

AMERICAN ELECTRIC POWER

UTILITY ROLE IN THE FUTURE OF ELECTRIC TRANSPORTATION

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About AEP

17,000 EMPLOYEES

26GW OWNED GENERATION

5.5M CUSTOMERS, 11 STATES

\$97B TOTAL ASSETS

40,000 TRANSMISSION MILES

225,000 DISTRIBUTION MILES

\$66B RATE BASE

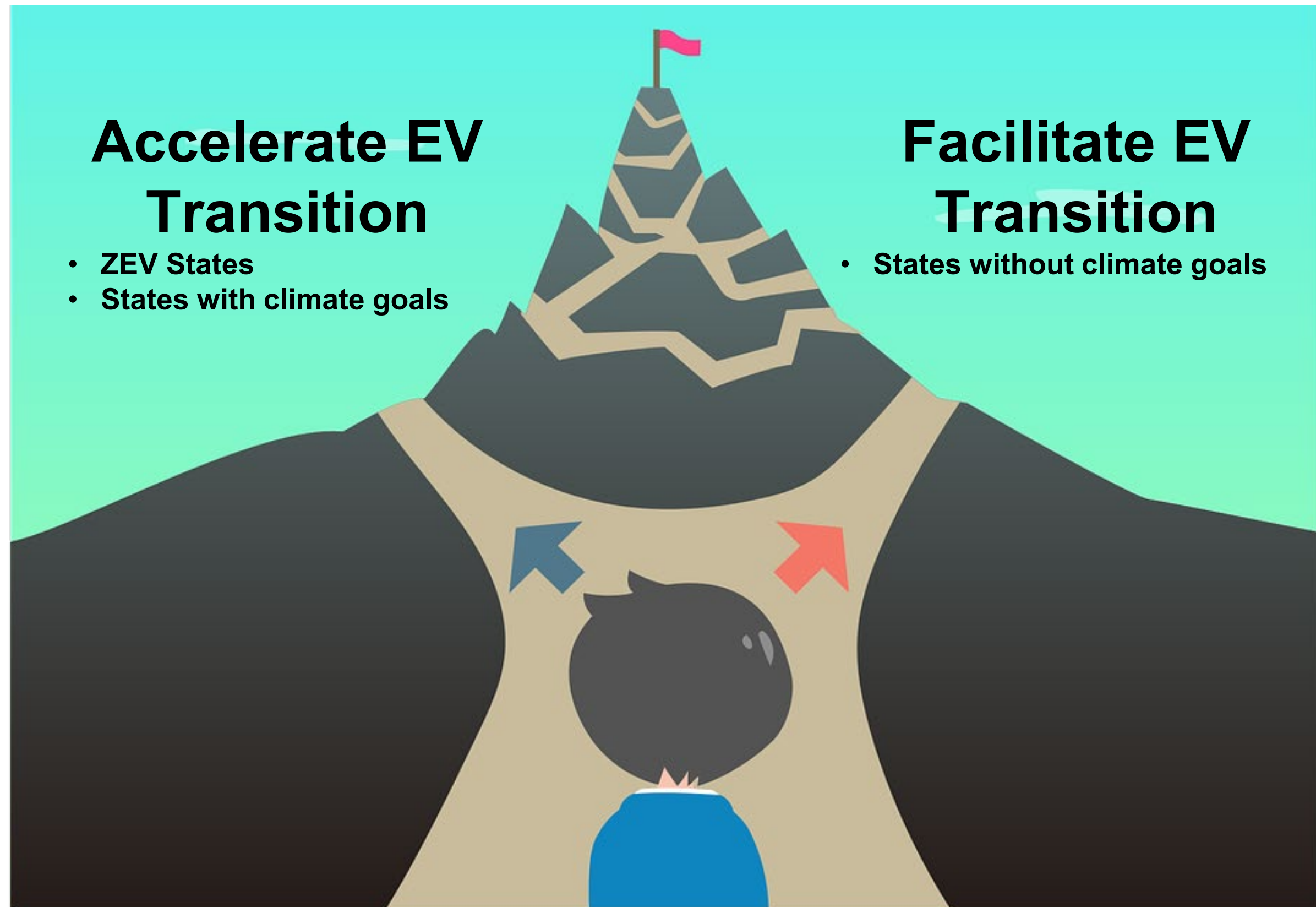
Utility Role in Transportation Electrification Varies by State

Accelerate EV Transition

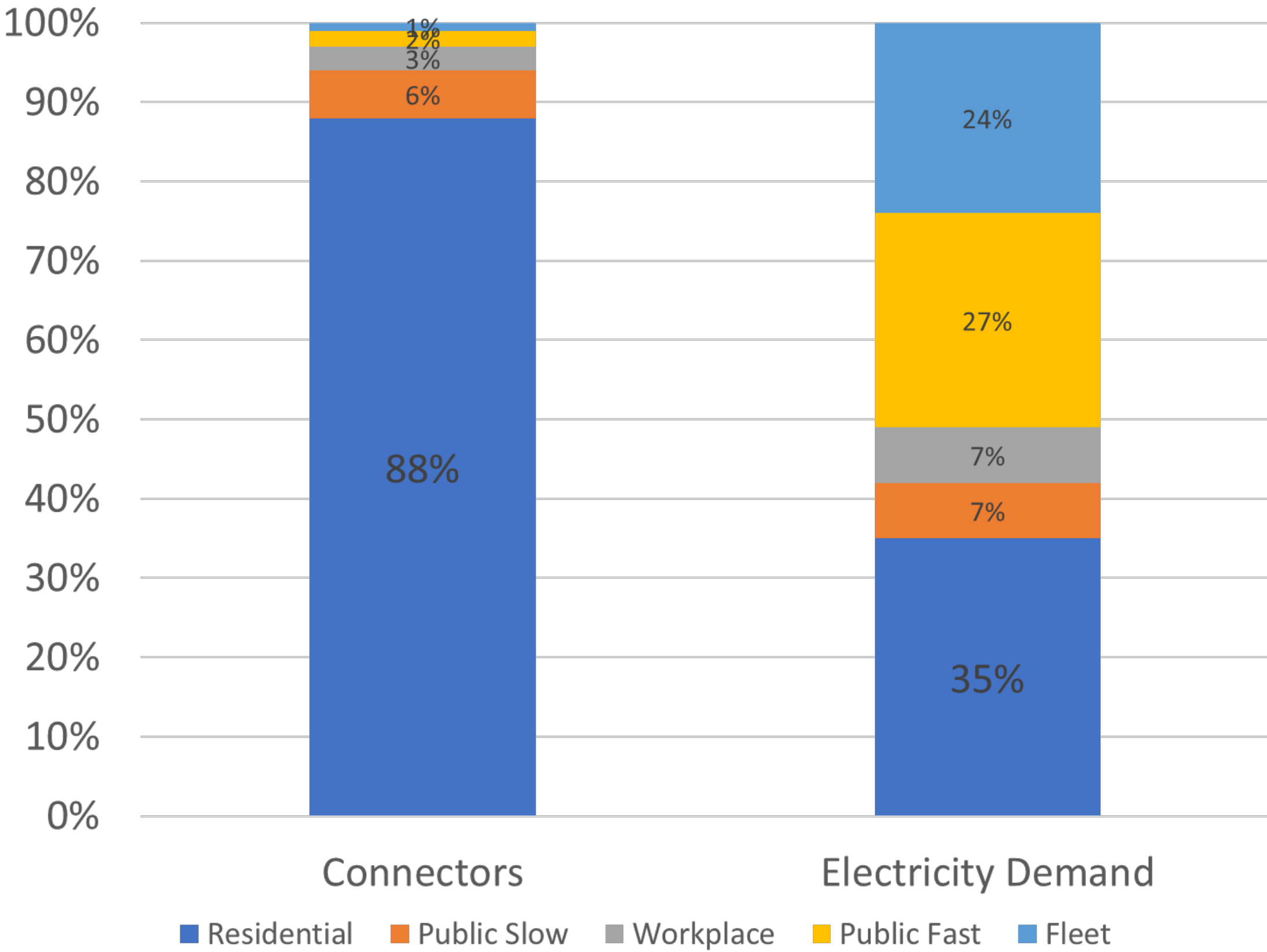
- ZEV States
- States with climate goals

Facilitate EV Transition

- States without climate goals



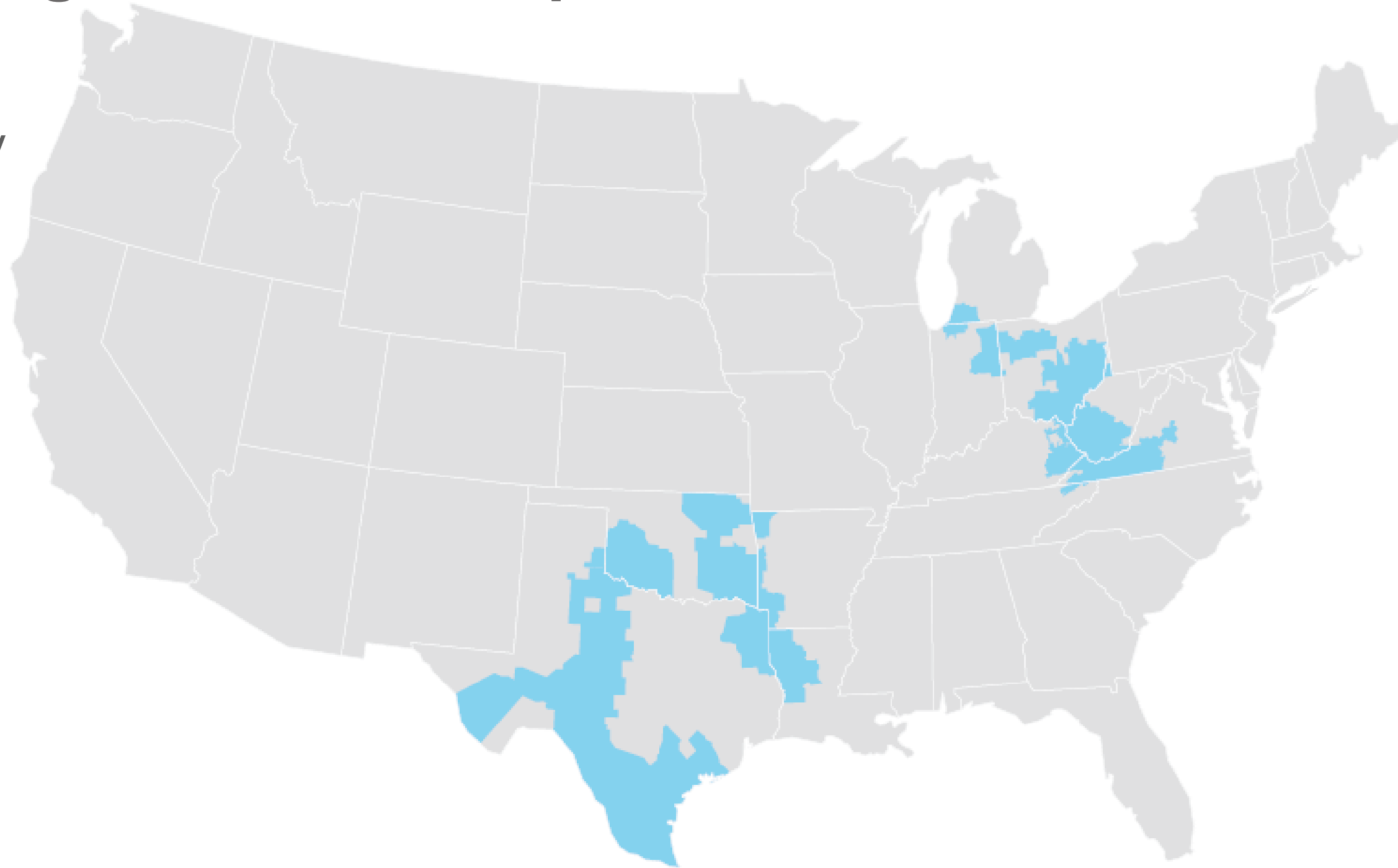
Projected global share of EV charging connector types and electricity demand in 2040



Source: BloombergNEF, EV Charging Outlook 2022, The Race to Scale

Utilities are all starting from different places

- Regulatory constructs vary
- Deregulated vs Regulated
- Policy and programmatic support of TE varies
- Local EV perceptions vary
- Staffing expertise and capacity vary
- Grid modernization efforts vary; ex: DERMS and AMI deployment



EV Planning is happening against a backdrop of massive growth

Case Study: AEP Texas

Average Growth (2011-2021) ~ 50 MW / Year

Average Growth (2022-2023) ~ 550 MW / Year

Actual Growth 2024 600 MW / Year

- **AEP Texas has just experienced nearly 35 years of load growth over the past three summers.**

Case Study: AEP Texas

All-time Peak Demand (2023)	~	7,550 MW
+ Signed LOAs w/ Customers	~	11,500 MW
<u>+ Customers Requesting LOAs</u>	~	<u>9,800 MW</u>
Potential Load by 2030	~	28,850 MW

UTILITY VISION FOR THE FUTURE IS ROOTED IN OUR EXISTING CORE VALUES



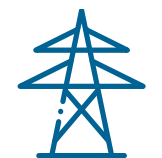
Affordability



Reliability



Duty to Serve



Used and Useful



Regulatory Compliance

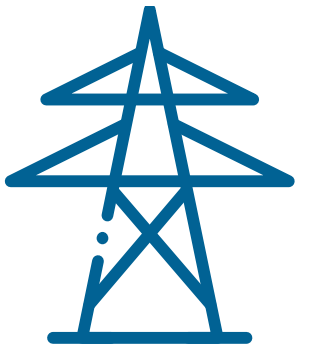


UTILITY INDUSTRY CORE VALUES

Affordability



- **Definition:** Providing energy services at a price that is reasonable for consumers.
- **Relevance to EVs:** Caution around shifting costs of EV programs/projects to non participating customers without demonstrating benefit to all customers.
- **Considerations:** Time-of-use rates, incentives for off-peak charging, and utilization of existing assets to reduce costs.



UTILITY INDUSTRY CORE VALUES

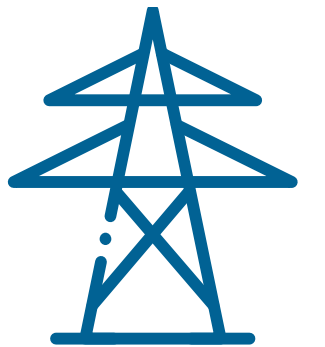
Reliability



•**Definition:** Utilities must ensure a stable and uninterrupted supply of electricity. Utilities must prepare for and respond to emergencies, such as natural disasters, to ensure rapid recovery and minimal disruption to service.

•**Relevance to EVs:** Increased load from EVs requires robust grid planning and management to prevent outages.

•**Considerations:** Any resilience, demand response, V2G, etc. benefits from EVs have to be reliable to be counted in utility programs.



UTILITY INDUSTRY CORE VALUES

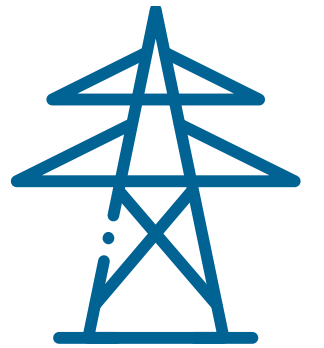
Duty to Serve



•**Definition:** A foundational principle ensuring that essential services are accessible to all parts of the community. Utilities are mandated to provide service to all customers within their designated service area.

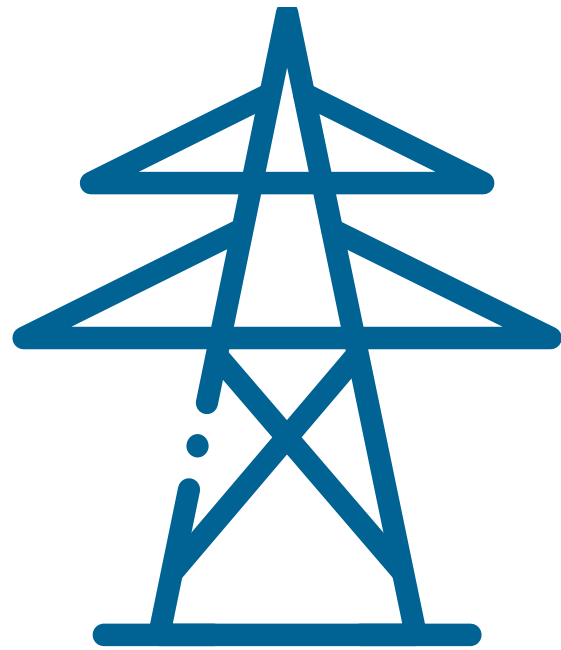
•**Relevance to EVs:** We serve everyone in our territory without discrimination and generally can not prioritize EV infrastructure over other customer needs.

•**Considerations:** Early and continuous communication with utility partners is necessary to prevent delays.



UTILITY INDUSTRY CORE VALUES

Used and Useful



- **Definition:** Investments made by utilities must be "used and useful" to customers before being included in the rate base. Speculative building is generally not allowed.

- **Relevance to EVs:** Investments in infrastructure must demonstrate clear benefits and utilization to justify costs. Potential issue for fleets in industrial areas, truck stops, etc.

- **Considerations:** Regulatory proceedings on *proactive grid build* out in NY and CA are working to solve this.



UTILITY INDUSTRY CORE VALUES

Regulatory Compliance



- **Definition:** Adhering to federal, state, and local regulations.
- **Relevance to EVs:** Regulatory lag, differing policy perspectives across states, long timelines.
- **Considerations:** Many of the rules and procedures that have made the grid work well for the last 100 years are slowing EV progress. These rules were put in place for good reason, but may now need to be modernized.



Thank you

