EV Charging Infrastructure
Utility and Regulatory Approaches

NASEO Energy Policy Outlook Conference

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Outline

1. Context: what is the charging infrastructure gap, and why are utility regulators getting involved?
2. Key to *beneficial* transportation electrification: smart charging
3. Recent utility proposals and commission decisions: what’s happening on the ground?
Takeaways

- Utility regulators are increasingly being asked to evaluate investments in EV charging infrastructure.

- In doing so, regulators must balance multiple regulatory and policy priorities.

- Charging can and should be done in a way that reduces costs and emissions and benefits the grid.

- State agency coordination can improve data, analysis, policy, and outcomes.
EV Charging – Coming to a PUC Near You

- Utility regulators are increasingly being asked to evaluate investments in EV charging infrastructure
  - Utility proposals
  - State policy goals
  - Market trends
EV Charging – Coming to a PUC Near You

“The Commission’s authority over EV charging programs is consistent with [our] general duty to consider “the economy of the State, the conservation of natural resources, and the preservation of environmental quality””
- Maryland PUC, January 2019
What Is The Charging Infrastructure Gap?

There is an important role for utility programs, but what exactly is that role and what parts of it should ratepayers pay for?

Charging infrastructure in 2017 as a percentage of that needed by 2025


Regulators Must Balance Multiple Priorities

- Equitable access
- Preserving competition
- Increasing EV adoption
- Environmental concerns
- Reducing costs
- Fair to ratepayers
- CA’s evolution: from *prohibiting* to *requiring* utility investment
Regulators Must Balance Multiple Priorities

“...the proposed decision ... balances well these competing aims of accelerating EV adoption, enabling competition, reducing cost and being sustainable and fair investments for EV drivers and ratepayers”

- Commissioner Carla Peterman, regarding the CPUC May 2018 decision approving $750 million in EV infrastructure spending
Beneficial Electrification of Transportation

- Reduces costs for consumers
- Lowers emissions
- Benefits the grid
  - Reduces renewable curtailment
  - Doesn’t add to peak
  - Increases utilization of existing infrastructure

https://www.raponline.org/knowledge-center/beneficial-electrification-of-transportation/
Residential Charging

Key issues: cross-subsidization, increasing EV adoption, energy efficiency, encouraging off-peak usage

**Maryland (Jan. 2019):** rebates for incremental cost of smart L2 chargers; customers must enroll in TOU

**Consumers Energy (Jan. 2019):** $500 rebate for EV drivers with nighttime EV rate

**SDG&E (May 2018):** rebate for EVSE approved, utility ownership of customer-side infrastructure denied
Multi-unit Dwelling Charging

Key issues: lack of private market investment, “right to charge”, up front cost, equitable access

Maryland (Jan. 2019): Rebates for up to 50% of charger costs; utilities not allowed to own EVSE

Massachusetts:
• Eversource (2017): 4000 “make ready” stations, 10% in low income;
• Nat’l Grid (2018): rebates for 600 L2 and 80 DCFC, performance incentive for installing 75% of target sites
Workplace and Commercial Charging

Key issues: important for a subset of EV drivers, electric ratepayers’ role?, reforming rate design

Maryland: rejected utility rebate proposals; approved 5-year demand charge waiver

AEP (Ohio) (April 2018): rebate for up to 50% of L2 charger cost, some may be located at workplaces

California (2016): approved all 3 utilities for workplace and public charging investment; since then, focused on reforming rate design
Public Charging

Key issues: preserving competition, lack of private market investment, reforming rate design

Maryland (Jan. 2019): approved limited deployment, highlighted need to gather data on charging behavior, utilities can own and operate, must be at public properties

NV Energy (June 2018): Rebates for public charging on NV electric highway; must file demand charge transition tariff for DCFC
Other Transportation Electrification

Key issues: local environmental benefits, up front cost barriers, reforming rate design

California (2018): all three large IOUs approved to implement programs to electrify airport, port, medium and heavy duty fleets, transit and school buses

Duquesne Light (PA) (Dec. 2018): $500k for DCFC for Port Authority of Allegheny County’s first electric transit buses
Takeaways

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• In doing so, regulators must balance multiple regulatory and policy priorities

• Charging can and should be done in a way that reduces costs and emissions and benefits the grid

• State agency coordination can improve data, analysis, policy, and outcomes
Discussion

• What Developments or Key Issues Are Happening in Your State?

• Please take a copy of RAP’s new publication “Beneficial Electrification of Transportation”
About RAP

The Regulatory Assistance Project (RAP)® is an independent, non-partisan, non-governmental organization dedicated to accelerating the transition to a clean, reliable, and efficient energy future.

Learn more about our work at raponline.org

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