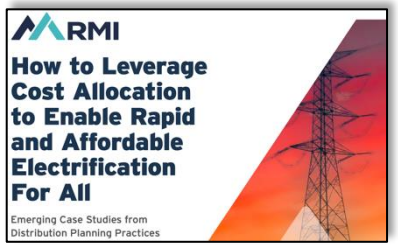
Resources For Advocates

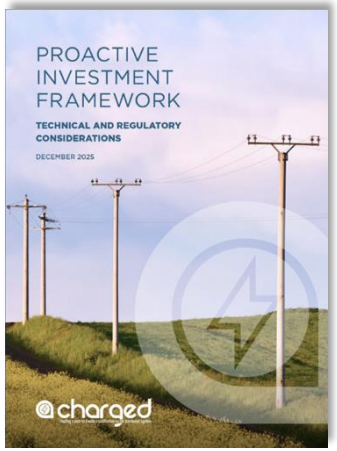
RMI conducts research, hosts dialogues, and develops tools to answer a variety of related questions.

Today we'll spotlight



Strategic Approaches to Grid Planning for EVs	**Analytical Tools to Understand Impacts & Opportunities**	**Case Studies of Evolving State Practices & Opportunities**	**Focused Research on Proactive Investment**





Strategic Approaches to Grid Planning for EVs

Profile: *Transportation Electrification Building Blocks*

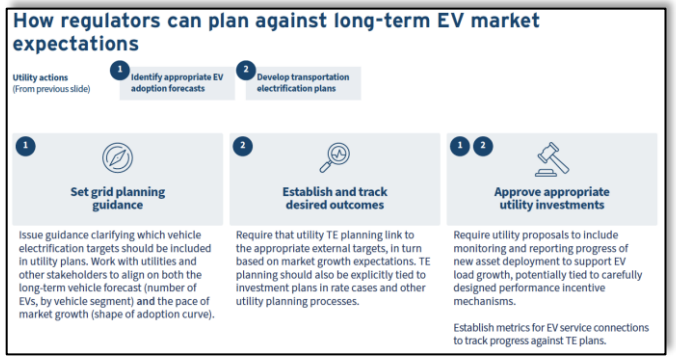
A stakeholder-informed, sequential set of “building blocks” to help answer critical EV-grid planning questions.

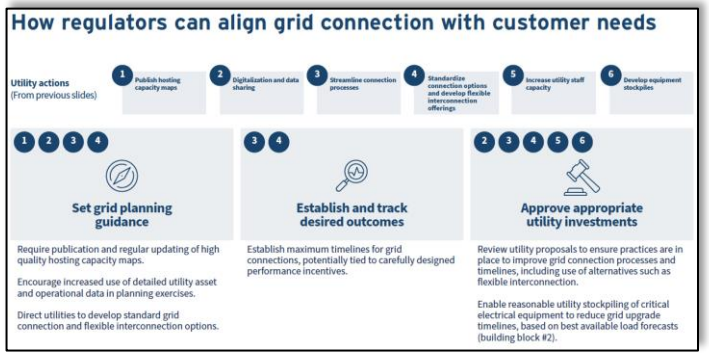
KEY QUESTIONS

1. **What do we need?**
   How much infrastructure and where?
2. **How can we efficiently meet that need?**
3. **How do we get there?**
   What changes are required to efficiently meet the need?

BUILDING BLOCKS

- Plan against long-term EV market expectations
- Improve load forecasting practices
- Prioritize efficient, cost-effective use of distribution infrastructure
- Align grid connection with customer needs
- Improve risk sharing and mitigation
- Enable accountable, longer-term utility capital investments





Source: Transportation Electrification Building Blocks (RMI, 2024)

Analytical Tools to Understand Impacts & Opportunities

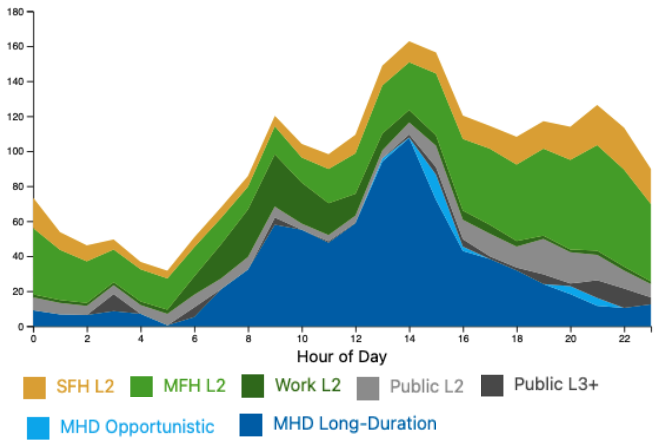
Profile: *GridUp EV Load Forecasting* + *Optimus Ratepayer Impact Analysis*

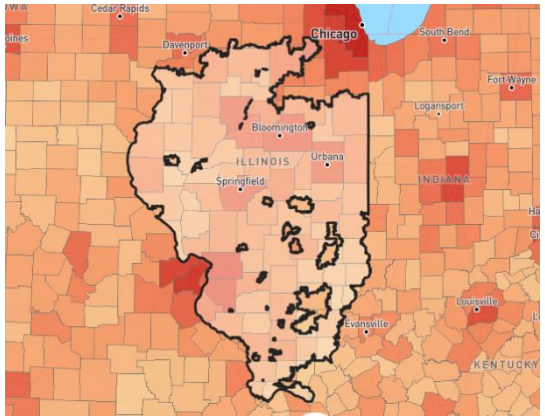
1 Aggregate and sample trip and population data

2 Assign charging availability and preferences

3 Simulate charging behavior based on energy needs, charger availability, stops

4 Summarize load curves and power needs for key audiences





POLICY & FINANCIAL TOGGLES AND MARKET SENSITIVITIES

INPUTS

From capacity expansion models

Physical Plant
- Capacity and generation
- Plant retirement year
- Operating cost

Demand
- Projected load by customer class

From utility data

Economics/Finance
- Depreciation schedules
- Historic rate structures
- Allowed rates of return

→

Policy Toggles
- Federal and state tax incentives
- Rate plan structure (traditional cost of service, multi-year rate plans, and revenue decoupling)

Financial Toggles
- Securitization
- Performance incentive mechanisms
- Earning sharing
- Fuel sharing

Market Sensitivities
- Load shifts by customer class in:
  - Average load
  - Peak demand
  - Customer counts
- Changes in inflation rates
- Changes in fuel cost
- Changes in non-fuel O&M expenses

→

OUTPUTS

Metrics
- Greenhouse gas emissions
- Total and average ratepayer costs
- Incremental impacts on rates and bills by customer class
- Utility earnings
- Shareholder value
- Utility credit rating

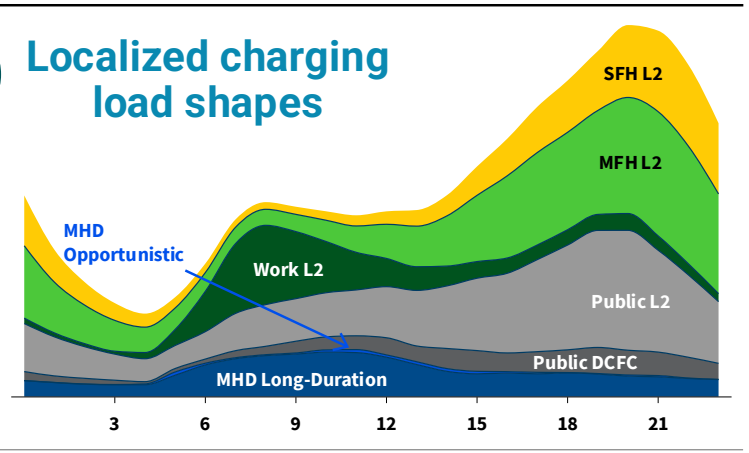
GridUp an RMI initiative

Enhanced load forecasting

Localized travel data from GridUp is enabling high resolution estimates of grid needs.

1

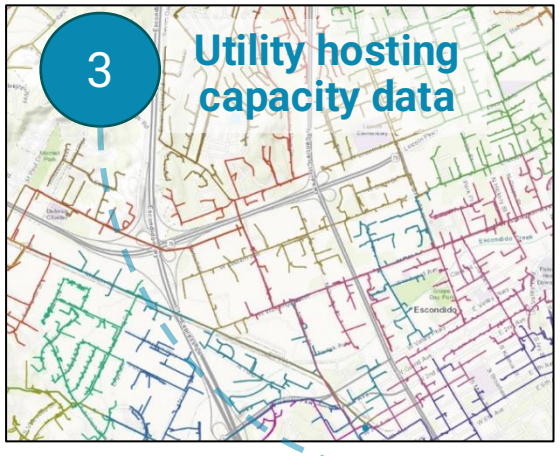
Localized charging load shapes



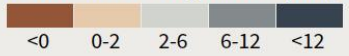
SFH: Single Family Home | **MFH**: Multifamily Home | **L2**: Level 2
DCFC: DC Fast Charger | **MHD**: Medium-/Heavy-Duty

3

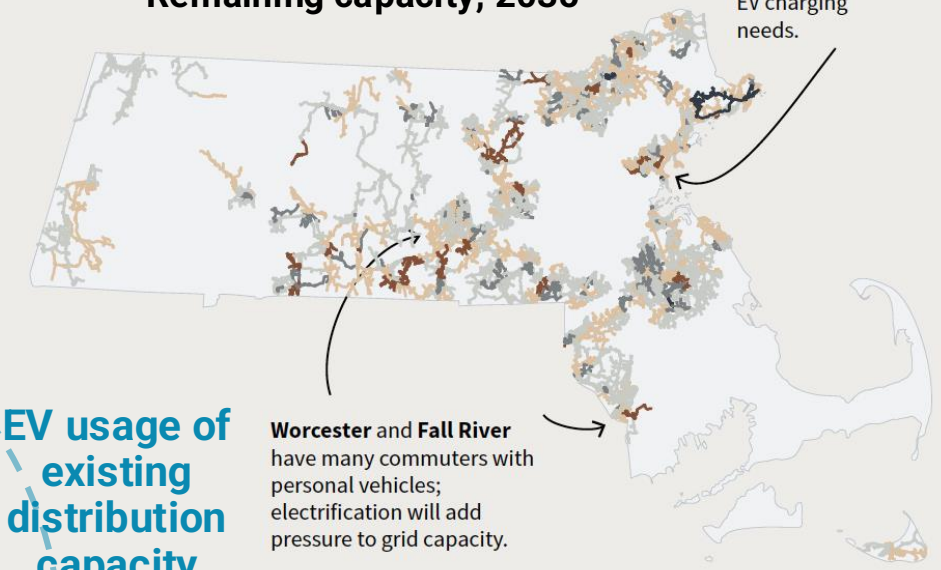
Utility hosting capacity data



Headroom in megawatts (MW)



Remaining capacity, 2035



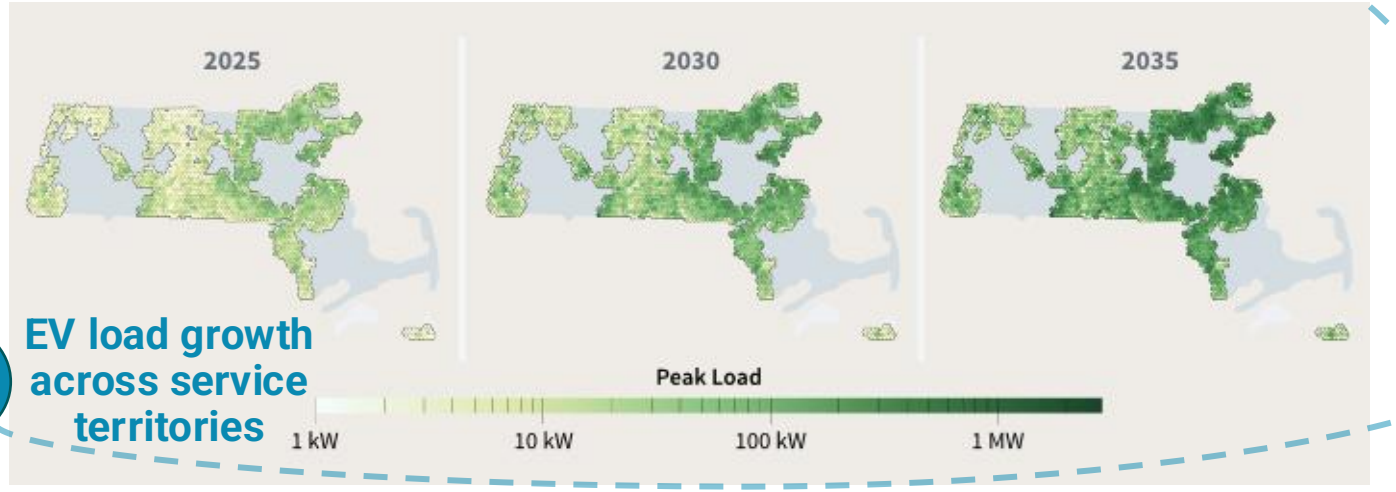
Revere's location near Logan Airport and its traffic density contribute to high EV charging needs.

Worcester and **Fall River** have many commuters with personal vehicles; electrification will add pressure to grid capacity.

EV usage of existing distribution capacity

2

EV load growth across service territories



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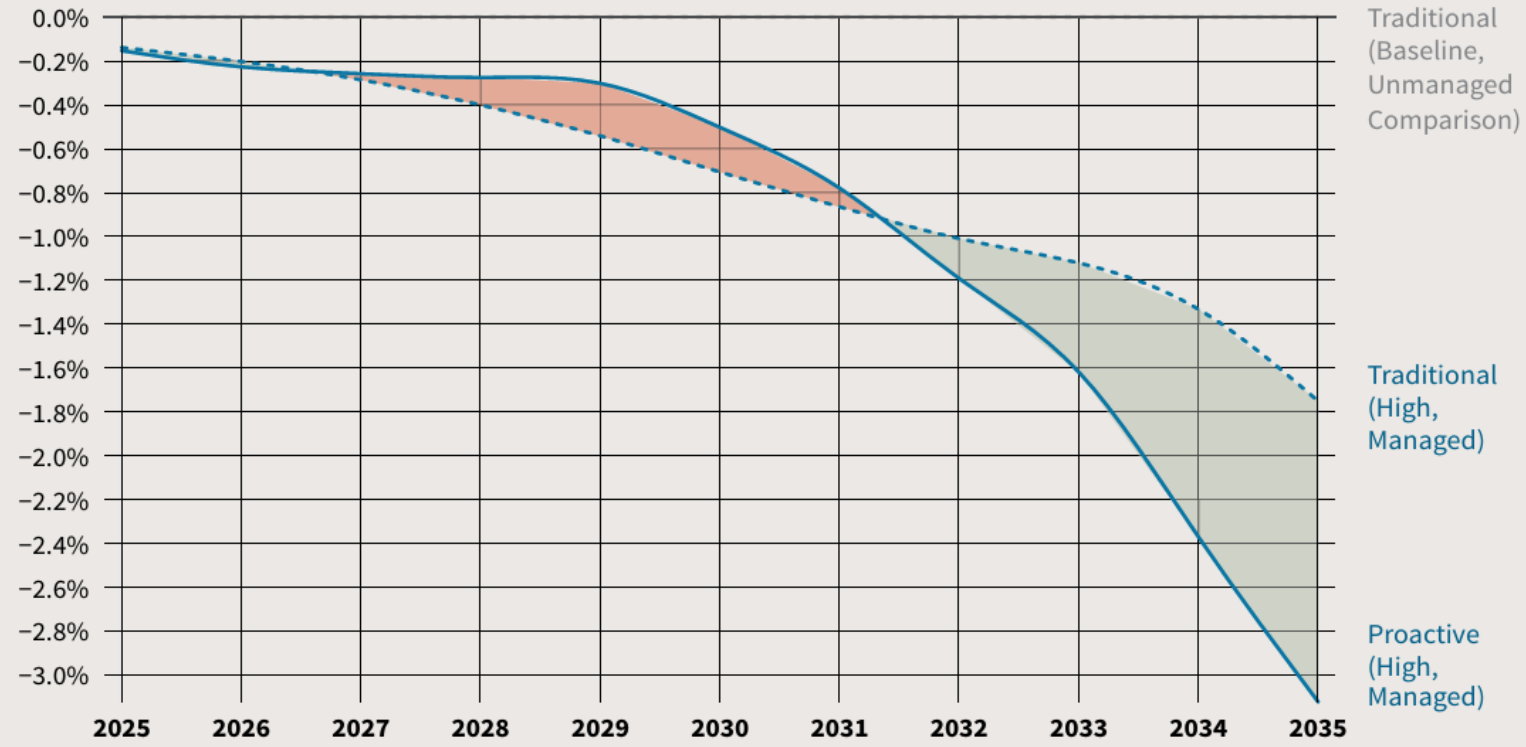
Sources: Ahead of the Curve: Utility Planning for an Electrified Transportation Future (RMI, 2025); GridUp; IREC (hosting capacity image).

Rate impacts analysis for an illustrative IOU highlights savings potential from both load management and proactive investment.

Exhibit 25 Variation in average rates from traditional and proactive approaches for high, managed load materialization



RMI Graphic. Source: RMI analysis

Source: Ahead of the Curve: Utility Planning for an Electrified Transportation Future (RMI, 2025)

Case Studies of Evolving State Practices & Opportunities

Profile: *How to Leverage Cost Allocation to Enable Rapid and Affordable Electrification for All*

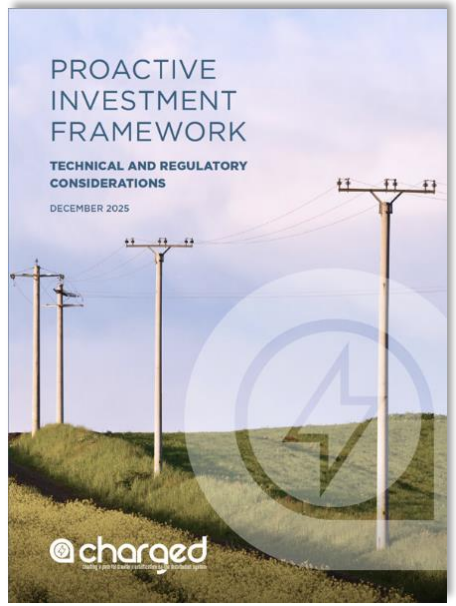
- **General Paradigm:** Proactive grid upgrades are necessary, and cost allocation can accelerate the process and distribute benefits and costs fairly.
- **State of some States**
  - Massachusetts:
    - Proactive Hosting Capacity Fee to replace project-specific upgrade charges
    - To watch: Will it be “free after full”?
  - Minnesota:
    - $/kWac fee for customers benefiting from proactive upgrades
    - To watch: What will the true split of fee customers vs ratebase in paying for upgrades
  - New York:
    - No new cost allocation framework, cost allocation will be done using existing rate case processes utility by utility
    - To watch: Will the benefits of flexibility outweigh the costs in efficiency and staff time

Source: How to Leverage Cost Allocation to Enable Rapid and Affordable Electrification For All (RMI, 2025)

Focused Research on Proactive Investment

Profile: *CHARGED Proactive Investment Framework*

- This framework is unique as it is not location specific,
- The framework explores risks and opportunities associated with proactive investment, and outlines options for developing a framework. This includes:
  - Key considerations for framework design,
  - Identifying and assessing the appropriateness of proactive investments,
  - Regulatory approval, cost recovery, and risk management,
  - Cost allocation.



Source: Proactive Investment Framework, (CHARGED, 2025)

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Questions on Resources?

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Consumer Advocate – Utility Convenings

Proactive Distribution System Investment

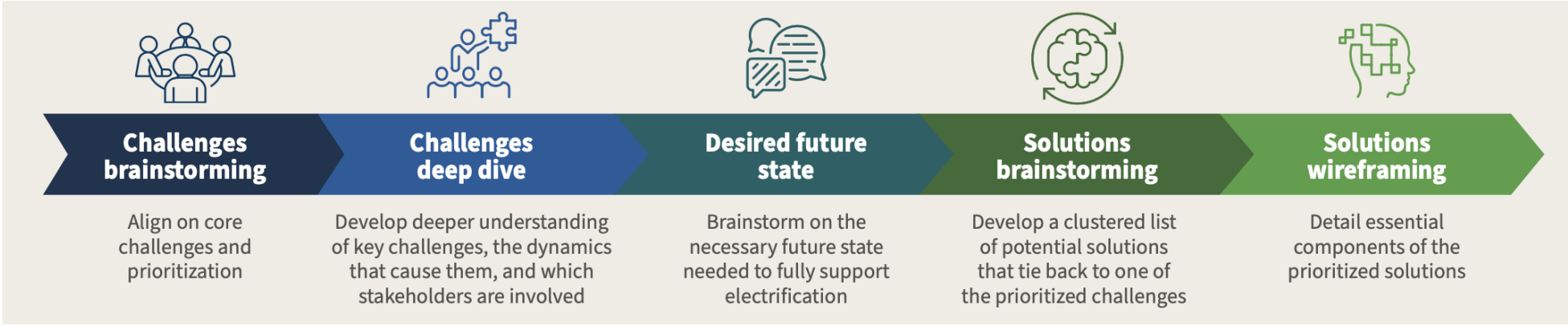
Motivation

Discussions of proactive distribution system investment are increasing, but consumer advocates remain underrepresented in this dialogue. How can we help correct that imbalance?

March 2025 Convening

Proactive Distribution Planning & Investment: *Opportunities for increased collaboration between electric utilities and consumer advocates*

- Attendees: 8 consumer advocates, 3 electric utilities,
- Challenges identified across 8 categories, with 40 potential solutions brainstormed,
- Solutions wireframing focused on:
  - Increased Capacity and Knowledge,
  - Developing a Framework for Net Transportation Electrification Impacts in Planning,
  - Building Value Propositions and Frameworks for Data Sharing,
  - Developing More Equitable Risk Sharing



Source: Distribution System Planning and Proactive Investment for EV Growth (RMI, 2025)

January 2026 Convening (last week)

Proactive Distribution Planning & Investment: *Recent Regulatory Frameworks and Consumer Advocate Perspectives*

Objectives

- Delve further into **growing trend toward proactive distribution investment,**
- Gather **broader perspective** on specific, recently proposed or adopted approaches to proactive investment,
- Identify further opportunities to **promote electricity rate affordability** while also supporting the **growth of transportation electrification**.

Goal: Conclude convening with a menu of parameters and practices consumer advocates would like to see in proactive investment frameworks if/as they scale.

January 2026 Convening Attendees

Facilitators

RMI

Alliance for Transportation Electrification

Consumer Advocates

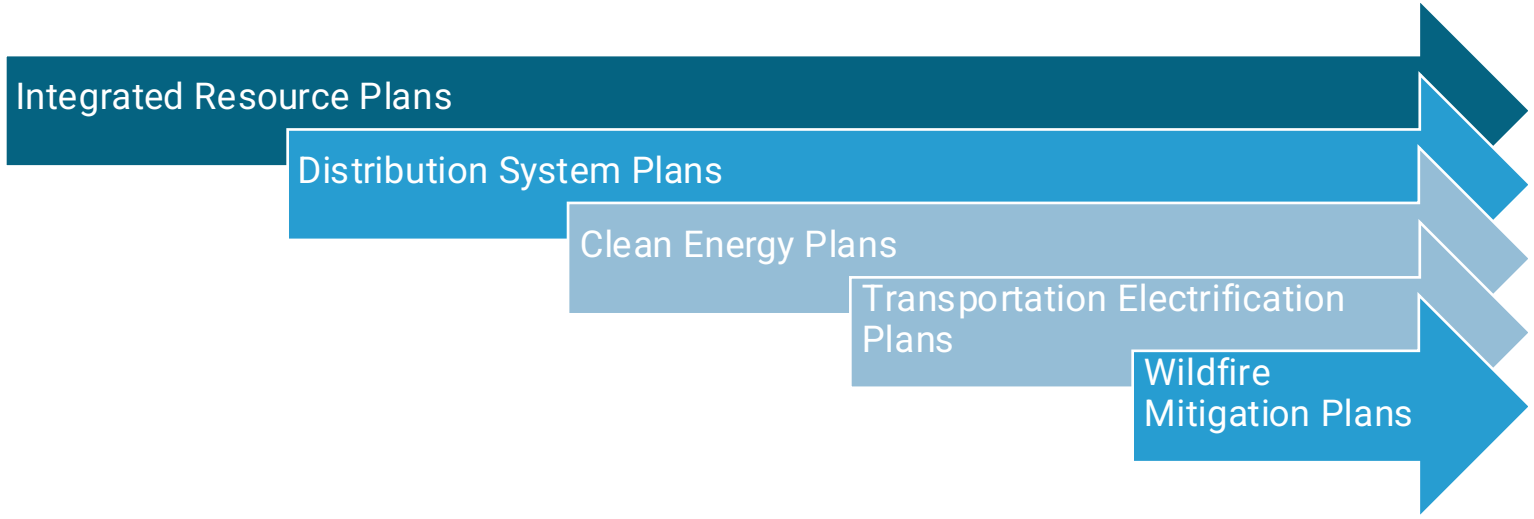
Four States Represented

National Association of State Utility Consumer Advocates NASUCA

Utilities

Two Utilities Represented

Utilities are in the business of planning and then investing based on those plans. In times of low load growth, the pace has been sufficient to meet incremental needs.



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Proactive investment is based on bottom-up analysis rather than top-down forecasts or "known" load from a customer service application (load letter).

"**Proactive investments** [are] those that are deployed *ahead of* certain load growth. These may include investments to serve new loads ahead of the utility receiving a load letter, as well as investments deployed to serve expected load growth that do not target an existing system constraint."

Traditional and proactive investment strategies entail different forms of risk.

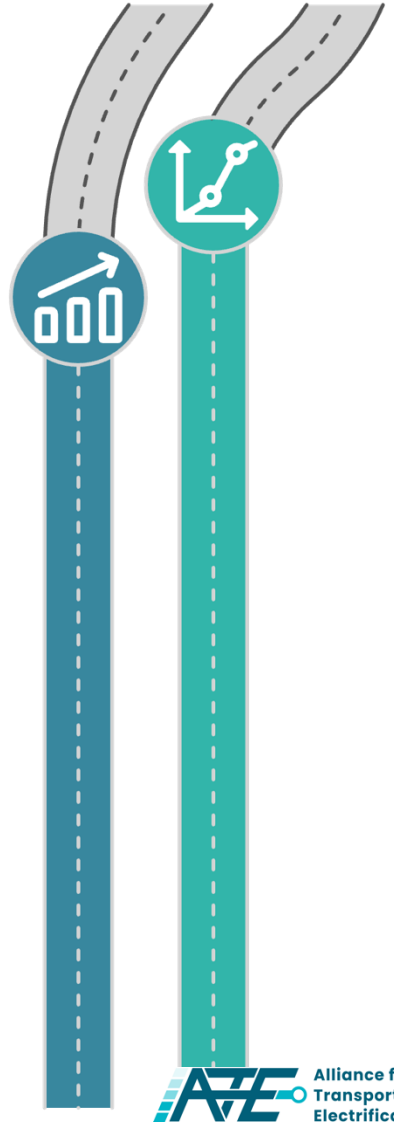
Traditional	Proactive
• Delayed energization • Revenue loss • Fossil fuel tech lock-in • Missed policy goals • Unsuitable investments (incremental)	• Stranded assets • Inappropriate cost allocation • Unsuitable investments (choices locked in)

Source: Lawrence Berkeley National Laboratory, Unlocking Load Growth at the Grid Edge: Practices for Managing, Recovering, and Allocating Distribution System Investments, Jan 2025

Rationale for Investment

Traditional	Proactive
Maintain reliability	Avoid energization delays
Repair/replace (old) equipment	Promote long-term affordability (building once)
Serve established load growth	Serve both established and nascent load growth

Adapted from RAP, NARUC 2026 (forthcoming): Proactive Investment Strategies that Support Transportation Electrification



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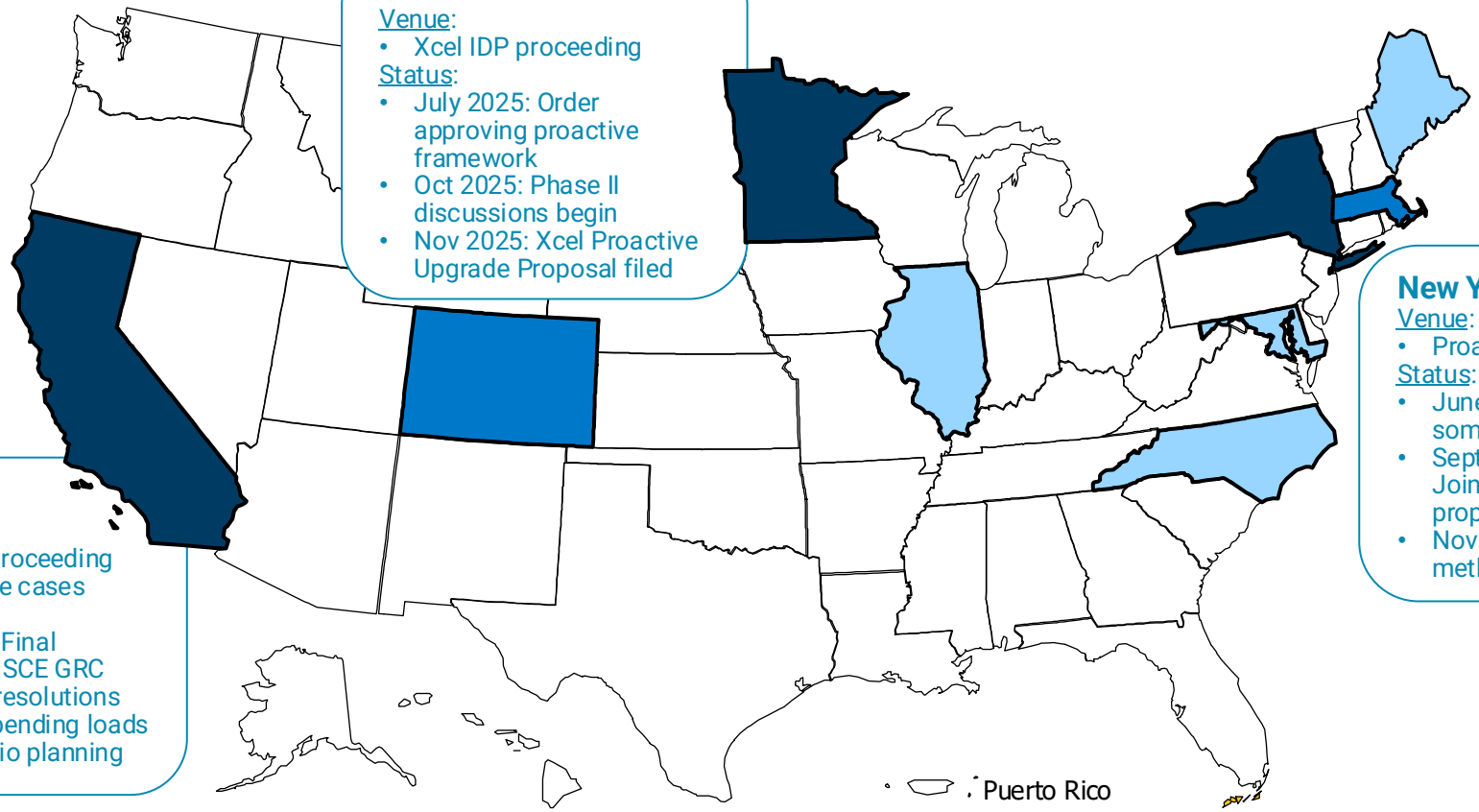
Proactive investments have been approved in states across the country, with proceedings underway in additional states.

Framework and/or investments approved; example state for Jan. 2026 convening

Investments approved; state not profiled at convening

Proactive investments and/or frameworks under consideration



Minnesota

Venue:
- Xcel IDP proceeding

Status:
- July 2025: Order approving proactive framework
- Oct 2025: Phase II discussions begin
- Nov 2025: Xcel Proactive Upgrade Proposal filed

California

Venues:
- High DER proceeding
- General rate cases

Status:
- Sept 2025: Final decision in SCE GRC
- Dec 2025: resolutions issued on pending loads and scenario planning

New York

Venue:
- Proactive planning proceeding

Status:
- June 2025: Order approving some urgent upgrade projects
- Sept 2025: Order approving Joint Utilities framework proposal, with modifications
- Nov 2025: JU load forecasting methodology document filed

IDP: Integrated Distribution Plan | **GRC**: General Rate Case | **SCE**: Southern California Edison | **JU**: Joint Utilities (of New York)

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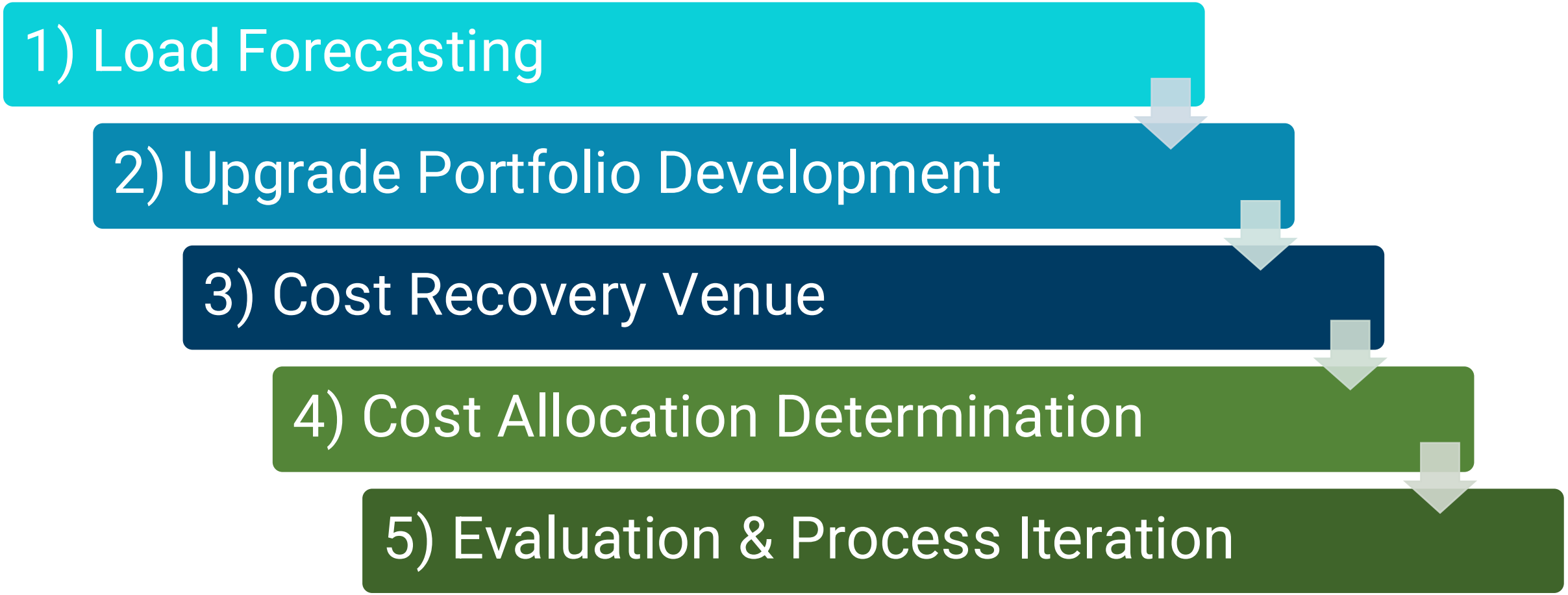
Convening structure aimed to follow key utility and regulatory process steps ("components").



Initial Reflections

	Takeaways	Open Questions
Load Forecasting	"Normal" forecasting window - now longer?	What level of "certainty" is appropriate? Which data?
	Potential to scale CA approach (pending loads, scenarios)	Opportunities to boost customer commitment?
Upgrade Portfolio Development	Key differentiation in portfolio vs. project-by-project regulatory approach.	Project-by-project approach – scalable?
	Approach here cascades into cost recovery, allocation questions	Where to draw line between proactive and traditional? How does this change approval process?
Cost Recovery Venue	Distinct approaches across states flows largely from approach to project- vs. portfolio-level	Real questions re: how alternative approaches would work in practice
	Strong interest in alternative recovery approaches (e.g., AFUDC, CWIP, deferred accounting)	How can (should) cost recovery integrate comparative analysis between forecasted load and performance metrics?
Cost Allocation Determination	No such thing as a perfect approach – compromise required	Who bears what risk, and for how long, remain key questions
	Allocating costs to uncertain sources of load requires new thinking	Fundamental question re: whether utilities should be taking on more risk
	Likely benefit in future work to determine expected (risk-adjusted) value to different parties	What is the balance to encourage utilities to invest while also taking new risk?
Evaluation & Process Iteration	Separating framework development from reporting metric conversations may prove useful	What metrics determine success and keep utilities accountable?
	Need for better tracking of grid / asset utilization over time	How should load forecasts be assessed retroactively?
	Opportunity to learn from early movers (NY, MN, CA, MA, CO)	What is the "right" level of utility reporting?

AFUDC: Allowance for Funds Used During Construction | **CWIP**: Construction Work in Progress

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Webinar Series

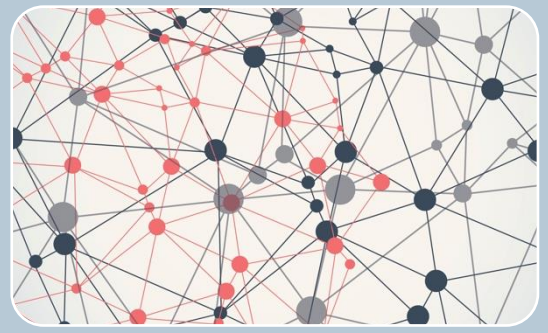
Audience Poll Question

What topics would you be most interested in for a webinar (select all that apply):

1. **EVs as a grid resource**
2. **Using forecasting and data tools to support better grid planning**
3. **Evaluating investment timing and rate impacts**
4. **Peer exchange on navigating grid planning challenges**

Webinar Series

***EVs as a Grid Resource**: Balancing Opportunities, Risks, and Uncertainties*



***No Crystal Ball:** Using Forecasting and Data Tools to Support Better Grid Planning*

***Measure Twice, Cut Once:** Evaluating Investment Timing and Rate Impacts*

***Collaborating for Solutions:** Peer Exchange on Navigating Grid Planning Challenges*

EV's as a Grid Resource

Webinar 1: Feb 26

Objective

- Explore how EVs can contribute towards maintaining grid affordability and stability when integrated strategically, while recognizing the uncertainties and challenges involved in planning for rapid adoption.

Topics Covered

- EV load characteristics, possible impacts, and potential to serve as a flexible, distributed grid resource.
- High-level overview of recent analyses (e.g., NRDC, Synapse) on EVs' impacts on rates and system costs.
- Key conditions required for EVs to deliver grid benefits: managed charging, supportive rate design, and infrastructure readiness.
- Understanding uncertainty: planning amid variable adoption rates and technology changes.
- Discussion: What does "good grid planning" look like in this evolving landscape?

No Crystal Ball

Webinar 2: End of March

Objective:

- Introduce advocates to analytical tools and data platforms that help anticipate EV adoption and load growth, manage uncertainty, and guide smarter, risk-aware planning decisions.

Topics Covered:

- The importance of bottom-up EV load forecasting in grid planning.
- Introduction and demonstration of RMI's GridUp and other data-driven tools, as well as examples of utility transportation electrification plans.
- How forecasting can inform investment timing, location, and scale.
- Managing uncertainty through scenario analysis and risk-sharing approaches.
- Q&A/Discussion: How advocates can use these insights to engage more effectively with utilities and regulators.

Measure Twice, Cut Once

Webinar 3: End of April

Objective:

- Examine the quantitative implications of different investment approaches – proactive and traditional - on rates, equity, and reliability, helping advocates understand and assess trade-offs in timing and scale of grid investments.

Topics Covered:

- Modelling results comparing proactive vs. traditional grid investments.
- How managed vs. unmanaged charging affects infrastructure costs and rate outcomes.
- Impacts of varying EV adoption scenarios (low, moderate, high).
- Strategies for sharing risk between utilities and customers amid uncertainty.
- Discussion: How can advocates evaluate whether proposed investments are “right-sized” and equitable?

Collaborating for Solutions

Webinar 4: Early June

Objective:

- Foster peer-to-peer learning and dialogue among advocates and experts, highlighting experiences, best practices, and emerging strategies for addressing the challenges of EV-driven grid planning.

Topics Covered:

- Recap of key takeaways from previous sessions.
- Case study examples from advocates and technical experts working on effective planning for EVs.
- Open discussion: barriers, opportunities, and new approaches to engagement.
- Q&A with experts to deepen understanding and share diverse perspectives.
- Identifying areas for continued collaboration and learning across the advocacy network.

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Technical Assistance

Audience Poll Question

Do you have a current or upcoming problem you can address using technical assistance from an expert on the topics you've heard today?

1. Yes
2. No
3. I'd like to know more

Technical Assistance (TA) Offerings

Analytical Capacity-Building

- **Training sessions** on EV forecasting, comparing utility forecasts, anticipating potential distribution system upgrade needs, and evaluating the need for proposed infrastructure investments. (*Using RMI's GridUp tool*)
- **Sharing relevant data**, visualizations, and analytical summaries from RMI's tools and reports to inform comments, testimony, or strategy.

Targeted Support

- **Quantifying the ratepayer impacts** of utility planning proposals
  - E.g., rate impacts of proactive distribution investments on different customer classes under various electrification scenarios (*Using RMI's Optimus tool*)
- **Support reviewing utility distribution plans**, load forecasts, grid upgrade proposals, or cost allocation methodologies.
- **Support preparing discovery questions**, technical comments, or expert testimony.

Thank you!

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