

Meet the E Source Mobility Service

Webinar



December 6, 2022

Agenda

- Introductions
- Mobility challenges utilities face
- How E Source can help along your mobility journey
- Next steps
- Q&A



E Source speakers



Rachel Reiss Buckley

Vice President,
Enterprise Strategy and Product Development
<https://www.esource.com/rachel-buckley>



Bryan Jungers

Director of Mobility,
Customer Energy Solutions
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Michael Hartnack

Senior Solution Director,
Customer Energy Solutions
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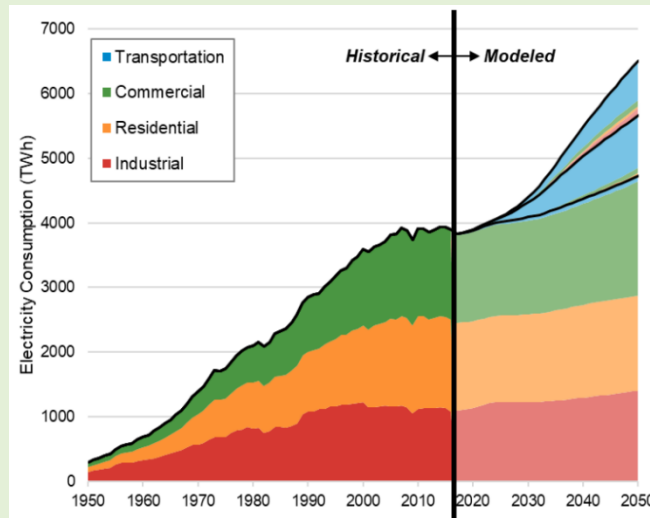
Brenna Raeder

Associate Data Analyst,
Customer Energy Solutions
<https://www.esource.com/brenna-raeder>

Electric transportation will be the major force in electricity growth for many decades

- Demand growth not seen since the mid-1900s
- Likely to be uneven for the next few years
- Followed by rapid acceleration

Vehicle electrification dominates incremental growth in annual consumption



High: 1.6% per year compound annual growth rate (2016–2050)

Medium: 1.2% per year

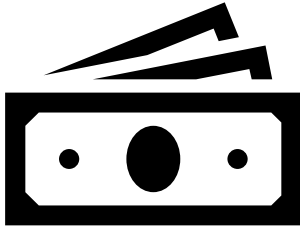
Reference: 0.6% per year

2050 US electricity consumption increases:

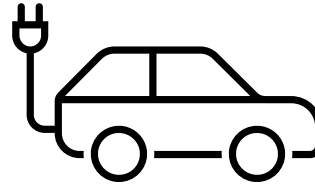
- **Medium:** +932 terawatt-hours (TWh) (20%); 810 TWh from transportation
- **High:** +1,782 TWh (38%); 1,424 TWh from transportation

Source: National Renewable Energy Laboratory (2018 Electrification Futures Study: Transportation Electrification). **Note:** TWh = terawatt-hour.

Why mobility and why now?



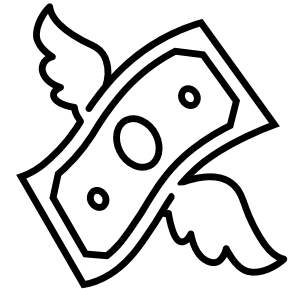
\$100 billion in new revenue annually



Major OEMs are going all-electric



12 states may ban gas vehicles



Mismanaged EV charging is costly

TE challenges utilities are facing now



Uncertainty about how incentives will affect adoption rates



Unsure about which consumer groups to target and how to get their attention



Assisting business customers with fleet electrification planning and implementation



Limited staff capacity to focus on transportation electrification (TE) initiatives and programs



Incomplete forecasting of EV adoption and associated grid impacts

Who we help

TE leaders

Utility executives responsible for creating a TE strategy, delivering results to the company, managing a team, and meeting regulatory requirements.

TE teams

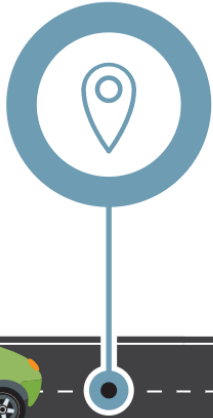
Dedicated TE teams focused on program design, program management, marketing and outreach, and continuous improvement and expansion of TE efforts.

TE functions

Some utilities don't yet have stand-alone teams, but there are individuals working on TE as their full-time job or as part of their role.

Utilities in all phases of a mobility journey

Phase 1



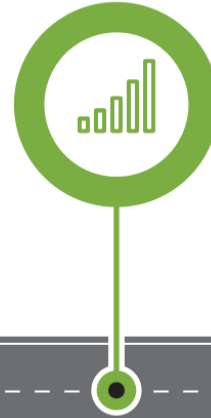
Don't have a TE plan, strategy, portfolio yet

Phase 2



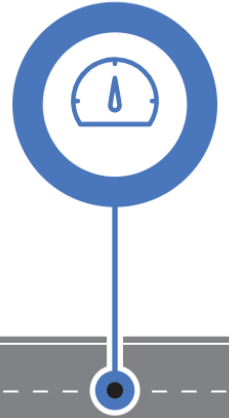
Writing TE plan now and need inputs

Phase 3



Doing tech validation

Phase 4



Implementing strategy, customer market transformation





E Source Mobility Service

The E Source Mobility Service will help you

- Meet regulatory requirements and utility priorities
- Proactively address fleet and consumer market demand
- Save time and prioritize your efforts
- Learn from what others have already tried
- Stay on top of trends
- Deliver more value to the right customers in less time
- Move from ad-hoc programs to a customer-centric portfolio

E Source Mobility Service membership components



You're not alone

Network with your peers

Annual in-person **Mobility Leadership Council**

Ongoing online **peer exchanges**

Ask us for connections

Our experts are on your team

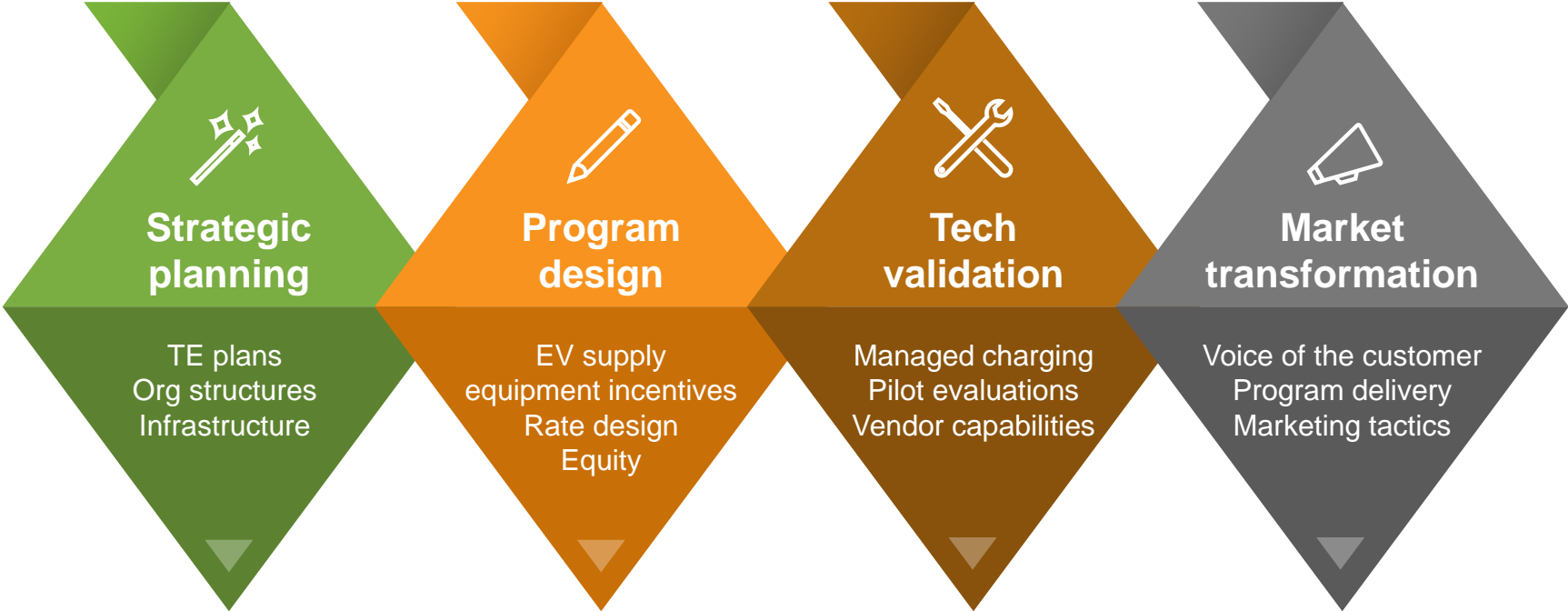
Authored dozens of mobility reports and invited to **speak** at many conferences

Frontline **consulting** with mobility vendors, agencies, and utilities

Deep **industry relationships** and context for mobility solutions

Analyzed all available TE plans, evaluation studies, and pilot results

Accelerate and improve your mobility portfolio



TE strategy and program design

Ask E Source



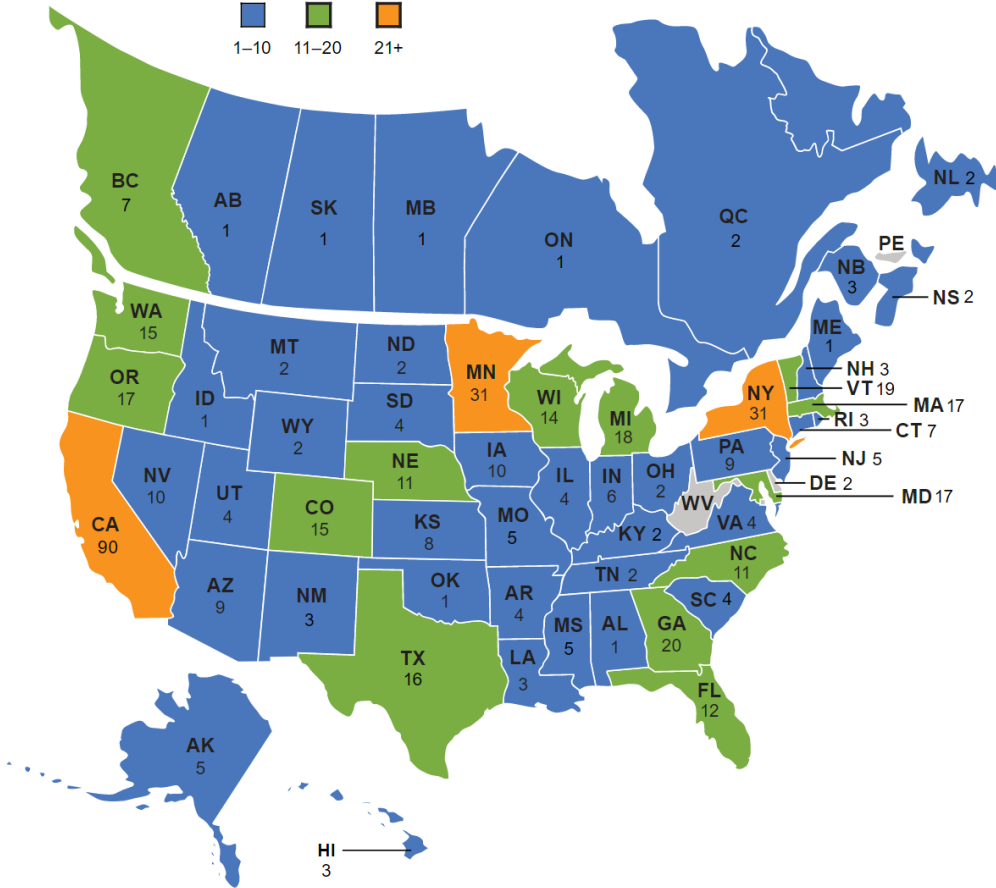
“How are utilities structuring their mobility teams and what are the roles on those teams?”

“How can we help fleets in our service territory build an electrification roadmap?”

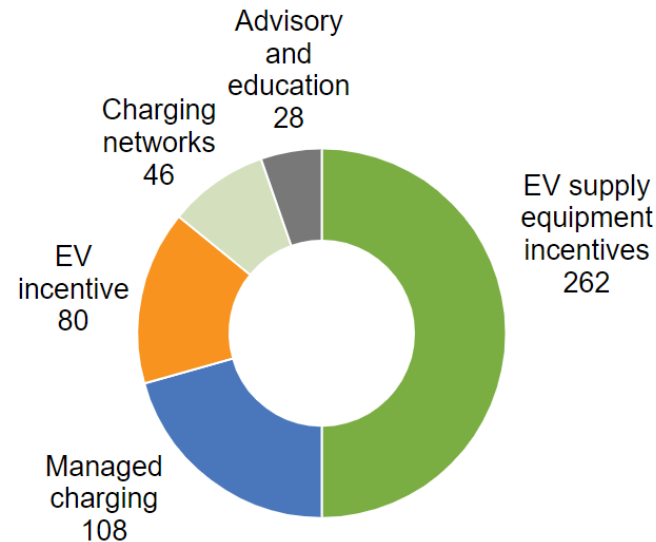


“Which incentives are utilities finding successful for driving EV adoption?”

Legend: Number of programs



Number of utility EV programs by primary category



© E Source

© E Source; data from utility websites and the US Department of Energy

[A catalog of utility EV pilots and programs \(2022\)](#)

Research report examples

Mobility Service

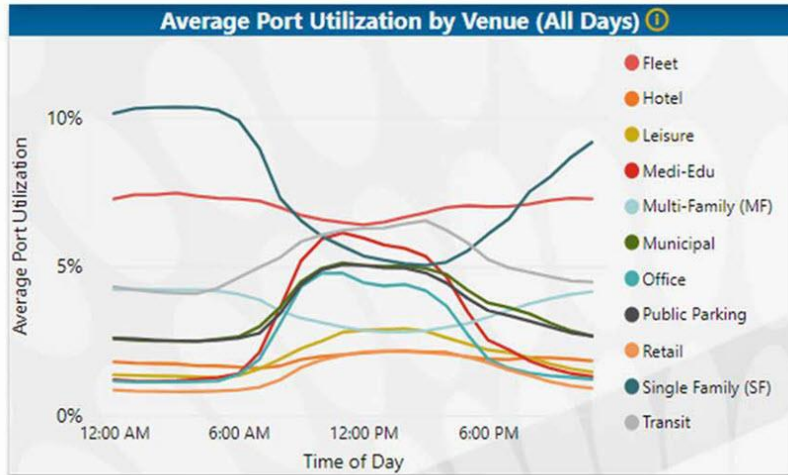
[Read the report](#)

Building your EV charger asset management plan

Bryan Jungers, Jesse Hitchcock, Liza Minor

Key takeaways

- Organizations installing, owning, and managing EV chargers need to build an asset management plan for the equipment. The plan should include site selection, system sizing, quality installation, and maintenance.
- Quality installation, in particular, is essential to EV charger operation. Most equipment errors, failures, and downtime are a result of poor installation.
- Level 2 charging equipment is the most common, representing the largest number of chargers in the field and the largest number of new chargers needed through 2030.
- All equipment should be inspected at least once a year, while frequently used equipment should be inspected more often.
- Specialized training, certifications, testing equipment, and other tools will help EV charger technicians properly install, commission, and maintain equipment.



Source: US Department of Energy

Research report examples

Mobility Service

[Read the report](#)

How to use EV charging data to make a great transportation electrification plan

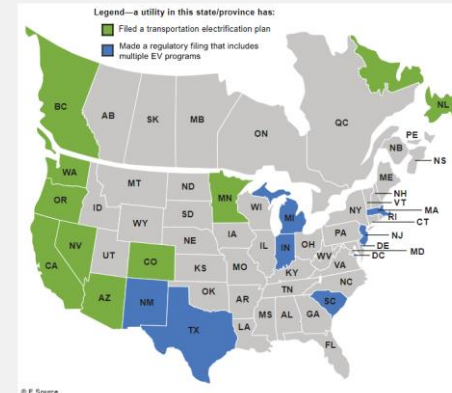
Jesse Hitchcock, Bryan Jungers

Key takeaways

- Few utilities have access to all the sources and types of data they need to inform transportation electrification investments and portfolio planning.
- You can use existing simulation tools and data repositories as a starting point if you don't have access to localized EV data.
- Use EV data, equipment variability, and market research to accurately quantify the potential impact of EVs on the grid.
- Utilities often focus on forecasting the impacts of EV charging. But understanding how consumers are currently charging their EVs is another key part of EV planning.
- Our five-step process can help move your initiative from EV load profile to program deployment.

Figure 1: States and provinces with utility TEPs and multiprogram EV filings

E Source tracks more than 300 active EV pilots and programs across all sectors in the US and Canada. However, utilities in just seven states and two Canadian province have filed more-robust TEPs. Utilities in an additional seven states and DC have made regulatory filings proposing multiple EV programs or pilots.



Custom engagement options within the Mobility Service

With a high-touchpoint model, E Source provides custom advising and engagement on your mobility initiatives within the Mobility Service.

Advisory calls

Recurring advisory calls between E Source TE experts and the utility's TE team, based on clients' needs.

TE Insights and membership trainings

We'll walk your teams through TE Insights and membership benefits.

Topical briefing

Schedule a specific research presentation with our subject-matter experts for your team.

Quarterly executive summary

We'll provide an executive summary on the latest TE trends.

TE benchmarking

Ask E Source



“How are utilities allocating their budgets in their TE plans?”

“What are the evaluated impacts and costs leading utilities are seeing for EV programs?”



“Can I read through other utilities’ TE plans?”



Benchmark utility TE spending and strategy

E Source TE Insights organizes the data from utility transportation electrification (TE) plans, EV-specific rates, and customer rebates into one easy-to-navigate platform. With this tool, you can understand how peer utilities are allocating their TE budgets, track goals and results, find transportation plan language that can support your own filings, and compare EV-specific rates and incentives. Make informed decisions about your TE strategy with this view of the industry landscape.

TE Insights helps you design a strategy with confidence by providing:

- Information on utility TE spending, goals, rates, and incentives
- The ability to perform a keyword search within TE plans and evaluations
- Built-in visuals to help you understand trends
- Original source documentation
- Powerful filters so you see only the most pertinent data

Filter data by sector, administrator, or location

Administrator
All

Year
All

Component type
All

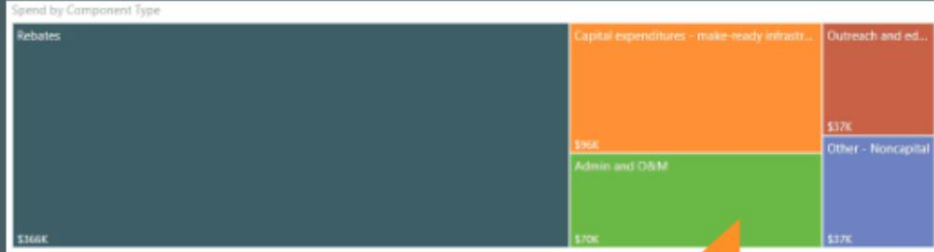
Sector type
 Nonresidential
 Not sector specific
 Residential

Sector
All

State/Province
All

Region
All

Reporting type
 Actual
 Plan



Season	Time of use	Energy charge
June 1-September 30	On-peak: Weekdays 12pm-7pm	\$0.216660/kWh
	Intermediate peak: Weekdays 10am-12pm and 7pm-9pm	\$0.111568/kWh
	Off-peak: Weekdays 9pm-10am, weekends and holidays	\$0.083668/kWh
October 1-May 31	Intermediate peak: Weekdays 7am-9pm	\$0.111568/kWh
	Off-peak: Weekdays 9pm-7am, weekends and holidays	\$0.083668/kWh

Explore EV rates and incentives

Understand how utilities are allocating funds to rebates, capital expenditures, admin, and outreach

Administrator	Rate	Year	Sector	Rate type	Live source	Static source
Alabama Power Company	Business Electric Vehicle TOU Charging Rate	2022	Commercial & Industrial	Time-of-Use	Live source	Static source

Track utility goals

Administrator	Component name	Component type	Year	Impact type	Reporting type	Value	Unit	Comments
Dominion (Virginia)	Workplace charging station - make-ready/equipment rebate expense	Rebates	2020	Stations added	Plan	200	Stations	Annualized over two years
Dominion (Virginia)	Workplace charging station - make-ready/equipment rebate expense	Rebates	2021	Stations added	Plan	200	Stations	Annualized over two years
Duke Energy Carolinas	EV school bus charging station program	Rebates	2021	Participants	Plan	18	Participants	Annualized over three years
Duke Energy Carolinas	EV school bus charging station program	Rebates	2022	Participants	Plan	18	Participants	Annualized over three years

I want to...

Document library

Explore and search transportation electrification plans, evaluations, studies, and other filings.

Source: TE plans, evaluations, and other filings

Portfolio list

Understand total portfolio spend and features included in transportation electrification plans.

Source: Utility filings

Spend summary

Discover how utilities are allocating their spend across different categories.

Source: Utility filings

Program spend and impact

See spending and impact data from filed utility programs.

Source: Utility filings

Program component spend

Explore utility spending by program component.

Source: Utility filings

Program component impact

See utility goals such as ports, participants, and charging stations broken out by program component.

Source: Utility filings

Choose your own dataset

Build your own custom data table from utility filing data.

Source: Utility filings

EV-specific rates

Review dedicated EV rates currently in place across the United States and Canada.

Source: Utility websites

EV incentive programs

Review customer-facing EV incentive programs.

Source: Utility websites

EV incentives benchmarking

Benchmark your EV-related incentive levels for customer-facing programs.

Source: Utility websites

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TE tech validation

Ask E Source



“How can we compare different EV solutions for business customer fleets?”

“What are the evaluated impacts, costs, and benefits leading utilities are seeing for EV telematics as a load management resource?”



“Can you help us establish EV supply equipment specifications for our program's qualified products list?”

TE tech validation

Reports



Transportation electrification and energy funding in the 2021 Infrastructure Investment and Jobs Act

Battery market forecast to 2030: Pricing, capacity, and supply and demand



How utilities can support EV charging infrastructure through the Infrastructure Investment and Jobs Act

Choosing the right managed EV charging strategy for business customers

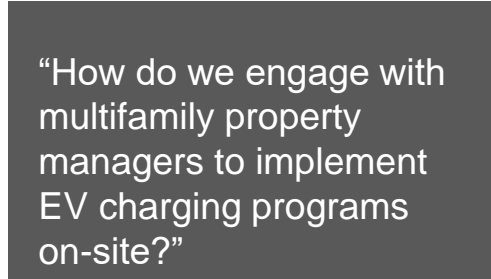


TE market transformation

Ask E Source



“Which of our residential customer segments should we focus outreach and managed charging efforts on?”



“How do we engage with multifamily property managers to implement EV charging programs on-site?”



“What has been the most effective outreach and education strategies for communicating EV rebates, benefits, and maintenance costs?”

TE market transformation

Marketing reports



Marketing EV charging to multiunit property owners

Understanding the next wave of EV buyers: Their habits, concerns, and characteristics



E Source Market Research

Electric Vehicle Residential Customer Survey

Mobility Service

VOC



About

The largest survey on US and Canadian customer readiness for EVs, we describe residential customers' readiness for EVs to inform utility program design and marketing outreach. Learn more at

www.esource.com/electric-vehicle-residential-customer-survey.



Participation

E Source Mobility Service members receive access to reports and webinars featuring insights from the survey. Nonmembers may purchase access to the results for a fee.



Results

E Source Mobility Service members get access to an industry report of national and regional-specific survey findings. Nonmembers may purchase access to the results for a fee.

Study objectives and methodology

[Electric Vehicle Residential Customer Survey](#) data will help you increase customer engagement and electric vehicle (EV) adoption by helping you better understand your customers. With this information you can design and market effective EV programs and services within your service territory.

The 2020 online survey included 8,047 residential customers in the US (n = 7,347 respondents) and Canada (n = 700 respondents). We recruited participants using a purchased sample of US and Canadian residential households from global online market research firm Dynata. We set quotas for age, gender, income, and geographical location. We oversampled respondents who own or rent a battery electric or plug-in hybrid electric vehicle (n = 1,016 respondents) and those who are considering purchasing one (n = 3,965). We then applied postfieldwork weighting on the sample to reflect current EV adoption rates while staying within population norms.

EV definition

Throughout this report we'll refer to EVs as battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs). In the survey we clearly defined this terminology for respondents who own or lease a BEV or a PHEV. However, for those considering an EV we used a loose definition and referred to these vehicles as all-electric vehicles.

Topics covered in the 2020 study

- Influences and barriers to the EV purchase process
- Purchase influencers for respondents who already have an EV
- EV charging knowledge, habits, and preferences
- EV owner habits



Key findings



Interest in EVs

- Around one-fifth of US respondents who don't currently have an EV are interested in purchasing one
- 80% of US respondents who are considering EVs expect to purchase one in the next four years



Barriers and influences

- Just under half of US respondents considering an EV find information online
- US respondents considering an EV are most concerned about cost and vehicle range
- Positive experiences with EVs typically involve driving and riding in them



Charging habits and preferences

- US respondents don't understand the various charging options available for EVs
- US respondents who already own an EV are less price sensitive than those who are considering purchasing one
- US EV owners are more likely to change their charging habits for environmental reasons than financial reasons



EV owner characteristics

- US EV owners use their vehicle for short trips
- EV owners may not associate changes in their electric bill with charging habits
- US EV owners are interested in environmental programs and services offered by their utility

Recommendations



Grow interest in EVs

- Focus your EV programs and services on the customers who are considering purchasing an EV in the next one to four years
- Now is the time to engage with the next wave of EV owners



Increase EV adoption in your territory

- Engage with your customers by providing informational resources on your website and through community events
- Develop programs, services, and informational materials that address key barriers to EV purchase such as up-front costs and range anxiety



Influence charging behaviors

- Educate your customers on the various types of charging options and the advantages and disadvantages of each
- Start engaging with customers before they purchase an EV to influence charging habits before they're established
- Explain your EV charging rates using customer-friendly language
- Explain the environmental benefits of charging during specific times of day or enrolling in complementary utility distributed energy resource programs



Take time to understand current EV owners

- Create effective EV programs and services by understanding how and why EV owners use their EVs in their everyday lives
- Promote charging benefits that align with EV owner needs such as the lower cost of electricity as a fuel source compared to gas

Upcoming

Events:

- [The state of transportation electrification planning](#) (December 15)

Content:

- Fleet electrification report series
- Effective organization structures for utility mobility teams
- EV infrastructure leadership
- Impacts of residential fast charging and how to accommodate
- Grid support for transportation electrification

We can help you develop a customized strategy and implement your plan.



Research and advisory

Using market research data, expert analysis, and industry experience, we help utilities put their customers first and meet their business objectives.

Data science

Applying predictive data science to help electric and gas utilities make data-driven decisions that improve their bottom line and increase customer satisfaction.

Solution Services

Advancing business and technology solutions that strategically enhance operations for utilities.



www.esource.com/electric-vehicles

Ask your engagement director how E Source can help you

What challenges are you facing with your mobility strategy?



Aleana Reeves



Jordan Tobey



Luke Beckett



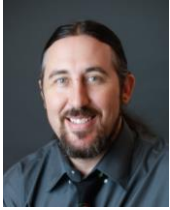
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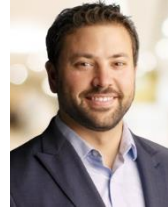
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