4 steps to getting started with building electrification

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Utilities, governments, and other stakeholders view electrification as a way to pursue their overarching energy, climate, and sustainability goals. By offering building-electrification programs to customers, utilities can increase the adoption of electric end-use technologies inside buildings. But where do you begin?

1. Find opportunities for building electrification

Building-electrification programs typically offer fuel-switching or fuel-substitution incentives to install equipment such as heat pumps and heat-pump water heaters (HPWHs). But a big opportunity for fuel-switching is with cooking. Because residential and commercial customers love cooking with gas, it's an uphill battle to overcome customers' aversion to electric cooking.

Induction cooking is an important piece of building electrification, and utilities are uniquely positioned to help with the education and awareness needed to get more customers on board with electrification measures. Our report Promoting induction cooking to support residential efficiency and decarbonization shows the benefits of induction cooking, barriers to growth in the induction-cooktop market, strategies for promoting induction cooktops, and profiles of successful utility programs.

2. Incentivize building-electrification programs

Most utility building-electrification programs have a limited scope, and few outside California have well-developed programs. However, we were able to profile the details of a few programs across the US. Our report Building-electrification programs: Funding, design, and energy savings, available to members of the E Source Distributed Energy Resource Strategy Service, details how five investor-owned utilities get funding for building-electrification programs, what kinds of programs they're running, and how they measure savings from the programs.

Our findings show that in their residential and nonresidential building-electrification programs, utilities most commonly incentivize retrofit heat pumps and HPWHs used to replace gas equipment. Utilities are also tapping into their new-construction programs as an opportunity to install efficient electric equipment in new buildings. And a few utilities are developing training programs for contractors, where participants learn how to install heat pumps correctly in place of gas equipment. Utilities measure the performance of building-electrification programs using incremental electric savings, avoided natural gas savings, or fuel-neutral metrics such as avoided carbon emissions or Btu.

3. Target the right customers for building-electrification programs

Data science can provide deeper insights about your customers to help you build and match the right programs with the right participants for optimal outcomes. E Source OneInform is a suite of artificial intelligence–powered solutions that facilitate the next generation of programs required for an evolving distribution grid.

Our customer-centric approach begins with an understanding of each individual customer and then lets machine learning cluster customers into cohorts based on common characteristics around behaviors and energy use. Then we use data science to process this large volume of data at the individual customer level to match customers with specific utility objectives. OneInform can help you with any customer-facing program. Several utilities have already had success using OneInform to pinpoint the ideal audience for building electrification.

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4. Look to regulatory frameworks for building electrification

To really move forward with building electrification, states need to provide performance-based incentives for utilities to profit from building a network that supports lower emissions, lower costs, and even lower rates for customers. Rewind to 15 years ago when utilities wanted and needed incentive regulation to drive more demand-side management initiatives. Now more states need to establish the incentives to encourage building electrification. These regulatory building-electrification incentives could reward and compensate utilities for:

- Recovering program and marketing costs
- Accelerating the adoption of new technologies
- Meeting specific environmental goals and outcomes

At E Source, we developed a framework that shows how utilities, regulators, and other government entities can make systematic decisions around decarbonization and electrification. The framework can help you reduce carbon, lower rates, and produce bill savings for customers. Learn more in our blog Who benefits from beneficial electrification?

If you're an E Source utility member, you can read the full beneficial-electrification white paper—The

electrification framework that benefits customers, the grid, and the planet. It shares the E Source beneficial-electrification framework and explains how it can help you reduce carbon, lower rates, and produce bill savings.
