

What Works in the Low-Income Sector: Survey Results of 33 Rate and DSM Programs

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Introduction

Hydro-Québec asked the authors to prepare a study on low-income energy assistance programs in the United States. In addition to describing these programs, the authors also gathered information on the designs, costs, participation levels, and other factors associated with successful program implementation.

The authors found that as federal and state governments in the United States have decreased their funding for low-income energy assistance, utilities have increased their commitment to low-income services. However, utilities are not acting by themselves in offering their services. Rather, they are teaming up with federal funding or community social service organizations to enhance energy rate assistance and conservation services. Some of the ways that outside agencies are assisting utilities include program marketing, customer eligibility verification, and program implementation. By joining forces with established community-based institutions, utilities have been able to improve the cost-effectiveness and overall success of their low-income programs.

Methodology

The authors conducted background research on the general social welfare framework in the United States, nonutility energy assistance programs, and types of utility low-income programs. The authors' sources included conference proceedings, marketing materials from various organizations, reports, and telephone conversations with representatives from agencies, consulting firms, and utilities. After conducting the research, the authors then developed two survey instruments: one focused on demand management and energy education programs and the other on rate assistance programs. The authors selected survey participants for either their similarity to Hydro-Québec's resource mix or their innovative programs and experience. The most important criterion in selecting survey participants, however, was simply the ability to attain as much information as possible about low-income programs. Thus, the survey participants are not a representative cross-section of utilities.

The telephone interviews that the authors used to conduct the survey typically lasted from 30 to 60 minutes. The authors sent the interviewee the survey instrument in advance to allow him or her to preview the questions and research some of the more complex or statistical questions. During the interview, the interviewers not only gathered descriptive and statistical information about the program in question, but they also tried to elicit anecdotal information on success factors for program design and implementation.

Demand Management Surveys

Nineteen utilities participated in the demand management surveys.

Rate Assistance Surveys

Fourteen utilities participated in the rate assistance program surveys.

Survey Results for Demand Management Programs

Program Type

Demand management programs take several different forms: weatherization programs concentrate on reducing space- and water-heating requirements through insulation, caulking, weather stripping, low-flow showerheads, and furnace tune-ups; appliance programs replace or repair inefficient refrigerators, furnaces, and water heaters; energy audits provide information on different ways to save energy, pinpointing the most cost-effective applications; energy education programs help low-income customers better manage their use of energy by increasing their understanding of how energy-efficient appliances and customer behavior can reduce utility bills.

For the utilities in the survey, the most common low-income demand management programs are energy audits and weatherization, which are offered by 100% of the utilities in the survey, energy education, offered by 79% of the utilities, and high-efficiency appliances, offered by 53%. Two of the utilities in the survey reported that they had discontinued low-income loan programs because of a lack of customer interest. The survey indicated that a utility can raise the overall cost-effectiveness of a program and enhance customer satisfaction with the utility's service by including an education component in a program and by installing basic weatherization measures at the same time that an energy audit takes place, so the contractor and home owner do not need to schedule two appointments.

Program Design and Implementation

Most utilities reported that they planned and launched their low-income DSM programs in less than a year, and only about one-third of the programs had any kind of pilot phase. About half of the programs were established more than five years ago. All but one utility used outside agencies to help administer the program. Although utilities consider outside groups to be a key attribute of their low-income programs, coordination with these outside groups was sometimes seen as a barrier to smooth program implementation. Forty-seven percent of the utilities in the survey reported that they used bill inserts to advertise their programs, 47% used direct mail, 42% used community meetings, and 32% depended on word of mouth. Utilities perceived that word of mouth was the most effective means of advertising. The most frequently mentioned barrier to program implementation was coordination with community action agencies (CAAs) and customer acceptance.

Program Eligibility

All low-income programs at the utilities that participated in the survey are available to both renters and owners, but five programs do not permit master-metered customers to participate. Most programs use a percentage of the federal poverty guideline (typically 150%) to determine eligibility. To verify eligibility, 42% of the utilities surveyed use utility staff, and 58% use community or social agencies.

Program Evaluation

The average annual participation rate for eligible customers for the low-income DSM programs in the survey was 4.3%. Six utilities expected that an average of 50% or more of eligible customers would eventually participate. Three utilities provided data showing annual savings of 1,700–2,500 kWh per year per customer.

Weatherization Features

Most of the weatherization programs in the survey offer between five and ten specific measures to low-income households, and 75% provide both material and installation at no cost. Most often the installing contractor is responsible for both purchasing and installing materials. The cost of implementing low-income programs can be substantial: seven utilities have established caps on their per customer expenditures that range from \$1,500 to \$4,000. One utility manager mentioned a change in a program's home weatherization focus. The program staff found that they could maximize program cost-effectiveness by installing as many measures as needed in a select number of homes rather than by installing just a few standard measures in as many homes as possible. Finally, another utility manager mentioned that one component of the utility's customer education program involves having the customer assist the contractor in weatherizing the customer's home.

Survey Results for Rate Assistance Programs

Program Type

Utilities offer several types of rate and payment assistance: level payment plans (sometimes referred to as "budget billing") smooth out seasonal variations in bills by averaging them over twelve months; notification assistance programs help customers by informing a "partner" about late payment or impending shut-off notices; ratepayer donations augment LIHEAP funds; payment assistance programs supply funds to customers with high arrearages or emergency needs; rate discount programs apply a fixed or variable percent reduction to a low-income customer's monthly bill; and a Percentage of Income Payment Plan (PIPP) fixes a customer's maximum monthly payment at a certain percentage of his or her income (the unpaid balances typically accrue as accounts in arrears).

Of the utilities in the survey, 77% offer discount programs, 69% offer payment assistance programs, 69% have level payment plans, and 69% provide notification assistance. Most of the discount programs offer a fixed discount, usually 15%. Forty-six percent of the utilities in the survey have inverted block rates. However, many utilities are turning away from this rate structure because it penalizes high users but does not specifically target low-income customers.

Program Design and Implementation

Most utility representatives in the survey recommended developing a pilot program to work out administrative issues. None of the utilities had taken more than a year to implement a low-income program. Almost all the utilities surveyed coordinated with a community agency for leads, verification of program eligibility, administration, or marketing assistance. The utility contacts cited bill inserts, referrals, direct mail advertisements, and public service announcements on television as the most effective marketing methods for low-income programs. The most frequently cited barriers to implementation were: poor automation or inadequate computer programming resources; targeting eligible customers in mailings and general marketing activities; the perception that a utility is promoting these programs for public relations reasons rather than to help low-income customers; employee resistance to the program; and the inability of third parties (community or public agencies) to release financial information about potentially eligible customers.

Program Evaluation

The survey results show that discount programs tend to capture a higher percentage of customers than payment assistance programs, probably because participation is easier in discount programs. Broad discount programs, although more prevalent than PIPPs, appear to be much less effective than PIPPs in helping low-income customers afford their energy bills. Also, it is not clear that any of the programs have changed customer consumption levels.

What Works: Conclusion

No single program provides an obvious solution to the problems associated with the electricity needs of low-income customers. A comprehensive approach, one that includes rate discounts, demand management, and education, provides the greatest chance of resolving low-income payment problems. Weatherization, especially when combined with a rate assistance program, can provide significant benefits to a utility, ratepayers in general, and low-income customers in particular. By lowering electricity needs, weatherization lowers bills (thus making them more affordable), reduces arrearages, and decreases the amount that ratepayers must provide to the nonpaying group. Energy education provides knowledge that can help low-income customers to balance their energy needs and expenses with their other household needs. Coordination with local social assistance agencies improves the success of low-income programs. Therefore, the authors recommend early and extensive utility involvement with these groups during the planning and implementation stages of a low-income program. Finally, simplicity is the key to success in the low-income market sector. A one-step application process for a comprehensive set of assistance programs has much by which to recommend it. If the one-step process can be linked to an outside organization that low-income customers deal with routinely, it will enhance the program's chances for success.

Endnotes

This paper is based on a report prepared by Barakat & Chamberlin for Hydro-Québec in November 1991.