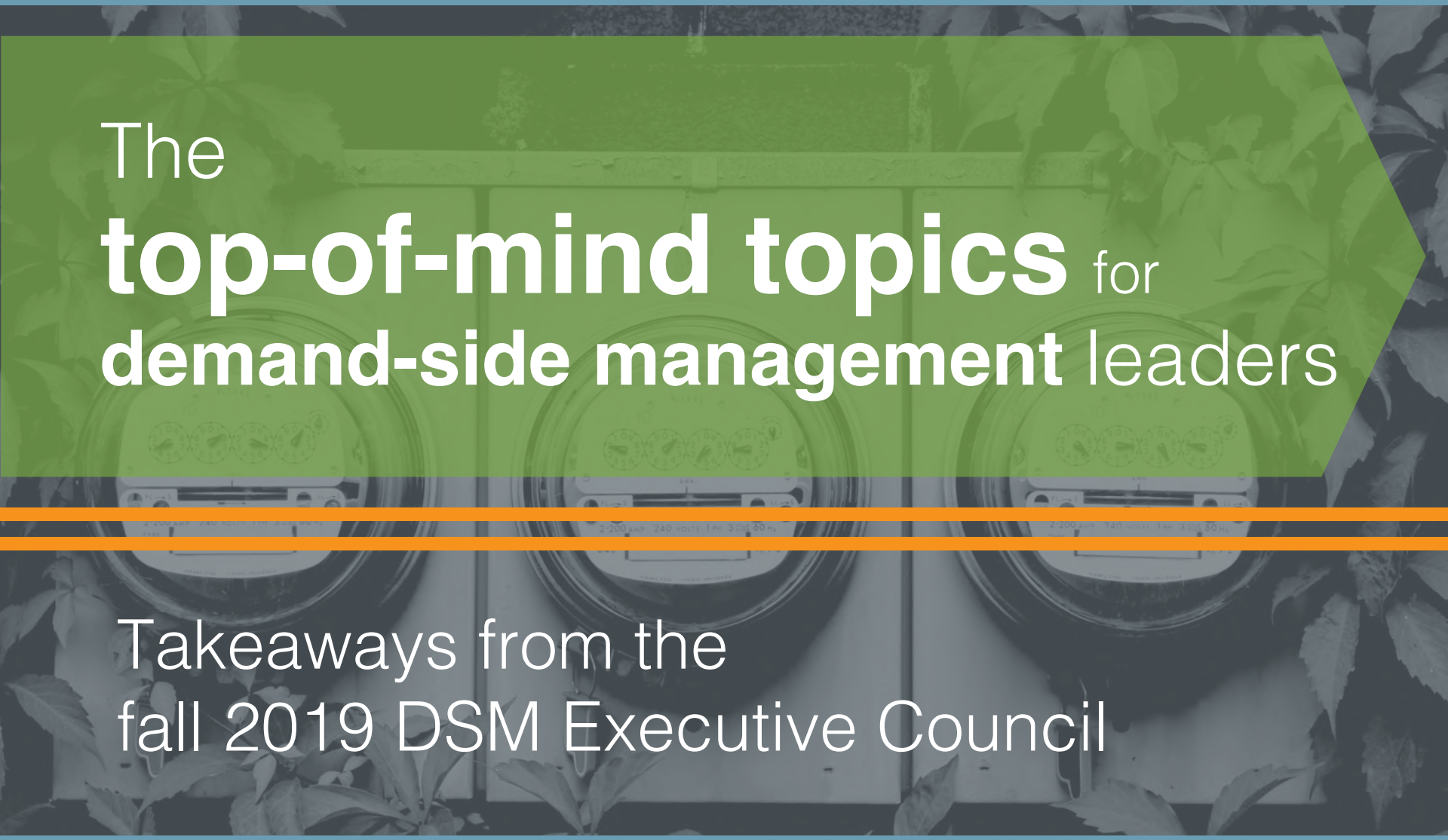

The **top-of-mind topics** for **demand-side management** leaders

Takeaways from the fall 2019 DSM Executive Council

E Source

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Twice a year, demand-side management (DSM) executives from across North America come together at the E Source DSM Executive Council to discuss how they're overcoming some of the industry's most pressing challenges. Though their regulatory environments, DSM budgets, and goals vary, the creative initiatives and strategies DSM executives have used to achieve their goals apply across the industry.

Here, we share highlights from the event to give you insights into what's on utility DSM leaders' minds.

Some utilities are getting rid of efficiency; others are doubling down

Ohio House Bill 6, passed and signed by the governor in 2019, decreases the state's energy-efficiency goals while subsidizing existing and new generation. In practice, the law prohibits any utility cost recovery for energy-efficiency programs beginning in 2021. Ohioans' utility bills will no longer include a line item for energy efficiency, but instead customers will pay a monthly fee to support generation. Of all the money collected annually, $150 million will go to two nuclear plants, and $20 million will go to eligible renewable generation. Depending on a court ruling, some money may go toward two unprofitable coal plants.

Iowa's Senate File 2311 (PDF), passed in 2018, caps energy-efficiency spending for electric and gas utilities. It also allows customers to opt out from the DSM charge on their bill if their utility's DSM portfolio doesn't pass its Ratepayer Impact Measure test. For example, MidAmerican Energy's approved five-year plan features a budget just over one-third that of its previous program, according to the flyer Saving Energy and Money (PDF).

California also reduced its efficiency goals but for different reasons. In its Decision Adopting Energy Efficiency Goals for 2020–2030 (PDF), the commission reaffirms its commitment to energy efficiency. But in the 2019 section of its Energy Efficiency Potentials & Goals report, the commission explains that upgrading lighting to LEDs lowered the state's energy-efficiency potential. For example, the total gigawatt-hour (GWh) reduction target for 2020 to 2030 that the commission set in 2019 is 17% lower than the commission's original 2017 goals for that period. See its 2017 Decision Adopting Energy Efficiency Goals for 2018–2030 (PDF) for details on its original goal.

Several other states are increasing efficiency goals. In the press release Governor Cuomo Announces New Energy Efficiency Target to Cut Greenhouse Gas Emissions and Combat Climate Change, the New York governor explains that the target would "accelerate achievement of energy efficiency in the next seven years by more than 40%." Nevada, New Mexico, Washington, and Maine also plan to invest more in energy efficiency to meet their goals for 100% clean energy.

DSM offers value beyond kWh and therm savings

Energy efficiency acts as a customer satisfaction tool

A positive experience in an energy-efficiency program can improve customer satisfaction and make you seem trustworthy, easy to do business with, and customer focused. This focus is becoming particularly popular in states with declining efficiency goals.

To improve customer satisfaction through DSM, you must organize your company's structure and culture to focus on customers. In 2019, E Source published a series of reports on how utilities are setting up their customer-focused DSM departments. E Source Demand-Side Management Service members can read reports at www.esource.com.

You should also use data in developing your customer outreach to make it more targeted and personalized. Several utilities are using data analytics to prompt customers to take an additional action based on who they are and their interactions with the utility.

It's also important to customize your outreach to diverse communities, which include more than people who don't speak English. For example, one utility noted that many of its customers don't have access to computers, so it's making its program materials available through a smartphone.

The value of savings depends on time and place

Intermittent wind and solar generation exaggerate changes in the value of kilowatt-hours (kWhs) saved at different times of the day and year depending on supply and demand. For example, in some states large amounts of solar go off-line in the early evening and require a quick ramp-up in other generation. Because inexpensive solar energy is available during the day, a kWh saved in the evening is more valuable than a kWh saved in the afternoon. In states with high wind generation, saving a kWh at night when winds are strong and demand is low provides little value to the utility.

Utilities are responding to this by encouraging customers to shift their usage by providing higher incentives for energy saved at peak times, promoting time-of-use rates, expanding smart thermostat programs, and reevaluating the cost-effectiveness of programs that save energy during off-peak periods.

You can also target energy efficiency and demand response to specific locations. This can provide value by delaying transmission and distribution equipment upgrades in areas where the current infrastructure isn't sufficient to serve the expected load growth. This approach is often referred to as nonwires or nonpipes alternatives.

DSM looks for footing in decarbonization efforts

In addition to being new and exciting, electrification and distributed energy resource (DER) programs are drawing from the same financial resources as efficiency programs. For example, California opened up DSM funding for electrification in its 2019 Decision Modifying the Energy Efficiency Three-Prong Test Related to Fuel Substitution (PDF). Sharing budgets can make it difficult for executives to keep staff focused on and maintain sufficient support for traditional DSM programs, which still have an important role in helping you meet decarbonization goals.

Our blog Who benefits from beneficial electrification? introduces our white paper on goals, technologies, and cost-effectiveness tests that can help you optimize your beneficial electrification and DSM resources.

Pressure to increase cost-effectiveness forces utilities to change portfolios

Moving measures mid- and upstream

Mid- and upstream programs—which provide rebates to distributors, retailers or manufacturers—can increase efficiency equipment availability and penetration and reduce utility administrative costs. We reviewed 93 midstream and upstream DSM programs administered by 69 organizations in the US and Canada. Using this industry benchmark, we explored the measures program administrators are moving upstream, the solutions to the evaluation challenges, trends in incentive pass-through requirements, and program performance. Check out our report Sending your DSM measures upstream: How to improve your midstream and upstream programs to learn more.

Increasing commercial and industrial savings

Utilities are turning to industrial and commercial customers to increase savings. One way to do this is to implement programs that use actual energy savings to determine a portion of the customer's incentive. Some utilities are using strategic energy management (SEM) and pay-for-performance programs for this purpose.

Capturing the non-energy benefits of energy efficiency

Energy efficiency improves air quality, which improves people's health; lowers greenhouse gas emissions; and creates jobs. However, these benefits are hard to quantify and are often left out of cost-effectiveness calculations. Even programs attempting to quantify health benefits account for only a small portion of them, according to ACEEE's 2019 report Protecting the Health of Vulnerable Populations with In-Home Energy Efficiency: A Survey of Methods for Demonstrating Health Outcomes. Utilities can improve their program cost-effectiveness by accounting for the value of non-energy benefits.

Utilities design programs to go beyond rebates for nonresidential customers …

While traditional equipment rebates remain an industry staple, utilities are looking at alternatives that can improve cost-effectiveness, drive savings, and improve customer satisfaction.

Implementing SEM programs

In SEM programs, you create cohorts of similar businesses and work with them to implement no- or low-cost measures with short payback periods. You can also identify capital projects that improve efficiency. Many programs provide incentives based on the participant's energy savings. SEM programs also bring energy managers together, creating a peer network they may not have had otherwise.

Using energy advisors for small and midsize businesses

While key account managers can connect you with large customers, there's no easy way to gain the trust and get the attention of small and midsize businesses (SMBs). A few utilities are using energy advisors to serve their SMB customers. These advisors help businesses review project bids, evaluate opportunities, and plan projects.

Collaborating with key account managers

By promoting collaboration between key account managers and DSM program managers, you can coordinate communications and deliver a more seamless customer experience. One utility noted that its energy-efficiency team always schedules meetings so the account manager can attend.

Offering energy services

You can provide services beyond energy efficiency—such as detailed energy-use feedback and analysis, backup generation, and microgrid development—to your nonresidential customers. Offering energy services can improve customer satisfaction and, in some jurisdictions, generate revenue.

… and residential customers as well

Utilities are rolling out new services to residential customers too.

Integrating energy offerings

You can provide customers with efficiency, DERs, energy storage, and beneficial electrification in one place. But to do so, you need to break down internal silos and figure out how to manage different funding sources and requirements. Customers expect this frictionless service from all the companies they do business with, including their utility.

Using data analytics

Utilities are using data analytics to move past customer segmentation and into personalization, which involves using a customer's past action to predict the their next action. The data can also help you reach out to the customer through the right channel, at the right time, and in the right language.

Out of challenges comes innovation

BYOT and BYOD programs

Utilities are providing customers more choice by moving to bring-your-own-thermostat (BYOT) programs. These programs allow customers to participate in demand-response events as long as their thermostat meets certain connectivity requirements, regardless of its brand.

You can take the same approach with other emerging technologies. For example, some utilities are offering bring-your-own-device (BYOD) programs for residential battery storage.

Efficiency-as-a-service

In efficiency-as-a-service (EaaS) programs, an outside entity owns and maintains a customer's energy-efficient equipment in exchange for a monthly payment. The customer benefits from an expert selecting and maintaining the equipment, and their energy savings often cover most of the monthly payment.

Many energy service companies have pursued EaaS, but utilities historically haven't. But one utility is beginning its own EaaS program in response to a mandate from its board. While the utility doesn't directly finance projects, it signs a power purchase agreement to buy the verified energy savings in exchange for a monthly customer fee.

Pay-for-performance programs for customers and implementers

The expansion of advanced metering infrastructure (AMI) has allowed for new, more-cost-effective pay-for-performance models.

In one model designed for large businesses, customers receive incentives over time based on the verified, weather-normalized energy savings their projects generate. These programs generally pursue complex projects with high energy savings.

In a second model, being piloted for residential and SMB customers, participating third-party aggregators receive incentives over time based on the performance of projects they implement. This allows the aggregator to spread the performance risk of innovative offerings over several projects. Some utilities provide different incentives based on when the customer saved energy.

Both of these approaches move the risk of a project away from you to organizations with a higher risk tolerance.

Creative low-income weatherization funding

Across the US and Canada, it's challenging to fund low-income programs that meet customers' needs. This is especially true in areas where homes need a lot of upgrades and repairs.

One utility is looking to supplement its low-income weatherization program with crowd funding. The pilot will allow individuals and the charitable arms of corporations to sponsor families receiving weatherization projects within the service territory. With the increased funding, the utility plans to serve more customers and improve the quality of each customer's weatherization.

Another utility is putting together a deferred 0% interest loan program for low-income customers. In this program, income-qualified homeowners can receive a loan for efficiency upgrades but aren't required to pay back the loan until they sell the house. In the meantime, it's a lien on the property.

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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