EV temperature check: Are utilities ready for the incoming EV wave?

Preparing for the 2023 Electric Vehicle Residential Customer Survey
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Utilities are facing a once-in-a-century opportunity—or challenge—to integrate electric transportation into their program portfolios and onto the grid. Customer awareness of and interest in buying EVs has never been higher (if all the EV-themed ads during this year's Super Bowl are any indication). Are utilities prepared to keep up with the demand?

Learn more about the E Source residential insights tools

The E Source US Residential Customer Insights Center is an online analysis tool that compiles data from the Claritas Energy Behavior Track annual online survey of about 32,500 residential customers in the US, conducted in partnership with E Source. The tool compiles data from the survey and allows users to filter responses by demographic information (such as gender and age) and household characteristics (such as size of home). It also allows users to filter by utility or state to gather information about their residential customers' energy-usage behaviors and attitudes around energy consumption.

The E Source Canadian Residential Customer Insights Center compiles data from the E Source Canadian Residential Customer Insights Survey, which we designed to better understand Canadian residential customers' attitudes and behaviors around energy and energy-related technologies. We conducted the 2021 study online with 5,001 customers.

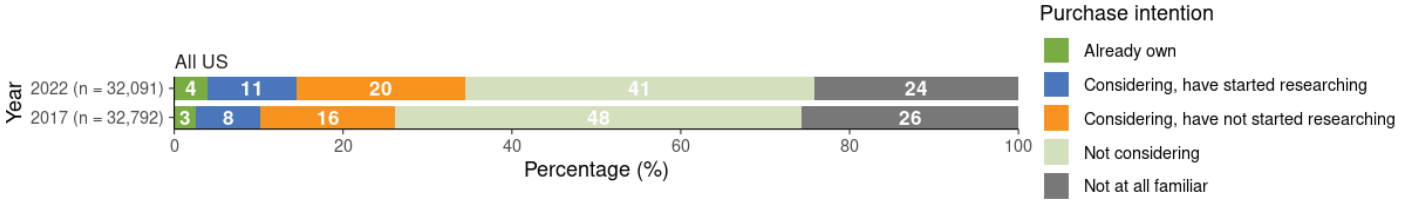
Since conducting the E Source 2020 Electric Vehicle Residential Customer Survey, the number of registered EVs in the US has increased almost 300%, according to the US Department of Energy. There are not only more EVs on the road than just a few years ago but are also more residential customers considering EVs.

According to the E Source US Residential Customer Insights Center, 31% of respondents were

considering an EV in 2022, a notable increase from the 24% who were considering an EV in 2017 (**figure 1**).

Figure 1: Stage of EV purchase, 2017 versus 2022

Just under one-third of US residential customers said they were considering an EV in 2022.



© E Source (US Residential Customer Insights Center; data from the Claritas Energy Behavior Track survey). Base: All respondents. Question C3_5: Which statement best describes the stage you are at in the purchase process for the following green or renewable technologies within your primary residence? All-electric vehicle Note: Percentages shown in the charts reflect weighted data; sample sizes (n) are based on unweighted data. Percentages may not add to 100 due to rounding. Use caution when sample size falls below 30.

It's time to get a better understanding of the residential EV market and how it's evolving. In addition to the changes we're seeing in customer behaviors and opinions, the Infrastructure Investment and Jobs Act—also known as President Joe Biden's infrastructure bill—passed in late 2021. It provides substantial funding for states to develop a nationwide network of EV charging infrastructure.

In his 2023 State of the Union Address, Biden once again mentioned the EV tax credits and EV charging infrastructure proposed in the Inflation Reduction Act (IRA). The IRA was passed in 2022 and proposed $369 billion for clean energy and climate programs, including consumer tax credits for qualified individuals to receive up to $7,500 off the purchase of a new EV or $4,000 off a used EV. These tax credits will likely boost the adoption of EVs in the consumer market. Utilities are likely to see a substantial impact on demand and will need to be prepared to support customers who are transitioning to efficient, electrified technologies.

There are still barriers utilities must address for successful EV adoption

More customers are considering purchasing EVs, but there are still many concerns utilities should be addressing to encourage EV adoption and position themselves as a trusted source of information on EVs.

In the 2020 Electric Vehicle Residential Customer Survey, we asked respondents who are considering EVs what was preventing them from purchasing or leasing EVs. Besides cost, which was the top barrier, respondents reported lack of familiarity and concerns about range and charging as some of their top barriers (**figure 2**).

Figure 2: Top perceived barriers to EV purchase

In addition to perceived cost barriers, just over one-third of those considering an EV said range anxiety was preventing them from purchasing an EV. Around one-fifth aren't familiar enough with EVs and don't know where to charge them.

These concerns can boil down to one common goal for utilities: ensuring customers have accurate

information about EVs and charging, EV tax credits, and the affordability of operating and maintaining an EV. We expect to see similar concerns in the coming year when we survey customers again in the 2023 Electric Vehicle Residential Customer Survey.

Would you like us to field this survey with your customers?

Learn how we can field this study in your service territory through the E Source Market Research Service to get personalized data about your customers.

Contact us to replicate this survey in your service territory

The Electric Vehicle Residential Customer Survey is designed to help utilities better understand customers habits, preferences, and intentions and how to communicate with customers about EVs and the necessary infrastructure to power them. For 2023, we've added new questions that will give us more insight on customers' purchase behavior and on use cases for different vehicle types.

For more information on how the IRA can affect utilities, see our blog post What does the Inflation Reduction Act mean for utilities? And check out our report How utilities can support EV charging infrastructure through the Infrastructure Investment and Jobs Act.

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