Cracking the Code: Understanding Customer Perceptions and Utility Strategies for Large Customer Energy Efficiency Programs

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ABSTRACT

Utilities' largest business customers represent a significant share of electric energy efficiency savings and portfolios, as these customers deliver significant cost-effective energy savings at scale, especially when compared to residential or small business customer classes. However, state policy trends involving opt-out provisions have enabled some large customers to avoid utility-run energy efficiency programs in recent years, presenting challenges for utilities in affecting these customers' decisions on implementing energy efficiency. This research highlights results from the E Source 2016 Large Business Gap and Priority Benchmark (LBGP), a survey-based instrument that identifies utilities' largest customers' needs and priorities around energy efficiency programs, account management practices, and utility communication strategies. Survey results are augmented by three detailed utility case-studies from AEP Ohio, MidAmerican Energy, and the Energy Trust of Oregon that identify successful strategies and lessons learned from working with large business customers. Results indicate that utilities and other energy efficiency providers must continue to develop a strong and nuanced understanding of the needs and priorities of specific large customers. Providing quality energy efficiency program offerings, technical expertise, and strategic account management are essential to keep large customers engaged in utility energy efficiency programs.

Introduction

Large industrial, commercial and institutional customers are important stakeholders in many successful utility-run energy efficiency programs across North America. Although they are few in number compared to utilities' residential or small-business customers, large business customers typically account for a substantial share of overall of energy consumption and thus possess great potential for cost effective energy savings (Molina 2014, Goldberg et al. 2014). Recent years have seen increases in state-level energy efficiency goals, further reinforcing the need for utilities to develop robust energy efficiency and demand-side management (DSM) programs that can meet the dynamic needs of both their customers and regulators.

The cost effective procurement of energy efficiency resources delivers a variety of benefits to utilities and their customers. Achieving cost-effective energy savings reduces the need for additional power generation, transmission and distribution capacity. Avoiding investments in these supply side resources helps defer the need for additional rate increases; therefore, cost-effective energy efficiency investments can help to keep energy bills lower for all customers over the long term (Goldberg et al. 2014, Taylor et et al. 2012). Procuring cost-effective energy savings, including from large customers, also avoids the environmental impacts associated with additional energy production, such as greenhouse gas emissions and local air pollution (Kelly and Rogers 2016).

Large business customers also benefit from implementing energy efficiency into their own businesses as efficiency improvements in both equipment and operational strategies help these customers reduce energy use and keep costs down. The engineering and technical assistance that is available through many utility energy efficiency programs provide the necessary technical knowledge and project expertise to help large customers implement capital projects (Goldberg et al. 2014, Kelly 2016). Energy efficiency gains also help these large customers reduce their risks from energy price volatility and market uncertainties. Improved energy efficiency also helps these large customers reduce their overall environmental footprints, furthering opportunities to strengthen brand image and attract positive consumer attention (Goldberg et al. 2014).

Despite these potential benefits for utilities and their customers, there has been a sustained and growing trend in the United States that allows for utilities' largest business customers to opt-out of utility-run energy efficiency programs. Opt-out policies vary from state to state but they generally define the largest customers based on annual energy consumption and allow these customers to opt-out of paying into and participating in utility energy efficiency programs. The avoided fees, which customers typically pay via a System Benefit Charge (SBC) on their bill, result in a substantial reduction in funding for energy efficiency programs and negatively affect utilities' abilities to offer comprehensive program options (Goldberg et al. 2014). Some large customers in opt-out states argue that the avoided fees are better spent through customer-facilitated energy efficiency, but a lack of regulatory continuity, financial transparency and robust verification make it difficult to confirm how large customers invest in their own energy efficiency and the energy savings achieved (Kelly 2016).

Self-direct energy efficiency policies have also expanded in recent years and typically allow large industrial, commercial, or institutional customers to self-direct all, or a portion of the fees they otherwise would pay into utility-run energy efficiency programs. This provides these customers with another mechanism for investing directly in energy efficiency rather than paying a system benefit charge like other customers. Well-structured self-direct programs can be an effective strategy for utilities to achieve cost-effective energy savings from large customers. Strong self-direct programs typically include verification and reporting requirements. In addition to affording large customers the tools and flexibility necessary to pursue greater energy savings, utilities also benefit from cost-effective efficiency gains and improved customer relationships as a result of strong self-direct policies. On the other hand, poorly-structured self-direct policies have no requirements for pre-approval of projects or verification of savings post-implementation, which ultimately diminishes the value of these policies to utilities and their customers.

As of 2016, there were at least 12 states that allow large customers to avoid paying into utility-run energy efficiency programs through opt-out policies or legislation that exempts these customers from having to pay fees in the first place (*Self-Direct and Opt-out Policies*, ACEEE 2016). Twelve of these states allow large customers to opt-out of utility energy efficiency fees entirely and there are indications that the opt-out trend is expanding into additional US states (Kelly 2016, Walton 2015). Recent legislative activity in Florida, Pennsylvania and Ohio underscores the growth of opt-out trends and further highlights the need for utilities to develop effective strategies for keeping large energy customers satisfied and engaged with energy efficiency programs and other utility services.

To better understand how utilities can meet the dynamic needs of their largest customers, this paper highlights findings from the 2016 E Source Large Business Gap & Priority Study (LBGP), a survey-based instrument that assesses utilities' largest customers' most important

needs. The LBGP analyzes the gaps between customer expectations and utility performance in more than a dozen specific attributes related to key account management, customer communication, and energy efficiency. Researchers also interviewed program managers from AEP Ohio, MidAmerican Energy, and the Energy Trust of Oregon (EnergyTrust) to ascertain successful strategies for keeping large business customers engaged. Together, results from the LGBP Survey and utility case studies provide valuable insight and actionable strategies for utilities interested in keeping largest customers engaged through effective program design and strong account management practices.

Large Business Customer Survey Methods and Findings

The 2016 LBGP used an online survey of utilities' largest business customers to assess these customers' most important needs and how well their energy providers are meeting those needs. Respondents identified the factors that contributed to energy-efficiency program participation decision-making and which utility-provided energy efficiency programs and products they were most interested in. Utilities from across the United States provided researchers with lists of large business accounts. Of the 19 utilities that participated in LBGP, nine met the statistical requirements of the study and it is the responses of those utilities' customers that results are based. Researchers fielded the LGBP study from May through December 2016.

Top responding sectors included industrial/manufacturing (34 percent), education (13 percent), government/public administration (11 percent), property management (8 percent) and healthcare (6 percent). On average, over half of large customer respondents participated in a utility energy efficiency program in the prior twelve months. Property management (68 percent) and education sectors (67 percent) showed the highest levels of participation while government and industrial/manufacturing sectors had the lowest participation (50 percent).

Large business customers that had participated in an energy efficiency program in the prior twelve months reported that they were highly willing to recommend those programs to colleagues and peers. In other words, getting large customers to participate in energy efficiency programs is a key to whether they see value in the utility's energy efficiency programs and services. Researchers calculated sector-specific Net Promoter Scores (NPS) using the difference between the percentage of "promoters" (those who give a 9 or 10 rating when asked about their willingness to recommend the program) and the percentage of "detractors" (those who give a 0 through 6 rating). The healthcare sector had the highest NPS (75) while the industrial/manufacturing sector had the lowest (63). Higher NPS scores (> 50) demonstrate high levels of customer satisfaction with a program, whether customers will participate in similar programs in the future, and whether word of mouth might encourage other large businesses to also participate in an efficiency program.

On average, large business customers were most interested in participating in energy-efficiency programs involving pumps and motors (47 percent), lighting (45 percent), "other" measures (44 percent), space cooling (39 percent), and combined heat and power (CHP) or cogeneration systems (39 percent). There were substantial differences in program interest among top responding sectors. As just one example, the industrial/manufacturing sector showed high levels of interest in programs focused on industrial processes (47 percent) and compressed air (43 percent), while other large business respondents were generally less interested in these program types.

Table 1. Large Business Customer Interest in Participating in Utility Energy Efficiency Programs

	Ind./Manufact. (n = 294) (%)	Education (n = 124)(%)	Government (n = 106)(%)	Healthcare (n = 51) (%)
Lighting	39	49	51	45
Space heating	26	35	37	41
Space cooling	33	43	39	43
Water heating	22	41	32	41
Industrial Processes	47	8	19	10
IT infrastructure	22	34	30	33
Refrigeration	21	44	21	41
Office equipment/plug loads	28	45	44	33
Cooking equipment	6	37	16	29
Building shell	26	44	45	41
Pumps and motors	49	46	43	49
Retro-, re- or ongoing commissioning	24	39	29	37
Compressed air	43	24	23	22
Demand response or load curtailment	25	34	39	33
On-site renewable energy systems	19	21	22	22
CHP or cogeneration	33	44	48	39
Utility-sponsored behavior program	31	32	35	35
Other	36	56	46	39

Percentage of large business survey respondents interested in participating in utility-provided energy efficiency programs. *Source*: E Source Large Business Gap and Priority Benchmark 2016.

Large business customers also indicated that more than one department is typically involved in decision processes related to energy efficiency program participation. Facilities department staff (61 percent), company executives (51 percent), and operations department staff (47 percent) were the top stakeholders involved in those decisions. Top reasons for large business customers' participation in energy efficiency programs include taking advantage of utility rebates or financing (62 percent), getting a return on investment/payback (58 percent) and reducing the need for maintenance/maintenance costs (53 percent). Respondents also identified specific barriers to participation, which included up-front costs being too high (21 percent), having no budget to engage in energy efficiency (19 percent), utility incentives not being robust enough (16 percent) and utility programs not being a good match for their business (15 percent).

Utility Case Studies

AEP Ohio

In Ohio, large customer opt-out legislation went into effect January 1, 2017. The legislation, described in §§ 4928.6610 - 4928.6616 of the Ohio Revised Code (ORC), enables large customers with greater than 45 million kWh of electricity consumption in the prior twelve months to opt-out of Ohio utilities' cost recovery mechanism (CRM) and energy efficiency programs. Opt-out customers must first submit written notification to their utility on the decision to opt-out and provide both an initial report within 60 days of their effective opt-out date and an updated report at least every 24 months for as long as the opt-out remains in effect. The initial report summarizes "the projects, actions, policies, or practices the customer may consider implementing, based on the customer's cost-effectiveness criteria, for the purpose of reducing energy intensity", while the updated report includes "a general description of any cumulative amount of energy intensity reductions achieved by the customer" (ORC §4928.6616(C)). Importantly, it is the sole responsibility of the customer to verify the information contained in each report and the reports themselves are considered confidential and trade secrets.

Researchers interviewed Ms. Angie Rybalt at AEP Ohio, who spoke about the importance of large customers to the utility and the value of relevant program offerings and strategic account management practices in keeping these customers engaged and satisfied. When AEP Ohio first started offering business energy efficiency programs in 2009, its program and incentive offerings were fairly straightforward. But as the utility continued to recognize the unique energy efficiency and business needs of its largest business customers, its program mix evolved to include programs designed specifically for this customer class, such as Retro-commissioning and Continuous Energy Improvement (CEI). These program offerings have been important mechanisms for AEP Ohio in driving energy savings with its largest customers, but have also been influential in building long-term relationships that have helped to improve overall large customer satisfaction with the utility.

Leading up to the legislation going into effect, AEP Ohio was aware its largest business customers would eventually be opt-out eligible. The utility worked strategically in the 18-24 months leading up to the legislation's implementation to engage with these customers, which consisted mostly industrial and manufacturing facilities with a few university and institutional campuses mixed in as well. After assembling a team of seven full-time outreach professionals to assist with large customer engagement, AEP Ohio first identified eligible accounts and prioritized its outreach to large business customers that had not previously participated in its energy efficiency programs. AEP Ohio hoped to demonstrate the value of its efficiency offerings to these customers and deliver quantifiable energy and cost savings prior to their decisions to opt-out of utility-run programs and fees. As a result of the initial outreach and engagement, AEP Ohio saw approximately 43 percent of historic large-customer non-participants enroll in utility energy efficiency programs.

After the initial outreach push and participation bump, AEP Ohio followed up with its largest business customers by sending out individual energy efficiency "report cards" that included information on the total amount of fees each business customer paid into the utility's CRM, the financial incentives awarded to each, and the energy and cost savings associated with implementing energy efficiency projects and strategies. And when paired with a customer engagement strategy that generated an approximate 43 percent bump in program participation

from historic non-participants, these energy efficiency report cards were instrumental in succinctly communicating the value of AEP Ohio's energy efficiency programs to each of its large customers. This strategy also enabled the utility to be proactive in communicating the likely opt-out scenario to these customers, which furthered AEP Ohio's strategic engagement strategy and built trust between the utility and its largest, opt-out eligible customers. Of the approximately 200 customers who are opt-out eligible, Ms. Rybalt estimated that ten percent have chosen to do so.

MidAmerican Energy

Researchers also interviewed Ms. Amber Moser at MidAmerican Energy to discuss the importance of MidAmerican's Industrial Partners program and the utility's strategic account management practices for its largest customers. And although Iowa does not currently have opt out legislation in place, Ms. Moser acknowledged that large customer opt-outs are a growing national trend that could eventually influence the policy context within the state of Iowa. As such, the utility has started preliminary conversations around the potential impacts that an opt-out policy could have on its 2018-2023 DSM plan, which is currently under development. Even in a state that does not give large customers the choice to opt-out of utility energy efficiency programs, MidAmerican Energy recognizes the importance of these customers in driving cost-effective energy savings and the necessity of keeping them engaged and satisfied.

MidAmerican deploys a targeted set of efficiency options through its Industrial Partners Program, designed specifically for large industrial and manufacturing facilities. Its large customer efficiency offerings are augmented with strategic key account management practices for large customers that help to promote greater levels customer engagement and satisfaction. MidAmerican's Industrial Partners program originally used an on-site energy assessment as its primary mechanism to identify potential energy efficiency projects in large customer facilities. This strategy ultimately restricted the program's ability to generate a continuous stream of efficiency projects, as large customers were slow to act on assessments' recommendations. As such, MidAmerican recently changed its delivery model to include energy managers with specialized training in large customer, industrial energy efficiency technologies and strategies. These individuals have been extremely effective at driving engagement with MidAmerican's largest customers and have provided the utility with an additional procurement source for large customer efficiency projects. As just one example, the program's energy managers now review individual energy efficiency action plans with each of MidAmerican's largest customers on an annual basis, which has helped the utility generate additional energy savings while building trust and strengthening relationships with these important customers.

Energy managers also work collaboratively with MidAmerican's key account managers to further drive engagement and satisfaction among the utility's largest customers. While energy managers effectively give large customers direct access to a trustworthy and knowledgeable expert on large customer energy efficiency, key account managers are responsible for marketing the Industrial Partners Program and delivering nuanced communication strategies that help to elucidate the value of energy efficiency to large customers. Key account managers have played an important role in maintaining relationships with large customers over the long-term by cultivating sustained and individualized dialogues that have helped to better understand these customers' unique business needs. Overall, MidAmerican has seen increased levels of engagement and satisfaction among its largest customers by developing a targeted and relevant

set of efficiency options, incorporating specialized energy managers as a resource for large customers, and driving engagement with its key account managers.

Energy Trust of Oregon

The Energy Trust of Oregon (EnergyTrust) provides comprehensive energy efficiency and renewable energy programs to energy customers in Oregon and southwest Washington. EnergyTrust's programs are overseen by the Oregon Public Utilities Commission (OPUC) and are available to approximately 1.5 million utility customers of Portland General Electric (PGE), Pacific Power, NW Natural, Cascade Natural Gas and Avista. Importantly, when the Oregon legislature established a public purpose charge in 1999 to help fund energy conservation, efficiency, and renewable projects, it included a self-direct option for large customers with more than 8.76 million kWh of annual energy consumption. Rather than paying the entire 3 percent public purpose charge on their electric bills, self-direct eligible customers with qualifying projects can claim credits through the Oregon Department of Energy, which are then used to offset part of the energy conservation (56.7 percent) or renewable resources (17.1 percent) portion of the public purpose charge.

By also including strict requirements around the measurement, verification, and reporting of customer-facilitated projects, Oregon's self-direct policy avoided the major pitfall of many unsuccessful self-direct programs. The self-direct policy also included a provision where large business customers could initially receive credits for projects that were completed during the three years leading up to the policy's implementation. As such, EnergyTrust originally saw a substantial number of large customers choose to self-direct the eligible portion(s) of the public purpose charge despite the strict evaluative requirements. However, upon choosing to self-direct, many large business customers continued to demonstrate a need for utility guidance around implementing energy efficiency projects and navigating the credit-based system for recouping portions of the public purpose charge.

Because the OPUC recognized that the potential efficiency gains via self-direct customers were small relative to these sites' overall potential, it encouraged EnergyTrust to find ways to work with self-direct customers in order to generate energy savings above and beyond what is typically achieved with self-directing. EnergyTrust ultimately embraced this guidance, which afforded the organization an opportunity to demonstrate the value of its large customer energy efficiency programs while building trust with this important customer class. And because self-directing customers were only eligible for half of the total incentives available to program participants, this forward-thinking strategy enabled EnergyTrust to claim some of the most cost-effective energy savings in its entire efficiency portfolio. Ultimately, after working with EnergyTrust's programs and leveraging the technical expertise available for industrial energy efficiency projects, many large business customers voluntarily exited the self-direct program, paid the public purpose charge in full, and participated in EnergyTrust's industrial efficiency programs. Of the approximately 150 self-direct eligible sites in Oregon, less than 15 currently choose to self-direct.

Robust industrial efficiency offerings and strategic account management practices were both essential in bringing self-direct customers back to EnergyTrust's program. The custom efficiency program is built on a framework that leverages geographically assigned energy efficiency account managers that maintain close and detailed contact with large business customers while providing the necessary technical expertise to implement industrial efficiency

projects. EnergyTrust's strategic energy management (SEM) program builds on this framework and aims to create long-term energy savings with large business customers. The SEM program provides intensive training for facility managers and other relevant staff that focuses on the technical skills necessary to implement industrial efficiency projects at their sites. It also focuses on the soft skills and management systems that are necessary to create on-going energy efficiency improvements within an organization. Both of these programs have been instrumental in driving further engagement with large business customers and ultimately improving their overall satisfaction with EnergyTrust.

Discussion

As opt-out policies continue to expand across the United States and large-customer abdication becomes an increasingly relevant threat for utilities, there is a demonstrated need for robust efficiency programs that can secure cost-effective energy savings while driving participation, engagement, and satisfaction among utilities' largest business customers. Drawing mainly from LBGP survey data and utility case studies, the remainder of this report discusses specific efficiency programs and strategies that can help utilities and other energy efficiency program administrators drive deep, long-lasting savings with their largest customers.

For utilities in states with current opt-out policies – or utilities in states moving towards an opt-out environment – finding ways to drive large customer participation in energy efficiency programs is an obvious but nonetheless essential step in building relationships with this important customer class. LBGP survey data suggest that prior program participation is a key factor in whether large business customers see value in a utility's programs and services. While this is true for many utilities in working with their largest customers, AEP Ohio demonstrated the value of strategic, proactive engagement in driving program participation with opt-out eligible customers. The utility's strategy of prioritizing historic non-participants helped target the sub-group of large customers most likely to exit the efficiency program. By focusing efforts on driving participation its efficiency programs, and following-up with detailed reports on the energy and cost savings achieved, AEP Ohio was able to effectively communication the opt-out scenario to eligible customers while leveraging established, individualized value propositions to persuade against opting-out of energy efficiency programs.

Among the utilities we interviewed, energy managers also play an important role in driving participation and satisfaction with large business customers. These professionals, who possess technical expertise specific to large customer energy efficiency, often work collaboratively with a utility's key account managers and large customers to identify and implement energy efficiency projects. Energy managers provide individualized advice on energy efficiency opportunities in facilities and work with large customers to identify relevant utility incentives that reduce project costs. By adopting a program delivery model that paired energy and key account managers together, MidAmerican Energy effectively strengthened its procurement methods for large customer energy efficiency projects while growing engagement and satisfaction among this important customer group. AEP Ohio and EnergyTrust also cited the value of energy managers' technical expertise in working with their largest customers.

Some utilities, such as Energy Trust of Oregon, leverage self-directed energy efficiency as a means to achieve energy savings while affording large business customers flexibility in choosing the approaches and projects best suited for their organization. Strong self-direct programs typically require efficiency projects to be approved in advance and include criteria

around the measurement and verification of the energy savings achieved. Importantly, self-direct energy efficiency programs also maintain the relationship between a utility and its largest customers, leaving open the potential for future participation in utility efficiency programs and incentives. Because of a well-designed self-direct policy that included the necessary oversight components – and because the Oregon Public Utilities Commission encouraged EnergyTrust to find additional ways to work with self-direct customers – EnergyTrust was eventually able to use large-customer self-direction as a means to demonstrate the value of its efficiency programs and technical expertise.

Without a robust program mix that meets the needs of large customers, however, the strategic advantages of proactive engagement and increased program participation are moot. LBGP survey data describe which programs and technologies utilities' largest customers are most interested in, but because these data vary between certain business types, it is important for utilities to understand which types of large customers exist with specific service territories. Large industrial and manufacturing customers, for example, showed high levels of interest in programs focused on industrial processes and compressed air, while other large business respondents were most interested in other programs and services such as pumps, motors, and lighting. In order to accommodate the diverse and unique needs of each large customer, strong custom programs are absolutely essential in driving energy savings. EnergyTrust described their custom efficiency program as the "backbone" of their large customer portfolio and cited it as instrumental in persuading large customers to leave the self-direct program. AEP Ohio and MidAmerican also cited strong custom programs as important factors in their strategies for working with large customers.

Strategic energy management is another program type that has the potential to drive deep, long-term energy savings with utilities' largest business customers. SEM programs typically involve in-depth technical trainings for facilities staff that focus on energy efficiency opportunities from capital improvement projects or efficiency gains in operational and maintenance (O&M) processes. Successful SEM programs, like the one at Energy Trust of Oregon, often go a step further in recognizing that a significant shift in focus towards energy efficiency within a large business environment can be difficult to sustain. As part of its SEM program, EnergyTrust provides leadership training to participants that better prepare these individuals to influence decision processes around energy efficiency within their organization. And because SEM programs require utilities and their largest customers to work in such close coordination, these programs also have the added potential of improving customer satisfaction and promoting utilities as the most trusted resource for information on large customer energy efficiency.

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