

KEY ENERGY EFFICIENCY LESSONS FROM EXEMPLARY PROGRAMS

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The quest for the better energy efficiency and demand response program marches on for utilities and other implementation groups. While overall DSM budgets may be growing, there is constant pressure to cut costs, reduce rebates, utilize emerging technologies, make customers happier, and of course gain more kW and kWh reduction. A great many evaluations have been conducted over the years, and there have been noble efforts to cull through those documents and find the elusive “best practices.” We decided to take a slightly different route to come up with some common wisdom for improving DSM program success. For this study, extensive interviews were conducted with managers from award-winning programs. They were asked about what works, what doesn’t, and what lessons they have learned along the way. A wide variety of program types from an array of gas and electric companies were investigated. The remainder of the paper highlights some of the key findings or lessons from this research. A “finding” was based on several managers emphasizing the importance of some attribute for DSM program success.

Use Energy Star as a Beacon

While it doesn’t fit every case, Energy Star can be quite a bright way to help design successful energy efficiency programs. In particular, it’s tough to keep up with the latest and best technologies that actually provide substantial savings, yet are sound enough to have high reliability and low failures in the field. The U.S. Environmental Protection Agency has established a widely recognized and accepted list of equipment or standards for efficiency. The very successful Energy Star™ program has not only set the bar for many technologies and end uses, but it has also established a widely recognized and accepted brand that has come to define energy efficiency in the eyes of consumers. Observes Andria Jacob, formerly a program manager at Ecos Consulting, “The national Energy Star label is not to be underestimated. . . . It’s gotten to the point where Lowe’s and Home Depot actually vie for Retail Energy Star Partner of the Year awards by promoting this label.”¹ In fact, Energy Star awareness was found to be 56 percent in the U.S. in early 2004, and 67 percent in areas where utilities or other organizations were using the Energy Star brand.²

Energy Star may be particularly useful for utilities just entering into new DSM programs or for smaller and medium sized utilities because Energy Star has done the analytical work already. But larger utilities are also finding benefits from using Energy Star. Observes Steve Bicker of NW Natural, “We started out using our own definition of energy efficiency, but when Energy Star

¹ Andria Jacob, Office of Sustainable Development, Portland, OR 503-823-7222

² Energy Star press release, “More Americans Look for Energy Star, Consumer Survey Says” (March 10, 2004), from www.energystar.gov.

started branding furnaces, it was more effective to use their established brand.” Sacramento Municipal Utility District (SMUD) requires cool-roof contractors to use Energy Star–certified products. Xcel Energy’s commercial boiler program sets its rebate qualification using Energy Star efficiency levels. Says Jacob, “We consider Energy Star the umbrella qualification for programs that are focused on home products.” It’s both politically expedient and a practical starting point.

Certainly, Energy Star has its limitations:

- If your program has a sliding scale criteria, where higher efficiency means a greater level of support, then Energy Star won’t do: Energy Star is a simple yes/no criteria, whereby a device simply does or does not qualify. Since equipment is either Energy Star qualified or not in a binary system, programs cannot use a sliding scale of rebates as equipment becomes more efficient. Many air conditioning and heat pump programs use such a sliding scale, for example.
- Energy Star may not set its criteria where you want it to be. It may be over- or under-aggressive in setting efficiency standards.
- Energy Star now covers over 40 product categories, but it doesn’t cover everything.

The Energy Star program gives DSM managers another tool to work with, one that has national status, a substantial history, and a significant amount of research strength behind it.

Program Evaluation: Too Much of a Good Thing?

Evaluation of DSM programs is necessary in order to ensure that money is being spent wisely, that impacts are being achieved, and also to provide feedback to improve program design. But it is also possible that demands of high levels of evaluation precision can hinder better program implementation, as well as drive costs higher. Leading energy-efficiency programs have found that regulators and other program reviewers view trading some customer detail for reduced administrative costs as worthwhile—once they understand the trade-off. Explains PG&E’s Terry Pang, “Everything used to be done via customer application. Fill out paperwork, give all this detail, send it in, it gets evaluated, incentives are mailed out, and then even after that you have after-the-fact assessors contacting the customer, asking questions, potentially going on-site, doing measurements, etc. When we got into the realm of CFLs, the level of incentives that we’re talking about just didn’t make sense. This (point-of-sale) program design that we’ve rolled out does make sense. The percent of administrative costs to incentives and the overall budget has worked favorably for all involved. So the measurement evaluation community in this case had to re-adapt their measurement and evaluation techniques. The selling points (to regulators) are clearly the (greater) percent of funds that go towards incentives and the lesser processing and administrative costs.” PG&E was able to reduce processing and administrative costs by about 30% through program simplification and use of a point-of-sale program design.

Often, evaluation requirements are built into DSM rules. And more complex technologies, such as HVAC systems for commercial buildings, don’t lend themselves to simple assumptions about savings. But overall, it’s worth looking for opportunities to reduce complexity and simplify evaluations: evaluative precision comes at a cost, which should be compared with its benefits. As

the industry obtains more data and confidence in savings with given technology applications, evaluation intensity may be able to drop, as well.

Demand and Get More from Trade Allies

How much are trade allies willing to provide to utilities and their customers in order to gain sales and become market leaders? You won't know until you ask. While most DSM programs use trade ally networks in implementation, some are pushing the envelope and asking the trades to pick up more of the costs and work.

Manufacturers may be willing to pitch in resources— marketing dollars, retailer lists and contacts, and so on—if it helps them meet their market share goals. Manufacturers see the money DSM dollars from the utilities as absolutely helping their cause. Many are willing to come to the table with assistance, but they need to be asked. If the combination of manufacturer assistance of any kind plus utility involvement can sweeten the deal in any way for these products to get into the retail channel, they are likely to want the new business.

In general, large retailers (such as Lowe's and Home Depot) have a lot of leverage over manufacturers, due to their market power. Manufacturers, of course, are eager to get their products on the shelves of these retailers and may be willing to cut their margins to do so.

Like manufacturers, distributors may be willing to pay for a program that benefits them. Advertising for NW Natural's high-efficiency gas program is funded largely by distributors. "Distributors provide the funding and expect us to create programs that will generate leads and sales for their brands," says Carolyn Farrar, channel manager for NW Natural. "At the end of the year, distributors want to look at their sales and be able to equate how many boxes sold based on the leads generated out of this program, and they want to have a decent ROI [return on investment] for their marketing dollar." Distributors in turn look to cover 40-50% of their program expense from their dealers.

Contractors also have an increasingly important role to play. Since most contractors are small, independent businesses, they often lack a "brand" that could help them to establish credibility and trust. As a result, contractors value and need the utility's brand or other ways to leverage the utility's strong reputation for quality and service and they want to affiliate in some way with the utility and its programs.

Leverage the Utility Brand

Right on the heels of the lesson about greater utilization comes the leveraging of the powerful utility brand in programs that use trade allies. SMUD's cool-roofs program does just that and in turn gets its contractors to do all the work (and the contractors are still happy). The program concept is fairly simple for SMUD: the contractor goes out and finds the project, markets the program, screens the potential participants, and does the paperwork. What contractors get in return is the ability to go out into the marketplace and say that they are on a list of participating firms, and that holds a lot of value in the Sacramento market.

Xcel Energy's commercial and industrial (C&I) boiler efficiency program has achieved a penetration rate of 10 percent for large C&I customers,³ with a cost of saved gas of about \$2.50/million cubic feet, less than half the cost of new supply.⁴ Bill Conrad, channel manager at Xcel, credits brand leverage for much of the program's success. One of its most important tools is allowing contractors to "leverage our brand so that the customer will say, 'I know the utility company. You're telling me they're supporting it,'" reports Conrad.⁵ The utility doesn't have to pay for this alliance, either.

The program managers we interviewed found that, overall, allowing trade allies (particularly contractors, who usually lack name recognition) to use the utility brand helped everyone. Utilities should continue to provide oversight to ensure that the media standards are being met by the trade allies. Every interaction using the utility name will affect customers' brand perceptions. This gives utilities yet another reason to maintain a positive brand position in the marketplace.

Leads are Like Honey to a Contractor

Trade allies that make their living by selling to end users run into dead ends more often than a criminal on Law & Order. A strong, interested lead is worth its weight in gold, and the utility can leverage their knowledge of customer wants and needs from various sources to reward dealers, contractors, and distributors.

NW Natural (Portland) has a creative approach to lead management for its high-efficiency natural gas furnace program. It's complex as well, but well worth understanding. Residential customers receive incentives if they purchase a qualifying new furnace from furnace dealers participating in the program. Every six months, each furnace brand is formally and explicitly evaluated and given a score. This score is based on a handful of clearly stated criteria, including:

- What percentage of the leads that dealers of that brand were given were successfully closed
- How successful the dealers were at generating and closing their own leads

Based on their performance score, distributors of that brand then get access to the utility's customers in two ways:

- They get to co-brand the utility's various contact pieces (bill inserts, mailings, and so forth). The better the brand's performance score, the more contact pieces they can buy, at a lower price.

³ Bill Conrad, Channel Manager, Xcel Energy, Minneapolis MN, 612-330-7769, william.t.conrad@xcelenergy.com.

⁴ M. Kushler, D. York, and P. Witte, "Boiler Efficiency—Xcel Energy," in "Responding to the Natural Gas Crisis: America's Best Natural Gas Energy-Efficiency Programs," ACEEE, from www.aceee.org/pubs/u035.htm.

⁵ Bill Conrad

- They get a greater fraction of the unbranded leads that come to the utility.

The utility manages the leads by collecting the customer calls and then appropriating them to dealers. If the lead came through a channel that included a specific brand, that brand's dealers would get the lead. Since these leads come from the utility, they are considered "hot". They consist of consumers who have contacted the utility with an interest in a new, high-efficiency furnace. So the dealers are grateful to the utility for providing them with these great leads and put pressure on their distributors to do whatever they can to get more such leads. Distributors, in turn, pay for the utility's marketing, which they are willing to do as it results in great leads for their dealers. Retail trade allies such as contractors typically spend 7 to 10 percent of revenue generating leads, so they are happy to pay utilities 5 to 7 percent for good leads because it saves them money.⁶

Gaz Métro also uses lead allocation as a tool to help ensure its partners meet the utility's goals. Gaz Métro's residential high-efficiency gas furnace program, launched in 2001, drove market penetration of these furnaces from close to zero, to 40 percent in existing homes and almost 100 percent in new construction, in just three years.⁷

In 2000, Gaz Métro started the *Certified Partner* program to support the gas-fired equipment installers. Any installer with proper licences can apply but must achieve an 80% or better quality rating in order to join and remain in the program; that is, 80% or more of their installations must perfectly meet the building code requirements. Any installation declared to the utility is inspected by one of its technicians. When a problem is found, the installer gets a chance to correct it. If this is not done quickly, the utility brings in another contractor to take care of it and then bills the faulty installer.

Gaz Métro's partners have found this program to be a bit of an adjustment. At first some contractors complained that the inspections were too detailed, and that they wanted to be the ones dealing with the customers. But over time they agreed that high quality is best for everyone. Doing an installation right the first time guarantees customer satisfaction and prevents the cost of returning on a job. Everybody is now satisfied all the way along the line.

Today, Gaz Métro has 270 Certified Partners involved in the residential, commercial, industrial and institutional markets and about 50 of them are specialized in the residential replacement and conversion business. Based on the quality of their work and sales performance, the best partners are allocated customer leads for a specific geographic territory. When a customer contacts the utility with an interest in natural gas equipment, a lead is electronically transmitted to the partner responsible for the territory in which the customer is located; the partner must reach the customer within 48 hours to set an appointment. The assigned partner must then present a Gaz Métro

⁶ Jerry Plymire, personal communication (January 9, 2001), Managing Director, Synergistic Systems, Santa Barbara, CA 93103, 805-963-7225, jplymire@synergisticsystems.com, as quoted in J. Egan and M. Joyce, "In Crisis Is Opportunity: Rising Utility Bills Create New Marketing Potential," E SOURCE *Report ER-01-6* (March 2001).

⁷ M. Kushler, D. York, and P. Witte, "High Efficiency Furnace Programs—Gaz Métro," in "Responding to the Natural Gas Crisis: America's Best Natural Gas Energy-Efficiency Programs," ACEEE, from www.aceee.org/pubs/u035.htm.

package to the customer. This package includes the price of the selected equipment and a standard installation price schedule, which all participating partners agree to charge customers.

Sell the Non Energy Benefits

Many of the DSM managers have discovered through the years that while larger customers talk about the “bottom line” and return on investment, they actually make decisions based upon a host of attributes including non energy benefits. One good example is SMUD’s cool roofs program. In many commercial buildings, the tenant pays the electricity bills, so one would expect little interest from building owners in making the cool-roof investment. It’s generally believed, however, that cool roofs last longer, as large temperature swings prematurely age roofs, and cool roofs see smaller such swings. The longer lifetime, not the decreased cooling costs, is the financial argument that convinces the building owner to make the investment.

A program promoting Energy Star homes in New York State found that customers attached a number of non-energy benefits to those more energy-efficient homes.⁸ Moreover the perceived value of non-energy benefits was approximately equal to the energy savings. In other words, the total value of the program, as seen by program participants, was about double the value of the energy savings alone. Another study of C&I energy-efficiency programs in Wisconsin concluded that “adoption of energy-saving measures . . . is at best a difficult task unless there are substantial non-energy benefits associated with the program or product.”⁹ That study found that businesses installing energy-efficient equipment reported the greatest value came from increasing productivity (through, for example, better temperature control), reducing injuries (through, for example, better lighting), extending equipment life, and reducing defects or errors in their work.

Different stakeholders value different non-energy benefits. The challenge for efficiency program managers is to figure out what each group values and then ensure the program promotes or provides those benefits.¹⁰

⁸ L. Fuchs, L. Skumatz, and J. Ellesen, “Non-Energy Benefits from Energy Star: Comprehensive Analysis of Appliance, Outreach, and Homes Programs,” 2004 Summer Study on Energy Efficiency in Buildings, American Council for an Energy-Efficiency Economy (ACEEE), Washington DC, tel (202) 429-8873, web www.aceee.org.

⁹ N. Hall and J. Roth, “Non-Energy Benefits from Commercial and Industrial Programs: What Are the Benefits and Why Are They Important to Participants?” 2004 Summer Study on Energy Efficiency in Buildings, [TK].

¹⁰ C. Bicknell and L. Skumatz, “Non-Energy Benefits in the Commercial Sector: Results from Hundreds of Buildings,” 2004 Summer Study on Energy Efficiency in Buildings, American Council for an Energy-Efficiency Economy (ACEEE), Washington DC, tel (202) 429-8873, web www.aceee.org.

Challenges Ahead

As with any product or service, it's easy to innovate in the early years. But DSM is a mature product at this point, and our industry must continue to work hard to find new ways of achieving results in the marketplace. Part of this continued innovation requires excellent communication among practitioners, sharing war stories and finding what succeeds and maybe even more importantly, what fails. The lessons in this paper provide a fundamental base for excellent program design, but we must continue to seek new and better methods to reach customers and reduce energy bills with new technology applications.

References

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2. Ten Key Lessons from Successful Energy-Efficiency Programs, Platts, March 2005.