

The DSM Trends Utility Executives Think You Should Know About

Takeaways from the
E Source DSM Executive Council





As part of their membership in the **E Source Demand-Side Management Service**, demand-side management (DSM) executives from across North America come together for the E Source DSM Executive Council, held twice a year. They connect with one another and with E Source staff to share innovations, discuss challenges, and solve problems. All of them have one overarching goal: to return to their utility with ideas they can implement.

Here we share six takeaways and trends from the Spring 2019 DSM Executive Council meeting.

Innovation is alive and well

Attendees shared their strategies for hitting their savings targets. Here we highlight four.

Using census data to serve hard-to-reach customers

Utilities are doubling down to serve traditionally hard-to-reach customers such as rural, low-income, senior, and ethnic populations as well as non-native-language speakers and small and midsize businesses. One attendee's efficiency organization focused its efforts on identifying where those customers live. The organization overlaid census data with information it had collected, allowing it to rank each census tract within its state. Now the organization is designing programs that target populations in the most-promising areas.

Providing incentives through a rebates-as-a-service app

One utility is working with third-party vendors to provide its customers with a rebates-as-a-service app for their mobile devices. This app allows them to receive discounts instantly, and it helps the utility demonstrate that its rebate influenced the customer's purchasing decision.

Facilitating multifamily HVAC upgrades through reverse auction

What if utilities stopped trying to figure out which incentive levels change customer behavior and which customer needs drive energy-efficiency projects and simply asked customers these questions? That's the idea behind one utility's HVAC reverse-auction program that encourages property owners to replace electric resistance heating systems with high-efficiency heat pumps in their multifamily buildings. Contractors submit bids to the utility, outlining the project details and requesting an incentive per unit. A scoring system allows the utility to compare projects and select the most-cost-effective ones across three multifamily categories: general residential, hard to reach, and targeted low income.

Reducing truck rolls with digital verification

Verifying proper equipment installation to prevent fraud is critical if utilities want their rebate programs to work. But this step can be expensive. Instead of dispatching an inspector, one utility asks customers to send geocoded pictures to verify that they purchased and installed the proper equipment. Another asks HVAC trade allies to use diagnostic tools that automatically capture evaluation-grade information.

As home energy reports become core programs, utilities look for other behavioral options

As a percentage of residential portfolios, utility spending on behavioral programs continues to grow, driven primarily by home energy reports (**figure 1**). Utilities are looking for other cost-effective behavioral opportunities to diversify their portfolios.

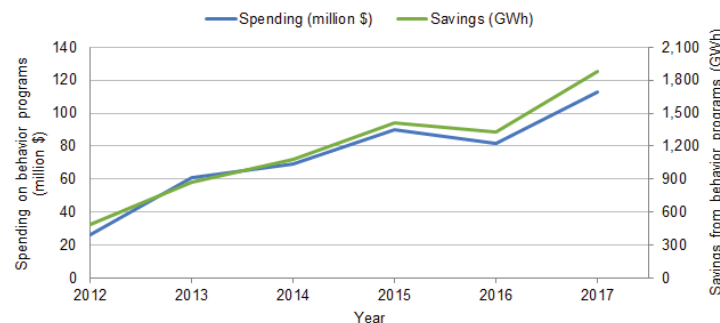
Attendees expressed interest in prepayment billing, where customers pay up front for energy and cannot use more than what they've paid for. Some utilities see between 5% and 10% energy savings from their prepay offerings. The E Source report **Claiming Savings from Prepay Programs: Does Prepay Change Behavior and Drive Conservation?** finds that these programs are both popular with customers and drive savings. But regulators and customer advocacy groups remain skeptical, citing concerns about service disconnections or arguing that the program helps the utility avoid customer payment defaults as opposed to driving efficiency.

Utilities are exploring other behavioral options including mobile apps that provide energy-usage data, community-based pledge offerings, and gamification and rewards-based programs.

To learn more, watch the Behavior, Energy & Climate Change (BECC) webinar **Utilities Investing in Behavior Change** where E Source discusses examples of successful behavior programs, and read the E Source report **Utilities Spend More on Residential Behavioral Programs as Energy Savings Increase**.

Figure 1: Utility spending and savings on residential behavior programs

From 2012 to 2017, spending on behavior programs has grown right along with savings from these programs.



Note: GWh = gigawatt-hours.

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| **Gas utilities** see a role in decarbonization efforts

Some utilities and industry stakeholders see decarbonization and electrification as the same. However, gas utilities at the DSM Executive Council made clear that they're pursuing their own role in decarbonization. Many gas and dual-fuel utilities see gas as central to a balanced fuel mix and are investing in renewable natural gas and energy efficiency to support decarbonization.

At the same time, electrification efforts are moving forward. Incentives for electric vehicles, heat pumps, and heat-pump water heaters are expanding. Utilities are also exploring technologies that could be great electrification candidates, such as port equipment, shipping refrigeration, and ice rink Zambonis.

| **DSM departments** continue to reorganize into customer energy solutions teams

Many utilities are reorganizing their departments to form customer energy solutions teams, where departments rally around the customer offerings, including distributed energy resources, demand response, and energy-efficiency product and service offerings.

For details on this transition, read the first two reports of our DSM organization structure series:



How DSM Departments are Evolving into Customer Energy Solutions Teams



DSM Department Evolution: Implications for New Measure Development

Online marketplaces are becoming more popular, with some utilities integrating revenue generation

Online marketplaces may look the same, but their funding mechanisms, implementers, and savings mechanisms differ. Some utilities use their online marketplace purely for energy efficiency, paying for the platform with DSM dollars and selling only instantly discounted energy-efficiency equipment.

Others use shareholder funds to pay for the platform, then sell both discounted energy-efficiency equipment (for which they claim savings) and non-energy-saving products that generate revenue for the utility. For example, a utility marketplace may offer a rebated smart thermostat bundled with other smart home equipment like a smart speaker or smart doorbell.

Upcoming challenges will require continued innovation

For years utilities across North America have achieved their savings targets cost-effectively. However, three forces will complicate this in the future:



Lighting—for many utilities a key source of cost-effective savings—will become more efficient, making it harder for utilities to earn additional savings from lighting measures.



Avoided costs will decline in certain jurisdictions, making it harder to achieve cost-effectiveness.



Policy questions regarding emissions and electrification will generate short-term and long-term uncertainties.

To deal with these challenges, we expect utilities to expand behavioral, midstream, and upstream offerings while incentivizing more-expensive emerging technologies such as heat pumps and heat-pump water heaters.

To learn more about our DSM research in a postlighting world, visit the E Source **Next Generation of Energy Savings Resource Center**.



For over 30 years, E Source has been providing market research, data, and consulting services to more than 300 utilities and their partners. This guidance helps our clients advance their customer energy solutions and enhance their relationships, while becoming more innovative and responsive in the rapidly evolving market.



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