

February 8, 2022

Putting the Customer First: How States Can Keep Driving the Energy Transition

Roundtable Webinar

Our Experts



David Littell



Nancy Seidman



John Shenot



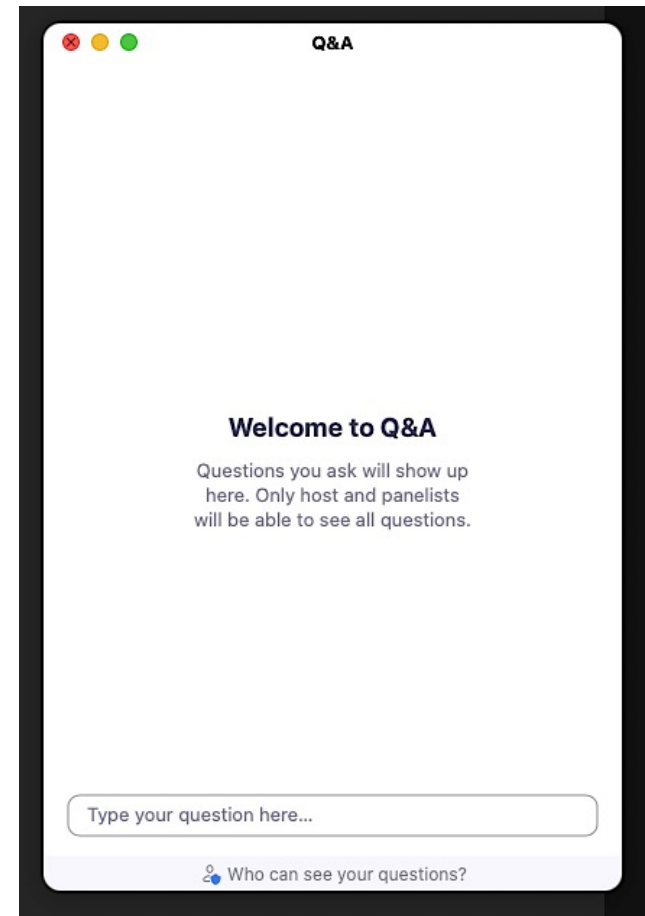
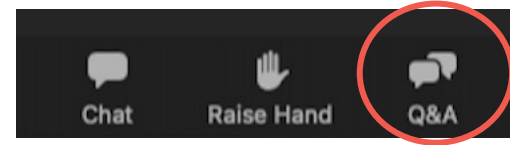
Jessica Shipley



**Moderator:
Richard Sedano**

Questions?

Please send
questions through
the Q&A pane



How States Can Put Customers At the Center

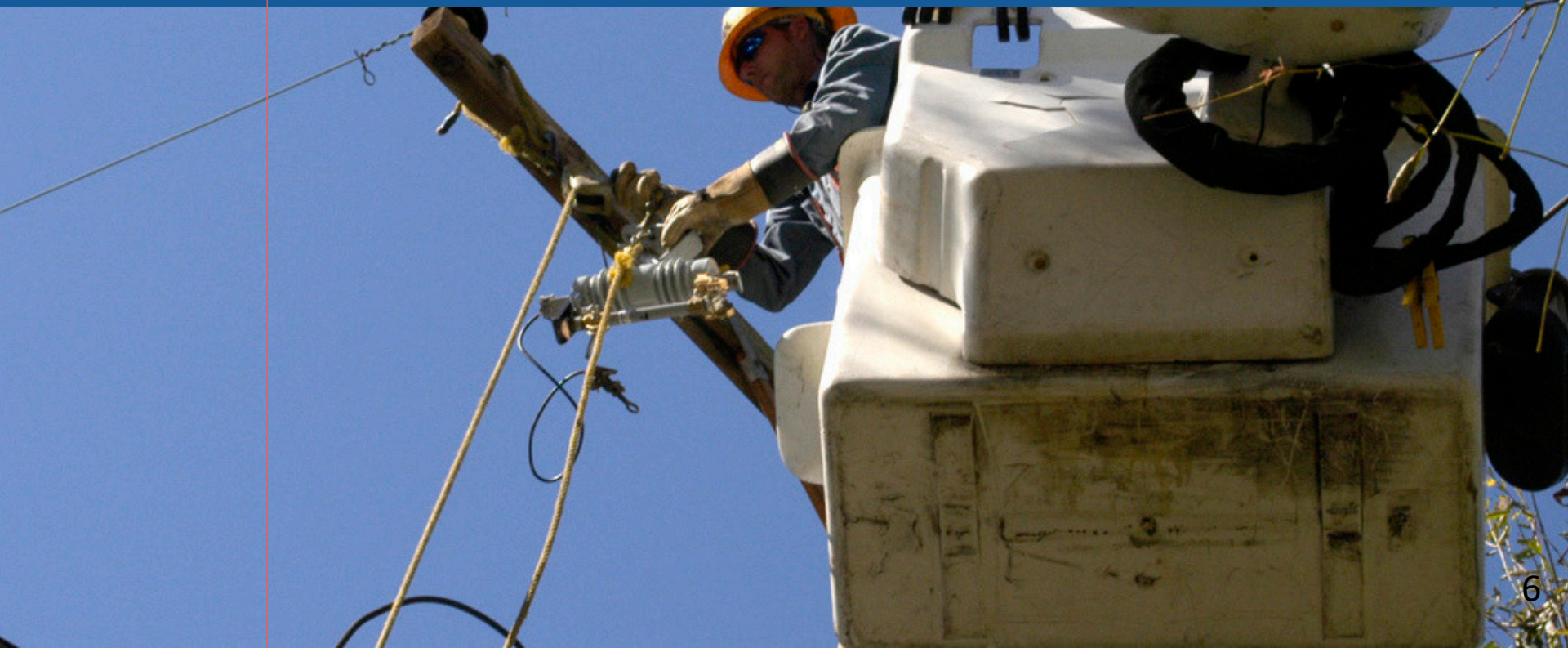
Proactive – Transparent – Equitable and inclusive

- PBR
- Distribution planning
- Rate design
- Electrification
- Equity in the regulatory process

Bonus Time: Federal Action



Performance-Based Regulation



PBR Metrics: Varying Approaches



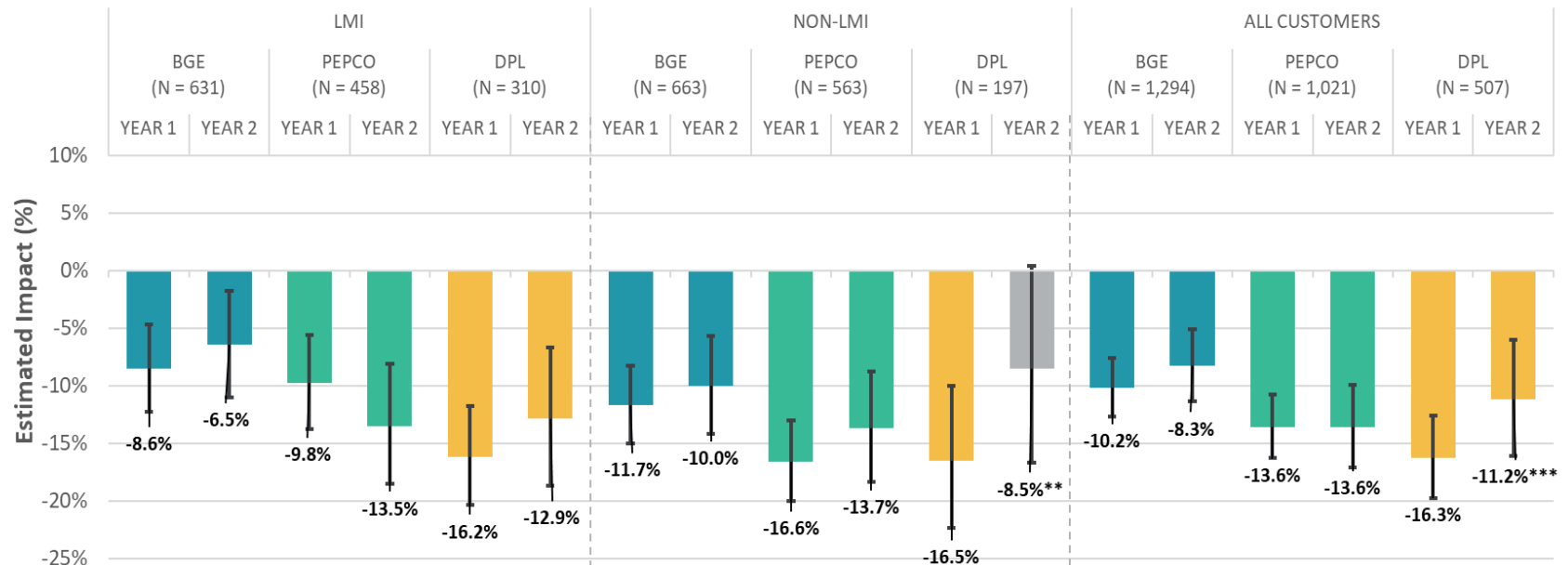
- MN: Affordability, disconnection/ arrearages, service quality by geography/ income
- RI: Debt, LMI discount enrollment, EV charger access
- HI: Energy burden (based on average income), EE delivery

Rate Design



TOU Rates: Weekday Peak Impacts

Weekday Peak Impacts by Group and Year

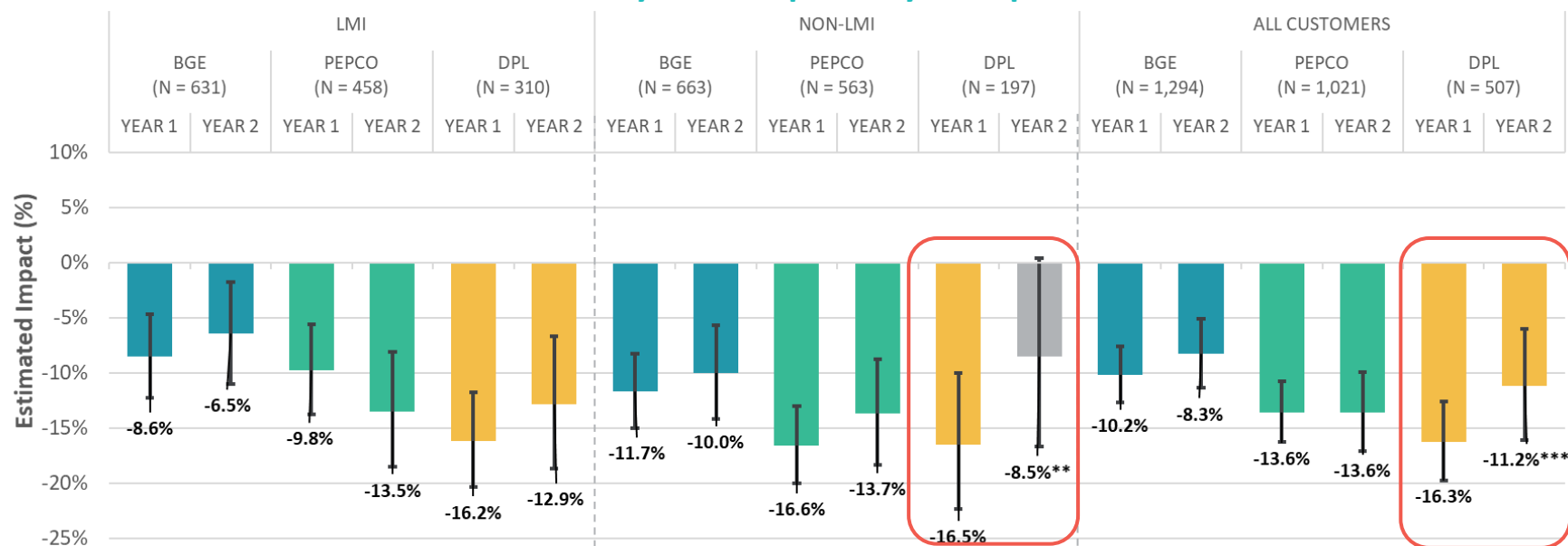


Notes: These results consider the same set of pilot customers across all three summers – those who have usable load data for the summers of 2018, 2019, and 2020. The error bar indicates the 95% confidence interval of the regression coefficient. Grey bars indicate statistical insignificance at the 5% level.

Source: Brattle Group

Year 2 vs Year 1: Comparison

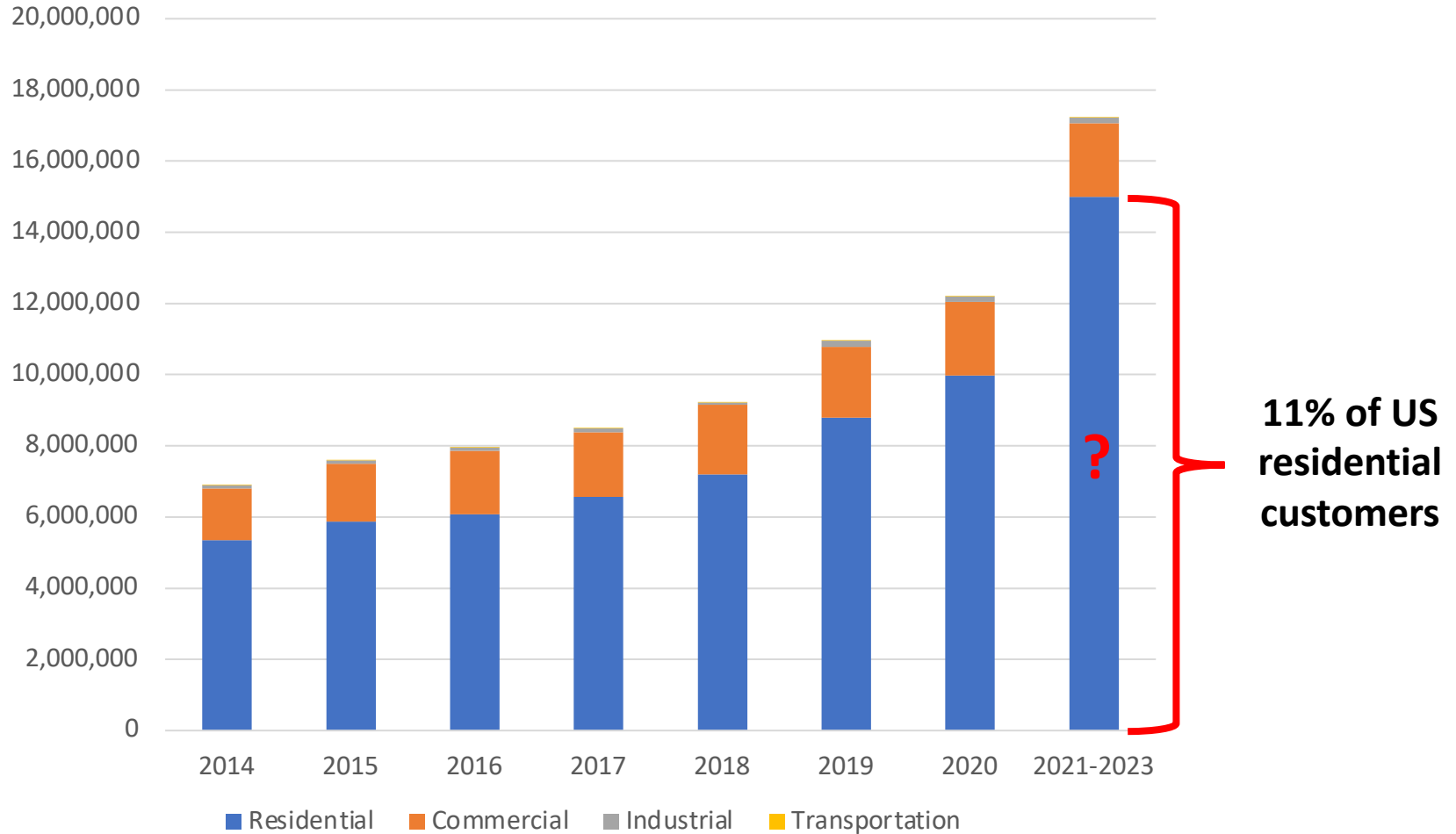
Weekday Peak Impacts by Group and Year



Notes: These results consider the same set of pilot customers across all three summers – those who have usable load data for the summers of 2018, 2019, and 2020. The error bar indicates the 95% confidence interval of the regression coefficient. Grey bars indicate statistical insignificance at the 5% level.

Source: Brattle Group

US Customers on Time-Varying Rates



Source: 2014-2020 based on Form 861 Annual Data submitted by utilities to US Energy Information Administration
2021-2023 estimated by RAP based on EIA data and PUC orders

Fort Collins Utilities

Residential TOU Rates - Mandatory

First year impacts:

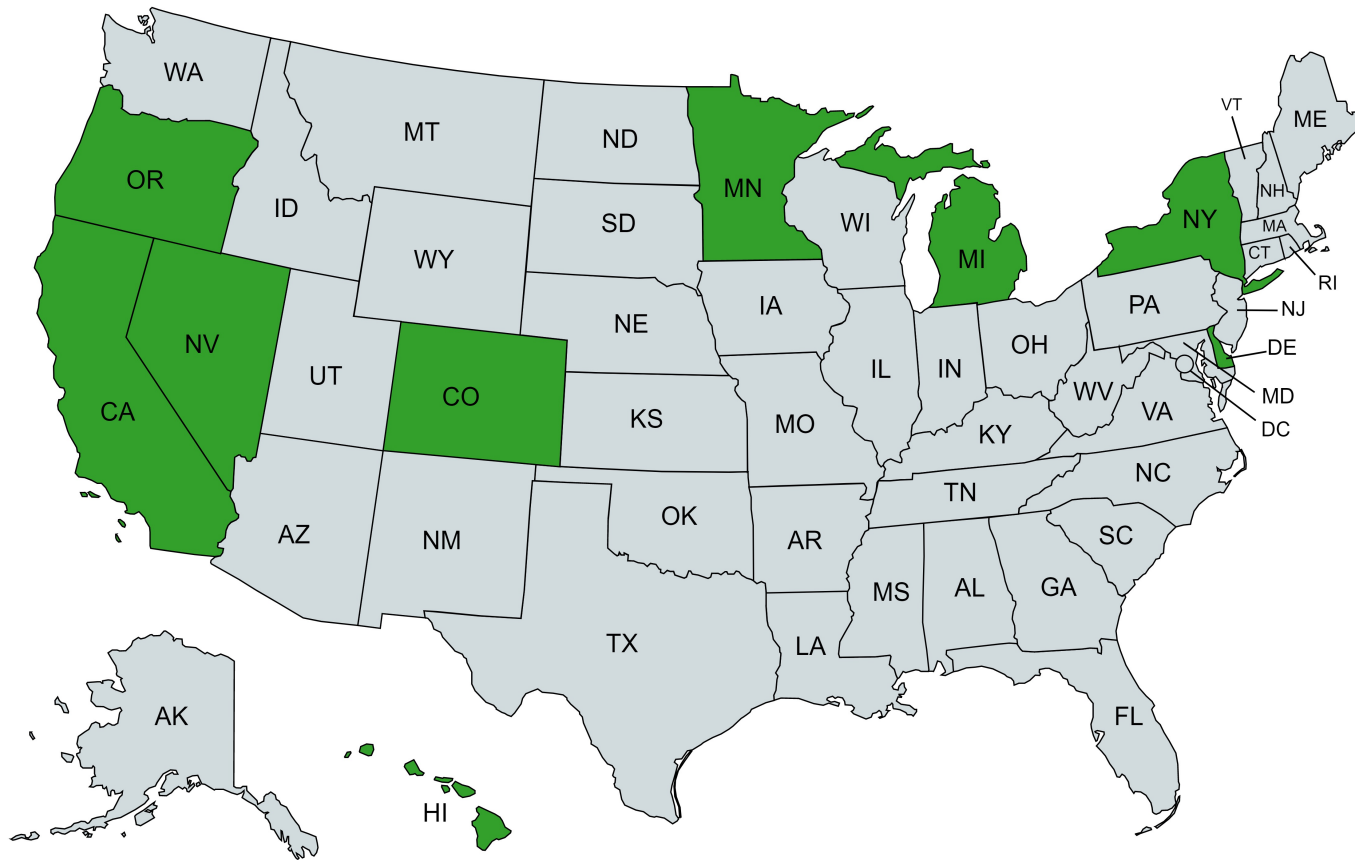
- 7.5% drop in peak demand
- 65% of customers benefited
- 67% of low-income customers benefited

Residential TOD	Charges-E125
Fixed Charge	\$8.59 /Mo
Non-Summer (Jan-Apr & Oct-Dec)	
Off-Peak	\$0.0719 /kWh
On-Peak (5 - 9 pm) M - F	\$0.2242 /kWh
Over 700 kWh tier	\$0.0246 /kWh
Summer (May - Sept)	
Off-Peak	\$0.0719 /kWh
On-Peak (2 - 7 pm) M - F	\$0.2624 /kWh
Over 700 kWh tier	\$0.0246 /kWh

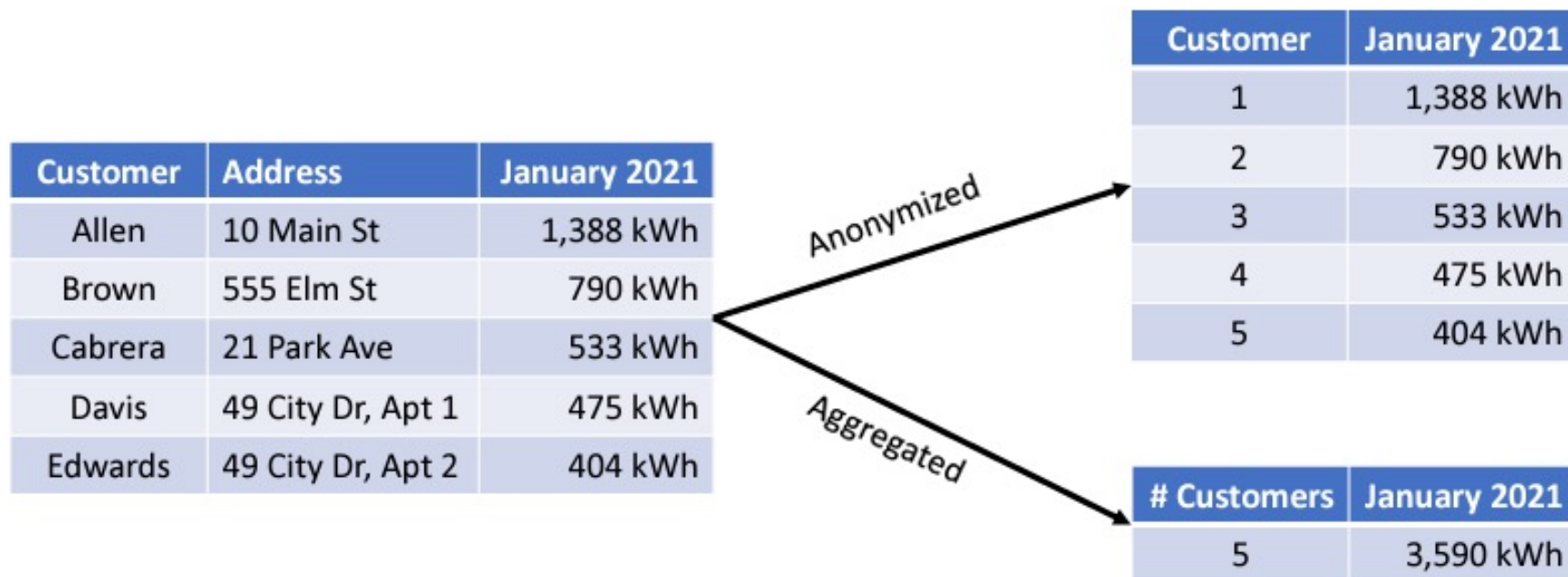
Distribution Planning



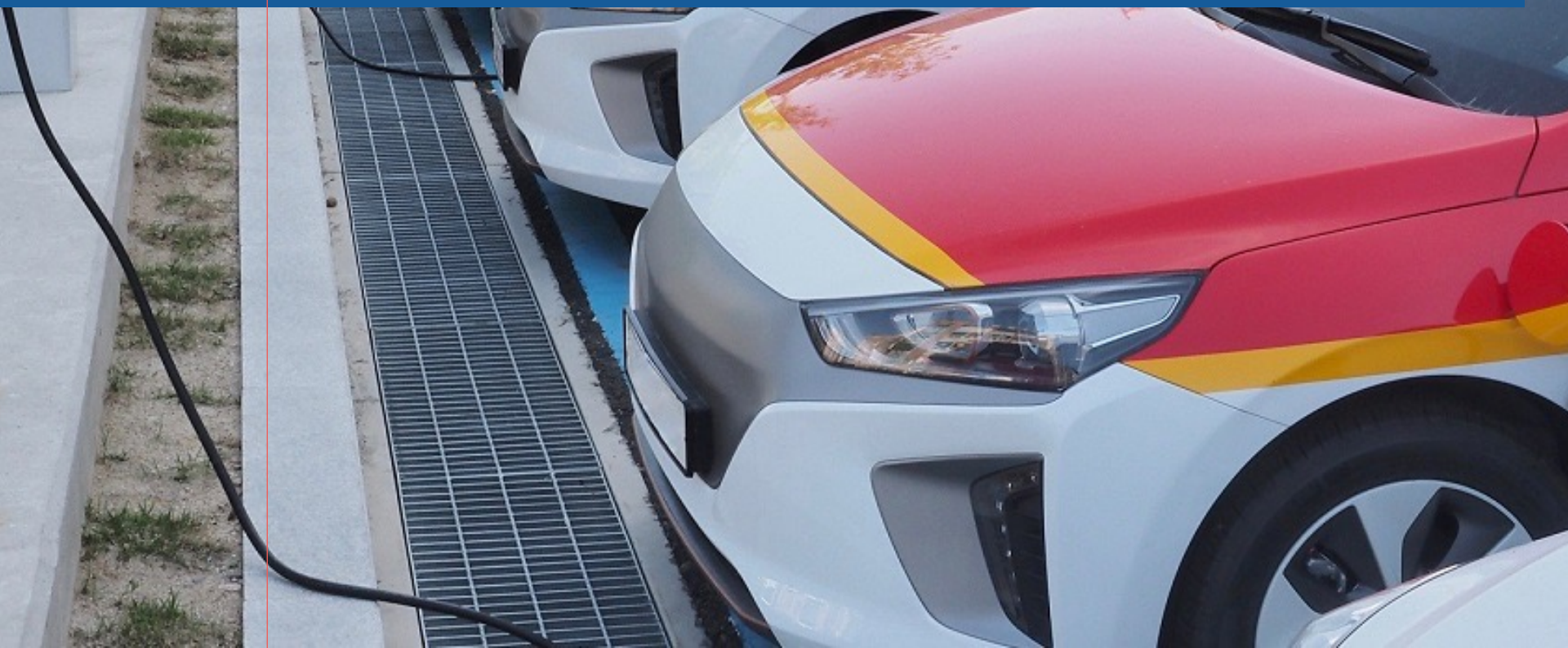
States with Distribution System Plan Requirements for Electric Utilities



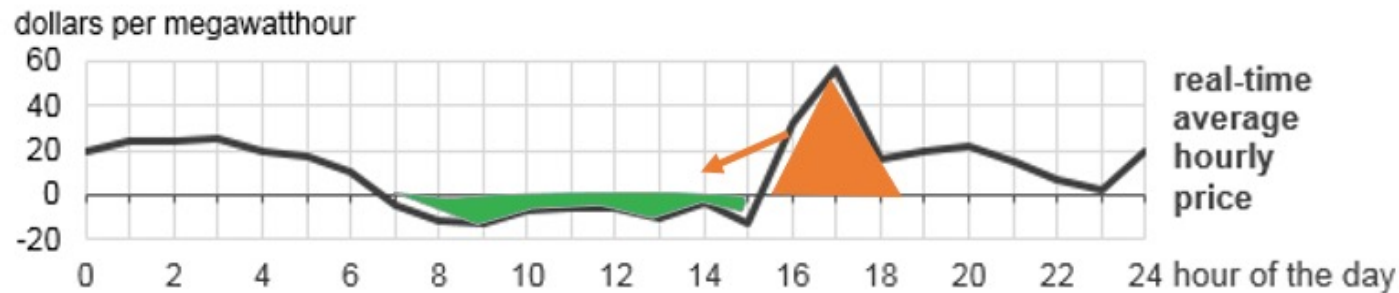
Anonymized Data vs Aggregated Data



Electrification

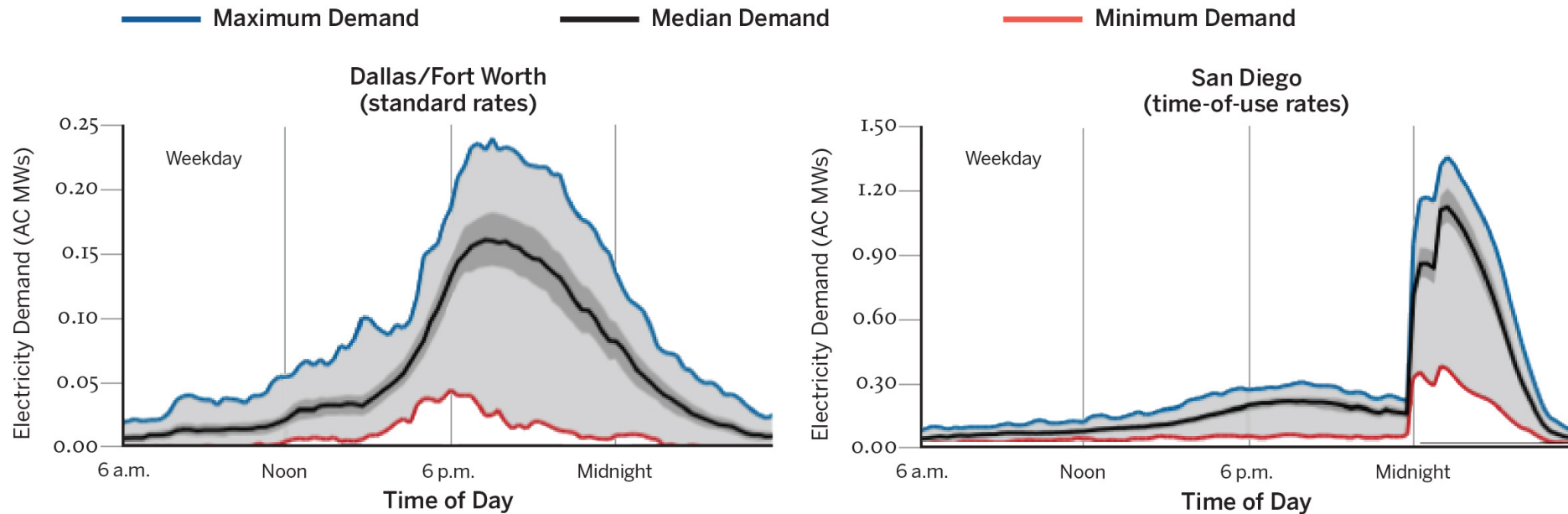


End Uses Can Be Flexible



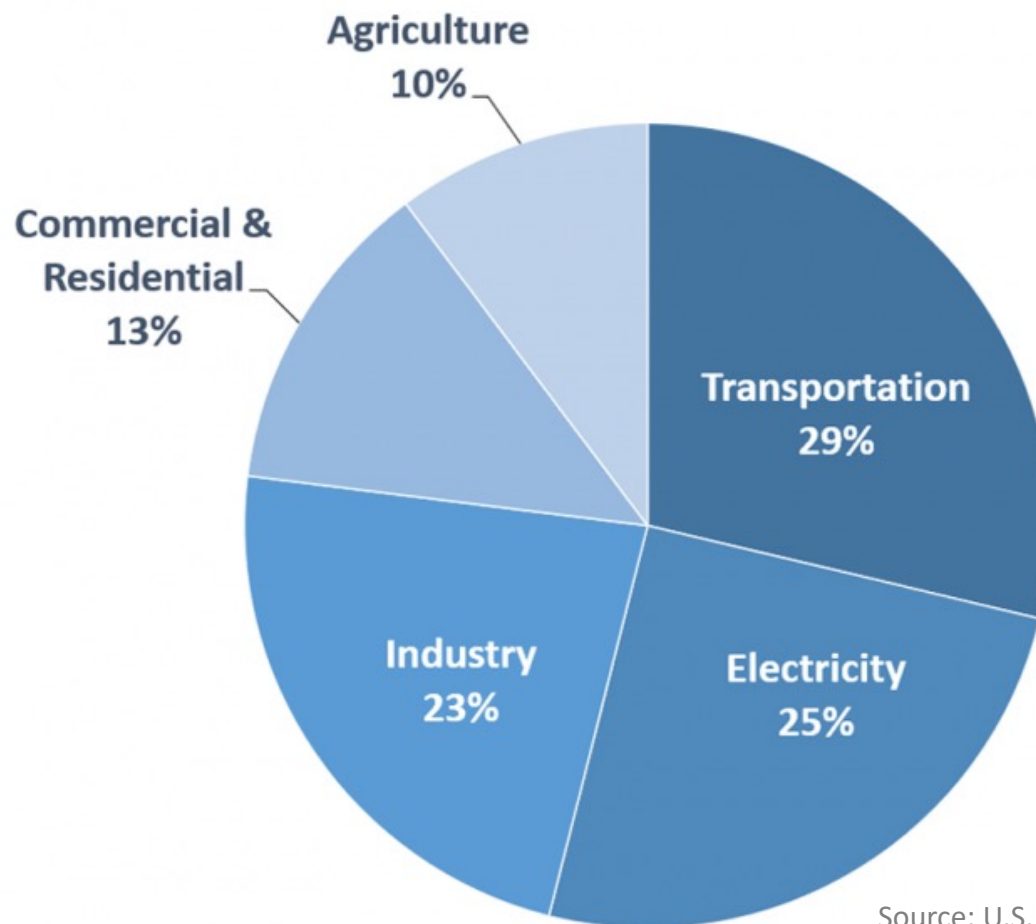
Price Signals and Flexibility

A Difference in Rates Can Influence When Customers Charge Vehicles



Source: Jones, B., Vermeer, G., Voellmann, K., & Allen, P. (2017). *Accelerating the Electric Vehicle Market*.

Sources of U.S. Greenhouse Gas Emissions in 2019



Source: U.S. EPA

Houston Vehicle Electrification

Vehicle type	# of Vehicles in Operation in 2017	Electrification numbers needed to achieve 25% reduction in NOx	
Medium- and Heavy-duty vehicles	155,000	62,000 (40%)	1% of all vehicles
Light duty-vehicles	5,300,000	3,800,000 (40%)	70% of all vehicles
Total	5,455,000		

Equity

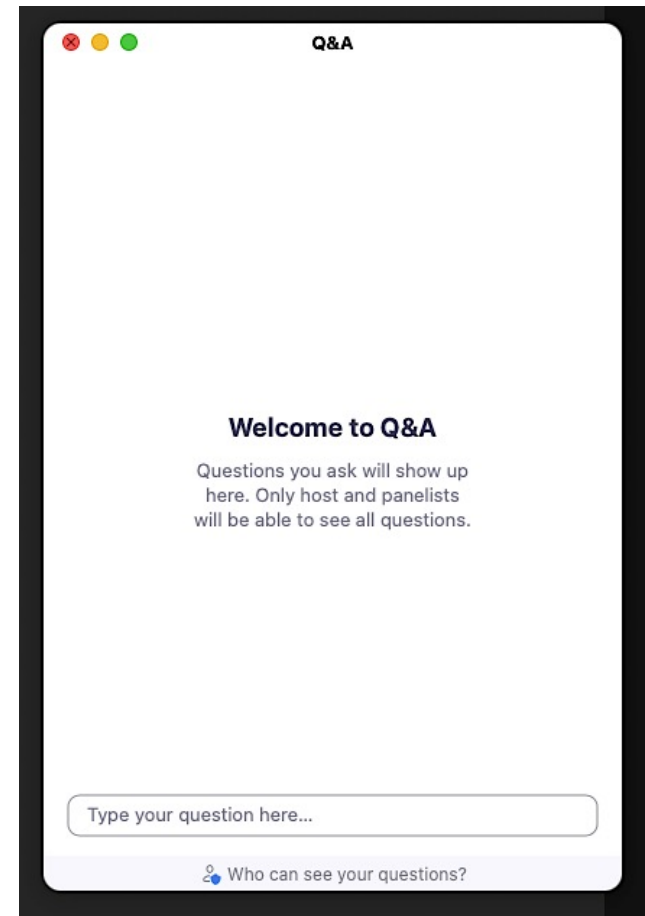
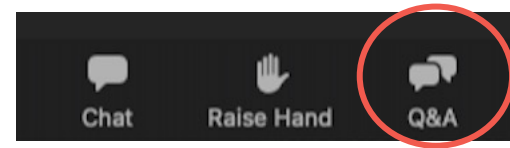


Bonus Time: Federal Action



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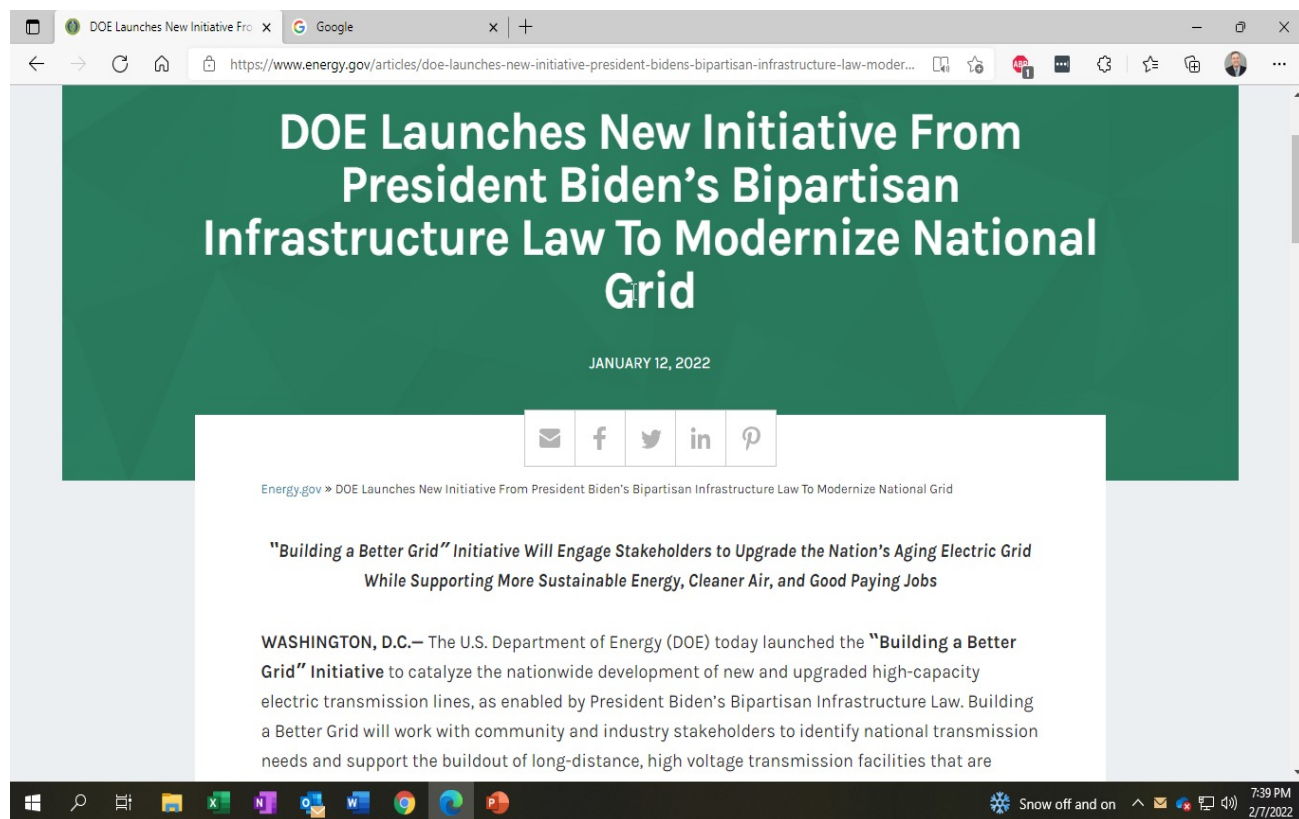


Federal and State Electrical Transmission Initiatives

DOE: Building a Better Grid

FERC:
Transmission
ANOPR

NY PSC & NJ
BPU: Offshore
wind transmission



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