The Longer Road to Deep Energy Savings in Commercial and Industrial Facilities

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ABSTRACT

As efficiency programs strive to achieve greater savings, there is a move toward "going deep" in customer facilities by implementing comprehensive multiple-measure projects (lighting, HVAC, refrigeration, etc.) at once. The concept is that, in addressing all of the major energy efficiency improvements under one large, comprehensive project, there are potential efficiency gains to be made by avoiding the repetitive process of separate projects. Some programs offer bonus incentives for implementing multiple measures together, while others provide incentives for reaching a targeted percentage of energy reduction through a whole-building approach. These approaches and their associated programs are succeeding, but at low participation levels and therefore low energy savings on a programmatic basis. The reality of the everyday complexity at major commercial and industrial (C&I) energy users presents barriers to deep saving at their facilities. These customers often do not move forward after considering how a comprehensive retrofit disrupts operations, the difficulty of securing funds through their capital budgeting and approval processes, and the challenges of managing multiple contracting teams.

This paper presents our experiences with C&I customers and how comprehensive energy savings can be achieved with multiple projects over time, versus one comprehensive project. The discussion covers the realities of customers' capital budgeting processes, their primary focus on running their businesses, and how deep/comprehensive energy savings can be achieved over time. Specific examples of success will be discussed. The paper also covers the results of recent research around multi-measure promotional incentives and deep energy savings programs around the country.

Introduction

Energy efficiency programs around the country have been attempting to achieve deep energy savings in commercial and industrial facilities through comprehensive approaches to building, infrastructure, and equipment upgrades. These approaches involve the installation of multiple energy efficiency measures in one project cycle. Generally, these programs focus on deep energy savings and have a minimum energy savings target of 15%. There are perceived advantages of comprehensive multiple measure projects beyond the obvious energy savings in the form of supposed synergies in the installation and coordination of the measures. Rather than undertaking multiple smaller projects (lighting, HVAC, process improvements) the customer and associated contractor team address all or most of the cost-effective measures as one project in a more compressed time frame, allowing the customer to realize the greater energy savings sooner. From a programmatic perspective this may be an ideal approach, but not so much from the customer's perspective. This is demonstrated by the relatively low level of participation in the deep energy savings or multiple-measure energy efficiency programs found in the research discussed later in this paper.

An alternative to this programmatic “one and done” approach and a methodology that seems to be successful delivering deep energy savings over time is more along the lines of account management. Developing trusting relationships with customers and becoming an integral part of their energy efficiency improvement planning can result in a series of projects that deliver significant energy savings and greenhouse gas reductions. This approach leads to higher participation rates compared to a deep energy savings program offering and much higher levels of total savings. Although a deep energy savings program might serve and be appropriate for a gut rehab situation, an account management approach has proven very effective for a broader reach, higher levels of savings per facility, and greater levels of program success.

Barriers to Deep Energy Savings Projects

Although the customer may desire high levels of energy savings, there are considerable barriers to undertaking a multi-measure deep energy savings project. One primary impediment is securing the capital for project funding even when efficiency program incentives are robust and available. Another major barrier to moving forward with a deep energy savings project is the disruption to company operations. This can be a significant issue in industrial manufacturing facilities where the energy efficiency measures directly affect the production line.

One project type where deep energy savings approaches are more acceptable involves buildings undergoing a major rehab or change of use. For those buildings where the customer or developer is undertaking a major rehab involving envelope and/or equipment, they are more likely to consider upgrading multiple aspects of the facility to higher levels of energy efficiency. In many cases the facility is unoccupied, and therefore operational disruptions are less of a concern.

In most situations customers seem more likely to undertake multiple projects in succession over a period of time, resulting in higher participation rates and increased savings levels.

Program Research

ERS conducted research on behalf of Con Edison to identify program offerings across the country that attempted to incentivize and successfully implement projects involving multiple energy efficiency measures in an attempt to achieve deep energy savings. Program attributes were studied as well as general program success in projects implemented and the associated energy savings. Also, the research attempted to understand the barriers to participation involved with these deep energy savings program offerings.

Research Findings

While commercial and industrial customers frequently engage in energy efficiency programs to receive incentives for a single measure, many customers do not make use of available programs to delve deeper into their savings potential. Many customers enter programs through market partners or trade allies that specialize in a single building technology or system. As a result, opportunities to install and claim savings for multiple measures in a facility are often

missed. This research initiative attempts to identify the nationwide best practices for achieving additional energy savings through multiple-measure installations or a deep savings approach using various types of programmatic offerings.

Research Activities

ERS engaged in the following activities for this research phase:

- Identification of programs nationwide that include deep energy savings-focused programs and/or cross-measure participation incentives
- Collection and review of relevant program information to identify best practices in design and delivery, including web-based research and interviews with program administrators
- Distillation of program information highlighting best practices findings and identifying barriers to successful programs

ERS used primary and secondary research to develop programmatic best practices to be incorporated into Con Edison's existing C&I Program or to serve as a basis for new programs going forward.

Secondary Research

ERS conducted the following activities for secondary research:

- Identified major urban areas similar to Con Edison's territory
- Identified program administrators that offer programs with one or more of the following elements:
    - Deep energy savings
    - Multiple-measure bonus
    - Strategic energy management (SEM)
    - Continuous energy improvement (CEI)
    - Whole-building energy savings
    - Tiered incentive structure
    - Comprehensive incentive program
- Identified key programs for further research
- Gathered data from publicly available resources on incentive structure and program participation process
- Reviewed impact and process evaluation documents for program performance data

ERS identified eighteen separate energy efficiency programs presently being offered around the country as models targeted at achieving multiple measure installations at a customer's facility.

Primary Research

The ERS team identified programs as having a strong potential for influencing customers to install multiple measures and flagged them to conduct brief follow-up interviews with their program administrators (PAs). ERS designed an interview guide to ask these PAs how their programs achieved savings beyond a single measure to understand how successfully the program

met its goals. The team then reached out to the PAs and scheduled and conducted the interviews. Table 1 shows programs identified for Program Administrator Interviews

Table 1. Program Administrator Interviews

Utility	Location	Program	Flagged for interview	Interview conducted
BG&E	MD	BG&E Comprehensive Systems for Existing Buildings	X	X
Consumers Energy	MI	Consumers Energy Business Solutions	X	X
Delmarva	DE	Delmarva Power Solutions for Business Program	X	
DTE	MI	DTE Multi-Measure Incentive Bonus	X	X
ETO	OR	ETO SEM	X	
National Grid	RI	National Grid Energy Efficiency Study and Custom Incentives	X	X
NJBPU	NJ	NJCEP P4P	X	X
NYSERDA	NY	IPE	X	
PPL	PA	PPL Continuous Energy Improvement	X	X
PG&E	CA	PG&E Customized Retrofit Incentives	X	X
SDG&E	CA	SDG&E Custom Incentive Program	X	
SMUD	CA	SMUD Small Commercial DER	X	X

Research Findings

Through the primary and secondary data collection methods described above, ERS identified a list of specific program offerings that attempted to drive multiple measures and deep energy savings through more comprehensive project implementation. ERS sorted these program offerings into the following categories:

- Multiple-measure bonus – Aimed at driving multiple measures by offering a bonus incentive to customers installing more than one measure.
- Whole-building approach – Aimed at incorporating deeper savings through a thorough assessment of all HVAC systems, process loads, lighting, and building envelope measures.
- SEM (also known as CEI) – A holistic approach to managing energy use that focuses on continuously improving energy performance and increasing cost savings by setting long-term goals and defining action plans to advance those goals. Savings result from behavioral changes, operations and maintenance improvements, and capital projects.
- Account management (AM) – A program approach where account managers foster long-term relationships with customers to identify and assist them with implementing energy efficiency projects over several years. These programs emphasize capital projects and are often combined with traditional custom incentives.

Research Conclusions

Eleven programs were identified with unique features to drive deeper savings. ERS determined that multiple measures and deep energy savings are typically driven by using the multiple-measure bonus incentive, whole-building approach, SEM, or AM. The multiple-measure bonus offerings appeared to be the most popular, but, while they promote multiple measures, the savings are not always substantial when compared to the baseline energy use. Based on information provided by program staff, it was determined that the whole-building approach has driven deep energy savings in some cases; for example, in one extreme case 45% savings from the baseline usage was reported for a facility in SMUD territory. SEM, another offering aimed at driving deep energy savings, shows promising results but requires dedication and commitment from program implementers and customers. A 2014 evaluation study of nationwide SEM programs showed typical energy savings ranging between 5% and 8% of the baseline consumption. Additionally, a pilot conducted by PPL on its own buildings achieved 52% savings from the baseline usage through a continuous energy improvement plan. The resulting savings from the PPL pilot, though impressive, are not typical, but they show that deeper energy savings are possible through CEI programs.

Based on interviews with PAs, ERS determined that participation in multiple-measure or deep energy savings' offerings is typically quite low. The program staff was not able to quantify the performance of these programs because of inadequate tracking procedures. It was determined that this low participation is due to more stringent requirements on the percentage of energy reduction, the number of measure categories affected, the threshold on individual measure contributions, and high project turnaround times.

From interviews with program experts, ERS learned that adopting a multiple-measure approach is less about program design and more about customer experience. Successful programs emphasize strong AM practices where deep relationships are built between the program and customer. The program (or TA providers or implementation contractors) should focus on building customer trust so that they can help identify opportunities and craft implementation plans. It is this practice, prominently featured in SEM or AM programs, that results in multiple measures being installed in a single facility regardless of other incentive mechanisms leveraged by the program. This approach also results in energy efficiency projects being implemented over multiple years. SEM programs such as PPL's Continuous Energy Improvement program or ETO's SEM have shown promising initial results with achieving deeper energy savings. There are still questions as to the persistence of the energy savings from year to year. In addition, NYSERDA's IPE Program uses AM practices to build strong customer relationships to move multiple capital projects forward in a facility to achieve deeper energy savings.

Examples of Success

The difficulties in achieving deep energy savings via a single project or program offering is evident in the research work conducted on behalf of Con Edison. The results of the research have also been demonstrated through the experiences from implementation of the Efficiency Maine Large Customer Program (LCP). The authors of this paper presently serve as the Efficiency Maine LCP Program Manager and the Implementation Contractor Program Manager. Efficiency Maine is the independent administrator for energy efficiency programs in Maine. Efficiency Maine's mission is to lower the cost and environmental impacts of energy in Maine by promoting cost-effective energy efficiency and alternative energy systems. The program

implementation team members have decades of combined experience in serving the large-customer segment in Maine as well. As a result, approaches and methodologies in reaching this sector have been evolving over the past years and have ultimately achieved greater success in implementing projects and achieving high levels of energy savings and greenhouse gas reductions in this sector. The approach that seems to lead to the greatest success falls into the category of account management versus a deep energy savings program offering.

The following provides an overview of four customers where the account manager approach was used successfully.

Paper Manufacturing

The first customer is a food service paper plate manufacturing facility located in Maine. They are an international firm with facilities elsewhere in North America and throughout the world. The plant in Maine presently uses approximately 100,000,000 kWh annually and has a peak demand of 20,000 kW.

The second customer is a coated fine paper manufacturer with a plant located in Maine as well as facilities in Europe and Southern Africa. The plant in Maine presently purchases from the grid 13,467,270 kWh annually and has a peak purchased demand of 67,150 kW.

The successful development and implementation of multiple energy efficiency measures at these two manufacturing customers started long before the first application was submitted for any specific project or incentive amount. The road to deep energy savings started with meetings with the decision makers at each facility with the Efficiency Maine Program Manager and the implementation staff. Customer staff included plant managers, facility managers, chief financial officers, capital planning managers, and senior engineering staff.

At these initial meetings the Efficiency Maine Program offerings were discussed in detail. The discussions included the types of measures eligible (large electrical efficiency, distributed generation, and greenhouse gas reduction) potential incentive amounts, how incentives would be calculated, and the process for submitting an application. The customers were provided with links to the Efficiency Maine websites for additional program information as well as contact information so they could speak directly with people knowledgeable about the programs to assist them as they proceeded with their projects. At each meeting the program funding was discussed so that these customers would know that Efficiency Maine was there to be a long-term partner with the customers as they put plans together for multiple projects. Discussions included how to optimize the amount of incentives that they could obtain from the programs as they put their long-term plans together. The Efficiency Maine team has become part of the customer's long-term planning process and an extension of their capital budget that allows them to do projects that might not otherwise make the cut at their companies. As an example, in 2015 this customer was in an acquisition mode, buying companies that matched well with their long-term plans for growth. The only efficiency improvement project approved for all of their North America operations was a heat exchange project on the paper plate machines in Maine.

At each meeting the customers were asked about their capital planning process to give Efficiency Maine a better understanding of how each company operated, what their ROI requirements were, where the capital approval would come from, and the process that each company had to go through to obtain capital support for the energy efficiency projects that they were considering. For both companies the approval process starts at the individual plant. At certain thresholds corporate approval was needed, which came from outside of the state. For very large projects final approval needed to come from home offices outside of the United States.

Understanding each customer's capital process is crucial to the planning process. It is also important to understand the ROI requirement of each individual customer. If proposed projects do not meet the capital planning criteria after the incentive is provided, it makes approval much more difficult for these companies to obtain. Some projects that were outside the "standard ROI" requirements did receive approval as there was financial support from Efficiency Maine.

It is important to note here that Efficiency Maine has adapted the programs to help meet customer requirements. Initially Efficiency Maine issued RFPs for projects that had to be submitted within a specific time frame. It was determined that the RFP schedule did not coincide with many of the customers' capital planning processes. The RFP process was converted to an open program opportunity notice, which provided much more flexibility for customers to participate. The program has also adjusted incentive levels and incentive caps as it has progressed. Efficiency Maine has adapted the program based on input and feedback from the customers it serves and modified the program to allow for more participation and the development of more complex projects.

The tools that Efficiency Maine provides to help customers identify and develop projects, such as the scoping audits and the technical assistance studies, have led to projects at both customer facilities. This has caused the customer to take a much deeper look into their facilities and their process and to identify projects to make them more energy efficient and more competitive in their production.

The implementation team is in constant communication with both customers, letting them know of program changes and opportunities to utilize the tools available to help them develop and implement projects.

Both customers received significant outreach and follow-up from the implementation staff. The outreach included multiple contacts by an account manager, and technical support was provided by engineering staff. The implementation team completes technical reviews of each project submitted, which provided a high level of confidence by the customer that the project would work as designed and achieve the estimated energy savings or greenhouse gas reductions. The process also provided the customer with a known incentive level for the energy efficiency measures installed before the customer signed their first PO for a project. As part of the contract requirement, milestone payments were scheduled as projects moved through the construction phase. This provided multiple opportunities for interactions with the customers on the project status in which to learn about any changes that may have occurred during construction. The milestone check-ins also provided opportunities to identify any other projects for consideration.

The secrets to success of any program are the project going well, being completed as proposed, incentive payments being provided as proposed, and the actual energy savings being realized by the client. In each case Efficiency Maine has had multiple successful projects with each customer. A level of trust has been established to the point that Efficiency Maine is now being asked very early in the customer planning process if proposed projects would qualify, what a potential incentive amount might look like, where they are with the incentive caps, and when the next review committee meeting is going to be held so they can have their submittals ready. Both of these customers now invite the implementation staff to presentations on potential project ideas that they have been considering as well as the methodology behind the savings calculations.

What has happened over time is that projects have moved from simple prescriptive lighting projects to more complex heat recovery projects, VFDs, pumps, and controls projects.

As part of the outreach effort the account manager has periodically contacted the customers to ask them about the status of projects underway, whether they are receiving their

milestone payments, where they stand in their approval pipeline, and whether there are any other projects they may be considering as well as to help identify projects which they have not identified. These conversations lead to discussions about additional opportunities and potential complex projects that go much deeper into the facility than traditional prescriptive measures.

For both of these paper customers the program manager, implementation team, account manager, and technical staff are an integral part of the process and often look to us for guidance. This consistent support and consistent program offering are the keys to developing projects that take these customers much deeper into their facilities.

Table 2 shows project data for the paper plate manufacturer that was incented by the Efficiency Maine program, and Table 3 shows the same data for the coated paper manufacturer.

Table 2. Food Service Paper Plate Manufacturer

Customer	Program	Project	Annual kWh savings	kW savings	Project costs	Incentives
Paper Customer A	Large Customer	Stock pulper, vacuum pumps, VFD	1,985,921	319	$1,250,000	$400,000
Paper Customer A	Large Customer	Lighting, VFD, CA	815,251	93	$310,000	$155,000
Paper Customer A	Large Customer	Heat Recovery Phase I	5,773,680	665	$1,243,772	$500,000
Paper Customer A	Large Customer	Heat Recovery Phase II	4,660,157	553	$1,439,632	$719,816
Paper Customer A	Large Customer	Steam & Condensate	7,340,585	62,575	$2,876,000	$1,000,000
Paper Customer A	Business Incentive	Lighting	14,300	5.5	$4,625	$1,500
Paper Customer A	Business Incentive	Lighting	178,617	31	$110,442	$61,620
Paper Customer A	Business Incentive	Lighting	3,736	0.38	$2,500	$1,000
Paper Customer A	Business Incentive	Lighting	211,557	24.9	$66,865	$20,900
Paper Customer A	Business Incentive	Lighting	1,107,838	126	$143,409	$45,745
Paper Customer A	Business Incentive	Lighting	9,627	3.7	$6,535	$1,188
Total electric			**22,101,269**		**$7,453,780**	**$2,906,769**
Paper Customer A	Technical Assistance	Steam & Condensate			$40,000	$20,000

Table 3. Paper Manufacturer

Customer	Program	Project	Annual kWh savings	kW savings	Project costs	Incentives
Paper Customer B	Large Customer	VFDs	4,099,167	374	$601,000	$300,888
Paper Customer B	Large Customer	Heat Recovery	1,135,172	1273	$1,950,000	$975,000
Paper Customer B	Large Customer	VFDs	235,705	28.3	$36,339	$19,335
Paper Customer B	Large Customer	Causticizing Controls			$1,209,587	$362,961
Paper Customer B	Large Customer	Lighting	2,770,536	316	$610,996	$305,498
Paper Customer B	Business Incentive	Lighting	12,663	3.5	$4,975	$1,500
Paper Customer B	Business Incentive	Lighting	8,080	1.85	$2,500	$1,000
Paper Customer B	Business Incentive	Lighting	44,091	5	$10,820	$4,050
Paper Customer B	Business Incentive	Lighting	6,918	0.8	$1,680	$525
Paper Customer B	Business Incentive	Lighting	31,047	3.6	$10,625	$5,950
Paper Customer B	Business Incentive	Lighting	48,333	5.8	$9,130	$5,250
Paper Customer B	Business Incentive	Lighting	16,872	2.1	$6,268	$3,475
Paper Customer B	Business Incentive	Lighting	53,811	5.9	$12,976	$4,750
Total Electric			8,462,395		$4,466,896	$1,990,182
Paper Customer B	Technical Assistance	Heat Recovery			$28,100	$21,075
Paper Customer B	Technical Assistance	White Water Mass Balance			$8,450	$4,225

Precision Manufacturer

This customer is a global precision manufacturer in the semiconductor field with a facility in Maine. The plant presently uses approximately 45,000,000 kWh annually and has a peak kW of approximately 12,500.

Much like the prior customers discussed in this paper, this customer has undertaken multiple projects over the past 4 years (commencing in 2012).

This customer has completed three projects with Efficiency Maine, and the technical team has provided input on three other projects that did not move forward after technical scrutiny. The Efficiency Maine technical staff helped the customer come to the conclusion that the projects were not within their investment parameters.

The first project involved replacing forty-nine small process chillers with thermoelectric chillers. Once this potential project had been identified, the account manager investigated the new technology and the large savings potential, and both Efficiency Maine and the customer were appropriately cautious considering there were no actual installations to prove the performance of the technology in this specific situation. Efficiency Maine's technical team worked with the customer and installed logging equipment on an existing small process chiller as well as the new thermoelectric chiller, which the Efficiency Maine and customer team had convinced the manufacturer to send for testing. This verification process validated the energy savings estimates, which gave the customer the confidence to pursue the project. This first project was instrumental in building the relationship with the customer, as it demonstrated Efficiency Maine's requirement of technical rigor. This helped to set expectations for future projects and demonstrated the value of unbiased third-party technical support resulting in a

successful project and cash incentive. From that point on, conferring with Efficiency Maine became part of the customer's energy efficiency project identification and development and capital planning process for the Maine-based facility.

The next project came after the customer was purchased by another precision manufacturer in the same field. This project included lighting upgrades in numerous locations throughout the facility and a change from a primary-only to a primary-secondary chilled water loop arrangement with variable frequency drives (VFDs). Efficiency Maine went to the site and discussed the existing and proposed chilled water pumping arrangements with the chiller plant operators and the site engineering staff. Their submitted energy savings calculations as part of the incentive application were very good, due to detailed discussions at the on-site meeting regarding the technical requirements for the project. The bundling of these measures for this project allowed the customer to qualify for an incentive and meet the internal company ROI requirements, helping the project to move forward.

The Efficiency Maine Team then provided technical input on a chiller consolidation and a free cooling project, as well as a second round of thermoelectric chillers. Unfortunately, neither project moved forward due to their long payback periods, failure to meet investment criteria, or technological difficulties with the new thermo electric chiller application.

The most recent project involved replacing 312 vacuum pumps with new technology DC variable speed pumps in three phases. This project is estimated to lower their electrical costs by 10% and will be implemented over the course of 2 years. The Efficiency Maine technical staff improved the rigor of the analysis by including the impact of reduced heat rejection based on measured data. The savings and incentives, as phased, allow the customer to get the maximum incentives available for each fiscal year from the Large Customer Program, making each phase cost-effective within their internal investment criteria. Had they pursued the entire project as one phase, and received the 1-year maximum incentive, the ROI would have been too great and they would not have been able to pursue this project.

Table 4 shows project data for the precision manufacturer that was incented by the Efficiency Maine program.

Table 4. Precision Manufacturer

Customer	Program	Project	Annual kWh savings	kW savings	Project costs	Incentives
Precision Manufacturer	Large Customer	Thermoelectric process chillers	1,055,446	122	$697,000	$300,000
Precision Manufacturer	Large Customer	Lighting and chilled water pumping revisions	583,814	147	$240,650	$120,325
Precision Manufacturer	Large Customer	Vacuum pumps PH1	3,302,746	384	$2,404,216	$924,768
Precision Manufacturer	Large Customer	Vacuum pumps PH2	3,622,463	413	$2,217,884	$1,000,000
Precision Manufacturer	Large Customer	Vacuum pumps PH3	4,638,757	530	$2,647,818	$1,000,000
Total electric			13,203,226		$8,207,568	$3,345,093

Pulp Manufacturer

This customer is a premium Northern ECF (Elemental Chlorine Free) bleached Kraft pulp manufacturer that uses hardwood chips from Maine and New Brunswick, Canada. The customer sells pulp to paper makers all over the world and presently uses approximately 320,000,000 kWh annually, with a peak demand of approximately 35,000 kW.

Efficiency Maine approached this customer at the commencement of the Large Customer Program in 2013 in hopes of identifying projects with significant energy savings or greenhouse gas reduction opportunities. The initial contact person at the plant had moved on to a different position, and the new contact person had significant responsibilities for finding and implementing energy savings projects. In working with the company representative Efficiency Maine was able to help vet a number of projects, resulting in significant energy savings and incentives being provided to help projects pass internal investment hurdles and ultimately get installed. Projects with this customer commenced in earnest in 2014 and have totaled five to date.

Table 5 presents project data for the pulp manufacturer that was incented by the Efficiency Maine program.

Table 5. Pulp Manufacturer

Customer	Program	Project	Annual kWh savings	kW savings	Lb GHG reduced	Project costs	Incentives
Pulp Manufacturer	Large Customer	Recovery Boiler Modifications	NA	NA	2,830,152	$4,687,000	$283,015
Pulp Manufacturer	Large Customer	Steam Line Insulation	NA	NA	1,334,779	$250,400	$100,200
Total GHG					4,164,931	$4,937,400	$383,215
Pulp Manufacturer	Large Customer	Process Pump VFD & Lighting	644,874	76		$266,019	$133,009
Pulp Manufacturer	Large Customer	Boiler Induced Draft/Fan Motor VFD	5,087,385			$1,027,708	$513,854
Pulp Manufacturer	Large Customer	Lighting Retrofit	507,441	54		$227,165	$113,582
Total electric			6,239,700			$1,520,892	$760,445

Efficiency Maine Large Customer Program Results

Table 6 provides program information for the Efficiency Maine Large Customer Program for the past three program years: FY2013 – FY2015.

Table 6. Efficiency Maine Large Customer Program – Electric

Year	Annual kWh savings	Program costs	Participant costs	Cost/kWh lifetime	Benefit/cost ratio
FY2013	19,852,282	$3,557,321	$10,322,947	$0.039	1.56
FY2014	11,124,852	$2,356,143	$1,990,320	$0.032	2.33
FY2015	30,760,921	$6,983,439	$5,124,783	$0.028	2.09

Summary

Although deep energy savings programs may have their place in the energy efficiency program lineup, market research and experience demonstrate that an account management approach can achieve equivalent or greater energy savings through the implementation of multiple projects on an ongoing basis. A solid, trusting relationship is a key factor in working with customers to identify, develop, vet, gain approval for, and ultimately implement energy savings projects. Understanding the customer's capital budgeting process, production process, and business needs is also crucial to implementing projects on an ongoing basis to realize deep energy savings and multiple projects over time. Savings on a per-customer basis for the group of customers discussed in this paper range from 8% to 29% for the projects implemented, compared to some project targets of 15% for deep energy savings programs. Advantages of the account management approaches include:

- Development of relationships with key decision makers within the customer's organization
- Multiple contacts and relationships with the customer help to ensure that project planning doesn't stall if a person leaves.
- Program staff are seen by the customer as an independent unbiased third party helping the customer to navigate the efficiency program process and helping to vet the technology and associated vendors.
- A more in-depth understanding is gained of the customer's decision-making and capital budgeting processes.
- More projects are implemented at the customer's facility, leading to greater energy savings versus other programmatic approaches.

As programs strive to achieve greater energy savings beyond the standard prescriptive or custom program offerings and consider the development and implementation of deep energy savings or multiple measure bonus programs, a long-term view may yield better results.

References

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