



Energy Efficiency Program C&I Challenges

PowerOptions' experience

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Executive Summary

Over the last eight years, PowerOptions has endeavored to provide support for its members seeking to implement energy efficiency projects, particularly the medium sized customers who have long been identified as the most under-served in the C&I class and most difficult to reach. We have committed significant resources to this effort. In 2009, PowerOptions was designated by the Health and Educational Facilities Authority (HEFA) to market a Green Loan Program to which HEFA had dedicated \$4 million. This program was designed to address a funding gap for medium-size nonprofits faced with funding barriers to implementing energy efficiency projects by offering below market interest financing. That program was later assumed by MassDevelopment as part of its merger with HEFA. In 2014, PowerOptions launched a pilot program whereby it would provide members with pre-development expertise and support to identify projects, select vendors, and secure financing of projects. Despite our no-cost help, many members were ultimately unwilling or unable to engage with our program. Their lack of internal staff to work with us was the primary hurdle. We also reached out to the two major utilities in the Commonwealth to see if we might be able to be more effective in reaching members if we worked together – combining our trusted advisor role with customers with the utility expertise in energy efficiency. That effort was rebuffed.

We continue to believe that, as the largest energy buying consortium of our kind in the region, and the success we have shown with implementing solar projects in the region (over 65 MWs under contract), we have something to bring to the table to overcome the barriers to success in delivering energy efficiency to this customer group. The Program Administrators (PAs) have entered into partnerships with various entities, but only in their discretion and with no clear transparent process for selection. In the upcoming three-year plans, the EEAC should adopt a process whereby entities such as PowerOptions can present proposals to the EEAC and be granted the opportunity to deliver success with remuneration akin to that of the PAs within the incentive framework.

Introduction

PowerOptions is a nonprofit energy buying consortium of 500 nonprofits and public entities in Massachusetts, Connecticut, and Rhode Island. Our mission is to help our members save money so they can focus more resources on their own missions. PowerOptions is the trusted advisor for a wide range of entities in Massachusetts, constantly looking for ways to help members mitigate their energy bills. To that end, PowerOptions is deeply interested in the future of the energy efficiency programs, especially in reaching segments of our membership that have yet to be reached. The present structure of the delivery of the energy efficiency programs makes it difficult to capitalize on these opportunities.

Background

Green Loan Program

In 2009, PowerOptions (then a part of HEFA), instituted a Green Loan Program intended to address a funding deficiency for many medium-size (300-750 kW) nonprofits and public entities looking to take advantage of energy efficiency upgrades. The Green Loan Program offered loans of \$50,000-500,000 to members who received utility incentives for energy efficiency projects, but who were still lacking the funds to go through with the project. Since many nonprofits and public entities of this size have very tight budgets, this program was essential to their participation. PowerOptions' experience helping medium-size members access the energy efficiency program offered insight into the way these customers are often underserved. After the program was assumed by MassDevelopment, we decided to explore a more robust program to reach these members.

Utility Outreach

In 2014, PowerOptions found that, despite the maturation of the energy efficiency programs, medium-sized commercial and industrial members were still lagging in program participation compared to our larger and smaller members. We retained Jacobson Energy Research and BTan Consulting to analyze member participation in energy efficiency programs. The analysis used a sample of 63 PowerOptions members in National Grid territory to find that low usage members (less than 2.3 million annual kWh) were taking advantage of the programs at a much lower rate. Of the five years of data studied (2009-2013), only 34% of low usage members participated in any energy efficiency program, whereas 88% of high usage members participated. Notably, high usage members were far more likely to take advantage of the programs in multiple years. Nearly 70% of high usage members participated in the programs for two or more years, while only 11% of low usage members did so. This indicates that they were more likely to undertake a one-off project than to become continuously engaged. This analysis confirmed our theory that small and medium-sized customers have lower participation levels, and need additional assistance in order to take advantage of energy efficiency offerings.

In order to aid our members in accessing energy efficiency opportunities, PowerOptions reached out to National Grid in the hopes of establishing a partnership to effectively and cooperatively reach these members. After meeting with National Grid, PowerOptions was told that the partnership would not move forward due to a perceived conflict of interest as a participant in the retail competitive supply market.

Later on, PowerOptions reached out to Eversource to propose a partnership. We explained that PowerOptions could leverage its role as the trusted advisor for nonprofits to reach previously unreached customers. We have over 250 of our electricity members located in Eversource territory representing over 500,000 MWhrs of load, as well as over 100 gas members representing almost 4 million Dekatherms of load. In addition, more than 40 of our gas members have 24/7 load and

would have been great candidates for CHP. As such, we believed this partnership would be mutually beneficial. After positive meetings with Eversource, PowerOptions was encouraged to submit a formal proposal to cement a strategic partnership, which we did.¹ The proposal, despite offering details on how the partnership was envisioned to work, was rejected with little explanation.²

PowerOptions Pilot

In this context, PowerOptions, through a pilot program, set out to assist members in accessing energy efficiency funds without the help of the utilities. We engaged the deeply experienced consulting firm, Rethinking Power Management, to facilitate member outreach and education, with the hopes of identifying projects that members could develop through the energy efficiency programs. We reached out to our membership broadly in our newsletter and at our annual meeting, and we also contacted individual members that we thought might be interested or particularly benefit from an energy efficiency program. PowerOptions spent over \$30,000 over the course of the pilot. In the end, PowerOptions' pilot aided two members in developing significant projects through the utility energy efficiency programs.

First, we identified kitchen exhaust hoods as a major source of inefficiency for the Museum of Fine Arts. The museum, being a larger customer, had already received a utility audit, but the audit did not identify the kitchen exhaust hoods. The museum was working with exhaust hoods that were unable to automatically slow down when not in use. Advances in technology meant that implementing kitchen exhaust hood controls would result in significant energy savings. In addition, the kitchen hoods were eligible for utility incentives. After extensive discussions, the museum decided to move forward with these efficiency investments.

Second, we identified an end-of-life boiler as an efficiency opportunity for the Franklin Park Zoo. After a load analysis, we determined that their current boiler was far too large and right-sizing it would further enhance savings. Right-sizing the boiler resulted in an 80% reduction in boiler capacity. The project was not eligible for incentives under the current guidelines of the energy efficiency programs. After successfully petitioning for the project to be considered as a custom measure under the energy efficiency program, the boiler upgrade was projected to result in over \$12,000 in annual savings. Even with significant anticipated savings, the Zoo was unable to find financing for the project on their own. PowerOptions was able to assist the Zoo in obtaining financing from their own bank, Citizen's.

Demand Reduction

In addition, and related to energy efficiency, the EEAC has stated its goal of including demand response in the next three-year plans. PowerOptions has extensive experience in delivering demand

¹ The proposal is attached as Appendix A.

² The only explanation received was, "At this current time, we do not feel there is a fit between your services and our Small Business program."

response. Between 2010 and 2014, PowerOptions ran a DR program for members through a contract with Comverge. We had 18 MWs under contract. PowerOptions believes that demand response is the next logical step for the programs and can result in significant peak savings for customers and for the grid. PowerOptions currently has a demand reduction program that aids our members in reducing their ICAP tags with minimal member investment of time and resources. Last year, our members reduced their ICAP tags by over 4 MW, resulting in over \$200,000 of savings. These savings were achieved only through our program; there are still significant savings being underutilized statewide.

Recommendation

The utilities have engaged a number of third parties to help administer the energy efficiency programs. These partnerships have often been very successful in leveraging the expertise and relationships of the third parties. However, these partnerships often do not extend beyond program administration and into customer outreach. As savings continue to become harder to reach, this model becomes increasingly inefficient; the utilities need new partnerships to reach underserved customer segments. PowerOptions' attempts to work with our members to identify incremental energy efficiency upgrades were made more difficult without the utility as an active partner. Having the utility as a partner would have helped PowerOptions identify targets for projects and streamlined the flow of information among the parties and provided a greater opportunity for educating the customer on the benefits of the energy efficiency programs. We know these sorts of partnerships can work and that the utilities have signed MOAs with some larger municipalities,³ associations, and individual customers⁴ to assist with outreach to their constituents. Effective utility/association partnerships can help reach marginal customers who have yet to take advantage of energy efficiency opportunities.

These strategic partnerships can open the door to customers who are currently unaware of energy efficiency opportunities or who are unable to take advantage of them, by leveraging associations' unique relationships with their members and acting as a conduit for the utility programs. Without utility involvement, however, there are challenges for associations to assist the utilities in fully engaging their members in pursuing and achieving energy efficiency projects. Associations do not have the funding to spend on these endeavors, despite having the potential to provide meaningful opportunities for savings. Further, any savings associations are able to achieve first and foremost provide value to their members, but also to the utility in the form of incentive payments. This presents an equity issue as the association does the legwork and the utility reaps the rewards.

³ For example: <https://www.cityofboston.gov/news/default.aspx?id=6159>

⁴ For example: <https://www.umass.edu/sustainability/news/umass-amherst-eversource-sign-second-agreement-energy-efficiency-partnership>

In light of the large untapped potential for utilities and associations to cooperate to reach underserved customers in Massachusetts, PowerOptions recommends that the next three-year plans include formal, open, and transparent processes for associations to propose strategic partnerships, with specific funds set aside to encourage these partnerships. PowerOptions also recommends that the discretion in accepting or rejecting partnership proposals lie not with the utilities, but with a neutral party such as DOER. This would ensure that proposals are accepted or rejected based solely on their merit and ability to help meet the three-year plan goals.

PowerOptions acknowledges the existence of a similar process for unsolicited proposals outlined in the current three-year plans. However, this process is currently weak; submission deadlines have not even been updated since 2016.⁵ PowerOptions advocates substantial reform of this process to make it more transparent and accessible to third parties. A commitment to such a process could lead to a rejuvenation of outreach to hard-to-reach customers, as well as the potential for novel proposals for increased savings. Associations, such as PowerOptions, have developed deep relationships with utility customers and expertise in offering certain energy-savings programs to their members even without utility engagement. By formalizing partnerships with the Program Administrators, associations may be able to leverage their expertise, relationships, and experience to facilitate customer outreach for existing and new (e.g. demand response) energy efficiency offerings.

Conclusion

Through its own Green Loan Program, energy efficiency pilot, and demand reduction program, PowerOptions gained valuable insight into the challenges facing the energy efficiency programs today, as well as into the potential for future demand savings. As the energy efficiency programs have matured, some customers have seen increased benefits, while others have seemingly been left behind. The challenges facing the programs are significant enough to warrant an examination of the current energy efficiency programs to determine the most effective strategies in reaching meaningful reductions and savings for customers. In advance of the next three-year plans, the recommendation to formalize and expand the unsolicited proposal process, as outlined in this case study should be addressed in order to ensure continued savings.

⁵ See: <https://www.masssave.com/-/media/Files/PDFs/Partners/ProcessforManagingProposals.pdf?la=en&hash=49ACC8B75974B76745AEFFFE9D003C9E1ABC8282>

Appendix A

MEMORANDUM

To: Eversource
From: Cynthia Arcate, President and CEO, PowerOptions
Subject: PowerOptions-Eversource Energy Efficiency Partnership
Date: February 06, 2016

As a follow-up to our meeting of January 11th, we are proposing a partnership between Eversource and PowerOptions to optimize the delivery of the energy efficiency programs to our members served by Eversource. This partnership would provide a win-win, with Eversource increasing their savings and further building their relationship with the hard to reach non-profit sector and PowerOptions meeting our goal of expanding the services we provide our members and continuing to help them better manage their energy costs.

Background

For more than 15 years, PowerOptions has been dedicated to a singular goal – helping fellow nonprofits manage their energy costs so they can invest in their core mission. We are the largest electricity and natural gas purchasing collaborative in Massachusetts with approximately \$200 million in annual purchases. Our non-profit members provide critical services to our community. They are internationally recognized as well as locally important institutions of education, healthcare and social services. They operate affordable housing complexes, institutions of higher education, cultural facilities and hospitals. Our low prices save our members tens of millions of dollars that is reinvested in their programmatic work.

Our members want to control their energy use, as they know this is the best way to manage energy costs. But they frequently lack the tools and expertise needed to accomplish their goals. This is how PowerOptions can help. Our members frequently refer to us as their Trusted Advisor, relying on the depth of experience we have in the utility, public and non-profit sectors to guide them through the world of understanding energy markets, policies, programs and regulations. As a small non-profit, we have adopted a culture of collaboration fostering creative problem solving, and are always thinking about new ways to help our members become more efficient and successful. A channel partnership with Eversource would allow us to do that on energy efficiency.

For Eversource, PowerOptions brings to the table our more than 300 members who are Eversource electric or gas customers. This includes more than 500,000 MWhr of total electric load and close to 4 million dekatherms of gas load, both heavily concentrated in the higher education and health care sectors, but with many housing authorities, private schools and a variety of others as well. This includes approximately 45 members who are in the hard-to-reach mid-size C&I customer category

of 300 – 750 kW. As the Trusted Advisor to our members, we can bridge the connection for Eversource to these hard to reach sector segments, expanding your efforts in achieving your Energy Efficiency savings goals for C&I.

Proposal

Energy Efficiency Program Advisor service:

PowerOptions will become fully versed in the Eversource energy efficiency services and incentives and serve as an education and outreach support channel for the individual sectors that the Eversource Account Executives manage and sell to i.e. Healthcare, Higher Education, Municipal, Housing Authorities, etc. PowerOptions will have one employee dedicated to calling our Eversource list of members and educating them on the energy savings opportunities available to them through the Eversource energy efficiency programs, but all program staff will become well-versed in the programs. This staff member will understand the building assessment process, typical measures evaluated, and how the incentives work. To support this effort, Eversource will provide education and training to PowerOptions on their program offerings and services.

Eversource will provide the sector point of contacts for the PowerOptions program. PowerOptions will make introductions and participate in initial meetings between the member and Eversource. PowerOptions will further advise the member throughout the process of an audit and help them to understand their options and potential savings when making EE decisions.

PowerOptions will host and facilitate educational webinars for our members with Eversource, including regional meetings as appropriate. Eversource will be invited to attend and host a booth at the PowerOptions annual meeting to further connect with current members and educate other potential members of the PO programs.

Combined Heat and Power (CHP)

PowerOptions has a significant number of members that have a 24/7 thermal baseload need and could be interested in CHP installations as an economic option for their facilities/campus. A preliminary screen of our members who are Eversource gas customers indicates a potential 40 members that may present an opportunity for CHP.

PowerOptions will call these members, determine if they currently have CHP, and educate them at a high level on what CHP is and how it can benefit their facility. PowerOptions will direct those members to Eversource for an initial assessment of the opportunity for CHP.

Based on the results of these initial assessments, and in keeping with the model followed in our other programs, PowerOptions will evaluate conducting a “bulk” procurement on behalf of our members for designing and installing CHP. PowerOptions will assess procuring the different types of business models, including a third-party ownership PPA model as well as a turnkey design and

installation for a customer-owned system. Eversource EE incentive funds would be included in the economic analysis along with Eversource customer support to facilitate project implementation. This program would be an extension of our current procurement services for our other programs and facilitate Eversource in meeting its targets for CHP installations.

Demand Reduction Opportunities

PowerOptions previously operated a successful Demand Response program with Comverge, with 11 members and 18 MW under contract when the program ended in December 2013. We now operate an ICAP Tag Reduction program. PO Supply contracts have unique demand reduction savings features for those customers willing and able to reduce their ICAP tag during the peak demand hour. This Tag reduction feature passes savings to customers who reduce their load through facility operations when the wholesale grid hits the regional peak hour. It is a voluntary rebate program that works as part of a fixed electricity supply contract for those customers that have interval meters on account(s).

We also have a Pilot program with Tangent Energy that facilitates the peak load reduction through a software platform and remote load reduction scheme. These options are open to all members and we could introduce these cost savings options to eligible non-profit members in Eversource territory. The Tangent pilot is open to customers on PO supply contracts and who have a minimum 200 kW tag account.

This program will help address Eversource's goal to reduce customer demand as outlined in the three-year plans.

Remuneration

PowerOptions proposes a fixed fee of \$75,000 annually, with an additional success fee for reaching certain reasonable thresholds for projects originated through PowerOptions. We welcome Eversource's input regarding the success fee and appropriate thresholds, but these could be based on projected kwh and therm savings for approved projects, and/or a number of approved projects.

Conclusion

An Eversource-PowerOptions partnership combining our collective expertise and relationships can provide multiple benefits to our members/customers, as well as to both of our organizations. This proposal presents our ideas but we are open to further discussion with a goal of developing a program that maximizes mutual benefit.

After an agreed upon path, we envision the next step as the development and execution of an MOU outlining an agreed upon program and remuneration.

We look forward to hearing from you.