3 ways utilities can shrink the risk of integrating EVs with the grid to ensure safe and reliable service

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The day before the E Source Forum 2023, we witnessed the convergence of leaders from many industries at our second annual E Source Mobility Leadership Council. It was a power-packed day, bringing together utilities and industry luminaries from the fleet electrification ecosystem. We dedicated our time to breaking barriers, fueling conversations, and exploring avenues to supercharge the electrification of fleets.

Much of the discussion centered on barriers to scaled fleet electrification and opportunities for accelerating related projects and initiatives. In this blog post, I'll unravel three strategies utilities can employ to remove risk and streamline the integration of fleet EVs into the grid.

Get your transportation electrification plan in gear

Fill out this short form to start a conversation about your needs and how we can help.

It all starts with good data

Utilities need high-fidelity data that many don't currently have. At the leadership council meeting, we heard about the data utilities need to shrink the risk associated with integration of EVs with the grid to ensure safe, reliable, and affordable service. Utilities need access to the following.

Charging behavior and load-profile data. Fleet vehicles, unlike stationary loads, roam far and wide, crisscrossing service areas. Understanding their movements and usage patterns is crucial.

Forecasted future sales. Understanding fleet EV adoption—and the phasing in of these vehicles and

their charging equipment over time—helps utilities plan and justify spending on programs and grid upgrades.

Fleet characteristics. Utilities need to understand the where, what, and how of fleets to embark on the journey to electrify fleets effectively and efficiently:

- Where are these fleets located? And where will clusters of electrified fleets emerge on the grid?
- What types of vehicles do they comprise?
- How are they being utilized?

You can read more about forecasting EV demand in the Forum session slides Improve EV demand forecasting and planning by reimagining data-sharing practices (PDF).

Build ahead of need

Utilities are exploring different strategies for "building ahead of need" with proactive grid planning, upgrades, and investments. For the new-construction journey on a large commercial or industrial facility, utilities typically have long lead times to deliver service to the building—on the order of three to five years (or more). However, traditional timelines like these won't suffice.

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To meet increasingly aggressive transportation electrification goals, utility fleet customers require shorter time horizons for energizing new projects (on the order of months, not years). It remains to be seen whether existing strategies will prove effective in enabling utilities to hasten the fleet energization process.

One thing is certain: reactive grid planning is no longer an option. We must adapt, innovate, and build ahead of need to electrify fleets if we hope to keep pace with regulatory and market needs.

In our article Transportation electrification and EVs: Who pays for grid upgrades? published with Utility Dive, E Source's Michael Hartnack and Jesse Hitchcock discuss how modifications to service-upgrade policies will become essential to avoid financial and inequitable roadblocks to EV adoption.

Collaborate and cooperate

We'll need unprecedented levels of collaboration and cooperation to successfully accelerate the rate of fleet electrification and meet related goals and commitments. Think of moonshot or war-time efforts of years past—all hands on deck and all parties rowing in the same direction!

This means organizations and industries that have traditionally never worked together will need to partner closely. We'll need to make more of an effort to find common ground and a common language. And utility pilots and programs must scale to serve all business customers and engage a larger group of implementers, trade allies, and qualified products and technologies.

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For example, at the federal level, we now see close coordination between the US Department of Energy and the Department of Transportation with the new Joint Office of Energy and Transportation. At the regional and local levels, we also need to be thinking about how we can better coordinate across sectors—from telecommunications to transportation and city planning to fuel retailers and advocacy groups—to reimagine existing systems and ensure a smooth and successful energy transformation.

For more examples of the kinds of coordination we'll need to enable such a major transformation, consider the *Washington Post* article, published in partnership with Siemens, New Infrastructure Will Pave the Way for E-Vehicles.

And if you're ready to take the next step toward accelerating and improving your EV and mobility portfolio, learn more about the E Source Mobility Service.

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