

Conservation Understanding and Behavior among Low-Income Consumers: Results from the Electric Education Trust Consumer Education Project

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ABSTRACT

The California Public Utilities Commission established the Electric Education Trust (EET) Community Outreach Program to involve community-based organizations in the task of educating hard-to-reach consumers about the electric utility industry and the options available to consumers in the restructured electricity market.

The program allowed grantees to adapt their education activities to the specific language, cultural needs and learning styles of their constituents. An ongoing evaluation and feedback component helped the grantees improve their effectiveness by documenting changes in awareness, understanding, and action in both participants and non-participants in the target population.

Since the program operated through the 2000-2001 California energy crisis, its continuing evaluation provided a unique opportunity to observe and document changes in understanding of energy issues among the grantee organizations and the target population. The adaptive program design, although primarily intended for flexibility in educating different population subgroups, allowed the educational activities to be adapted to the rapidly changing energy situation. The evaluation design offered the unique opportunity to document changing perceptions, understanding, and knowledge as the energy crisis unfolded.

This paper discusses how consumer perceptions and education needs evolved as the grantees adapted their activities in response to the energy crisis. We focus on consumer interpretation and understanding of utility bills, perceptions of and myths about the energy crisis, and the impacts faced by the primarily low-income hard-to-reach community.

Introduction

The California Legislature included funding for consumer education in the legislation that authorized and provided the basic design for restructuring the electricity in California, Assembly Bill 1890. Because one major element of that design was for electricity consumers to select among different electricity service providers (ESPs), the legislature specifically recognized the need for educating consumers about the changes in the industry and for warning and protecting consumers, especially the most vulnerable consumers, about the potential fraud and consumer abuse from that might accompany the shift from single providers to new, competing ESPs (California Legislature 1996, §392 (d)). Responsibility for implementing the plan was given to the California Public Utilities Commission (CPUC).

CPUC Decision D. 97-03-069 laid out a basic design for educating consumers. First the Commission approved development of a joint, statewide customer education program

(CEP), funded by electricity consumers through the investor-owned utilities—primarily SDG&E, SCE, and PG&E. The CEP, originally funded at \$20M but eventually to expend over \$60M, embarked on a mass media campaign with the goal of creating awareness of changes coming to the electricity industry. One element of the CEP’s “Plug-in California!” effort was a Community Based Organization (CBO) education effort that focused on wide distribution of brochures and give-away items such as magnets, cups, pencils printed with slogans (“Knowledge is Power!”) and consumer hotline numbers.

The campaign was successful in achieving its goal of 60% aided awareness of electricity restructuring in California¹ (Communication Sciences Group 1998). The evaluation report claimed a very high success rate (94% aided awareness). Combined with the potential normative bias created in the interview design, some skepticism of the results’ value and the degree to which the CEP prepared consumers as the legislature had intended seems reasonable. In any case, D. 97-03-069 recognized the need for additional education efforts in forming the Electric Education Trust (EET) to follow CEP efforts in 1998.

The Electric Education Trust Administrative Committee

The California Public Utilities Commission (CPUC) established its Electric Education Trust Administrative Committee (EETAC) as an advisory group to develop and implement a consumer education program targeted at hard-to-reach customers, “customer groups and communities where direct access participation remains low or where the level of reported consumer abuses is high.” They were also directed to “pay special attention to ensuring that customers, especially those with limited English-speaking ability or other disadvantages when dealing with sophisticated marketers, receive correct, reliable and easily understood information to help them make informed choices.” (CPUC D.97-03-069. P.38).

The EET effort differed significantly from the CEP in that the goal was to achieve *understanding* rather than *awareness*. Members of the EETAC believed that understanding, not just awareness, was necessary so that people targeted by the program could protect themselves and make appropriate choices, as the legislature had intended.

Evolution of a program design. EETAC members began by holding public meetings around the State, inviting members of the public and especially CBO representatives who had previously been involved with the Plug-In California campaign. The stories that emerged through those meetings (recorded in the EETAC Minutes) revealed a series of issues. First, the CBOs were simply hired to distribute complex and confusing materials with very little or no training in the content. Second, materials, especially translations, were very slow to be delivered (some CBOs ended their programs without ever having received materials they had ordered) and attempts to communicate with Plug-in! officials were difficult and ineffective.

¹ In telephone interviews, 94% of California consumers—after being informed that the interviewer was calling on behalf of the “California Public Utilities Commission” and that they were going to be questioned about the “California electric utility industry”—responded correctly to at least one of two questions concerning the messages of the campaign: “Changes have taken place in the California electric utility industry . . . changes which have been called restructuring or deregulation. Do you believe this is true or false?” and “Even though you are currently a [INSERT NAME OF UTILITY] customer, due to competition, you now have a choice of companies from which you can select to buy electricity. Do you believe this is true or false?” (emphasis in original).

Translations, although welcome, were often simple translations from existing English materials and were not suited to the culture, education levels, or concerns of their specific client groups. For example, one Spanish-language document translated the English colloquial use of “rate freeze” literally, conveying to the readers that rates had become very, very cold. In another case, a CBO serving a Hmong community was given in-language brochures without the recognition that there were essentially no Hmong who could make use of them. The program administrators were apparently unaware that Hmong was not a written language until very recently, that older adult Hmong did not learn the written version of their language as children; or that the English-literate children and teenagers were often given responsibility for performing family tasks, such as bill-paying that required using English. The CBOs believed, and expressed deep frustration, that their clients had not been better served by the CEP. They told the EETAC that the materials had not been what their clients needed, that the administration of the program had been less than effective, and that their own knowledge and expertise had not been utilized.

Working within the constraints imposed by the CPUC, EETAC members developed an education plan that responded to CBO concerns and to a growing recognition that some of the AB 1890-engendered visions of a deregulated market, such as a vibrant ESP market for residential consumers, might not work out as planned.

The EETAC developed an education plan based on discussions held during public meetings. Although members brought their own experience and knowledge to the table, there was no formal literature review or similar research effort. The plan did include a research and evaluation component designed to develop a better understanding of targeted consumer groups, but that component was only begun after the grants had been awarded and the CBOs had already begun their education activities. The majority of EETAC members believed that their knowledge and experience with the targeted communities, electricity, and deregulation issues was sufficient to design an effective education program.

The fundamental elements of the plan were to:

- 1) Use Community Based Organizations (CBOs) already serving the hard-to-reach population as partners in educating their community on these issues.
- 2) Provide a capable and committed administrator to oversee the program and respond to the needs of the CBOs by: a) providing initial and periodic training to CBO staff both to enhance program effectiveness and to create knowledgeable resources in the community that would last beyond the end of the program funding; b) providing ongoing, positive feedback and support to the CBOs; and c) holding periodic workshops with groups of CBOs to encourage interaction, mutual support, and creative problem solving.
- 3) Focus on interactive educational activities rather than one-way message delivery or simple brochures.
- 4) Encourage grant applicants to develop creative, appropriate education activities appropriate to their specific communities.
- 5) Conduct an ongoing process evaluation with CBOs and consumers to discern what was working and what was not, to monitor consumer information needs, and to measure program effects in terms of education outcomes.

- 6) Allow CBOs to take advantage of collateral materials available from other State agencies and the utilities, and to specifically include conservation and energy efficiency as part of the curriculum.

While it may seem obvious to those involved in education and research that one-on-one and small group education activities are more effective than handing out brochures, CPUC education efforts prior to the EET had not utilized those approaches, instead focusing on maximizing the number of contacts made. Further, measurement criteria were held to simple standards, as the “aided awareness” target for the Plug-In! Campaign illustrates.

In addition to designing the plan guiding the education program, the EETAC participated in a selection process at the CPUC to find and retain contractors to implement the plan. Contractor GeM Communications Group managed the development of the Request For Grant Proposals, assisted in the CPUC/EETAC selection process, and ultimately administer the outreach program. WestEd Inc. conducted research on electricity issues to inform curriculum development, helped identify the target populations, participated in curriculum development, reviewed the implementation process and provided feedback on potential improvements to the EETAC, GeM, and the grantee organizations.

Implementation of the EET Outreach Program. The Electric Education Community Outreach Program operated through two one-year grant cycles set to begin in January 2000 and January 2001 respectively. Because of funding-related administrative hold-ups, the selection process did not begin until Fall 1999. The first cycle commenced in May 2000 with 97 community-based organizations receiving grants. The second cycle began in May 2001 with 108 CBOs involved. First-cycle participants who wanted to participate were required to reapply for second-cycle funds, allowing selection committees to replace the few poorly-performing CBOs who did reapply with different, and potentially more effective applicants as well as redistribute additional funding to the most effective grantees. Due to additional administrative delays, research and evaluation activities were not begun until September 2000. Some of the planned activities that were to have taken place before the education activities began had to be revised and conducted as part of the ongoing evaluation effort.

Research and Evaluation

Methods

Three major data collection efforts had been completed by late Spring 2002. The first was a survey with cycle-one CBO representatives. The questionnaires focused on the strategies the CBOs were using to reach their clients and the experiences they were having. The second was a series of group interviews with target population electricity consumers who had not received program outreach services. These interviews focused on the respondents’ perceptions of the electricity issues and their understanding of deregulation and conservation issues. The third was a combined mail survey/telephone interview with cycle-two CBO representatives. The two CBO-interview datasets were combined and duplicative responses from CBOs participating in both grant cycles discounted when assessing response frequencies. CBO respondents were asked to describe their clients’ understanding of

electricity issues and their education needs. In this analysis, the CBO respondents serve as both expert informants about their client populations and, because CBO employees are typically members of the communities they server, proxy respondents for target population consumers who have received a thorough education on the topics of interest.

All data collection instruments were developed to answer the following general questions:

- What did CBOs find to be particularly effective strategies for working with their targeted consumer groups?
- What did CBOs view as the highlights of their work during the 2000-01 grant cycle?
- What challenges did CBOs face during the 2000-01 grant cycle?
- How prepared did CBOs feel to work with issues relating to their grants and how did their sense of preparedness change during the grant year?
- What did CBOs view as the priorities for their work in the future?
- How did consumers from the groups targeted by the Community Outreach Program view issues related to electricity deregulation and conservation?

Consumer group interviews. WestEd's initial work plan called for learning how consumers targeted by the Electric Education Community Outreach Program viewed electric service, utility bills, and energy restructuring. The California energy crunch caused a redirection of emphasis toward energy conservation and billing.

Between February 2001 and June 2001, WestEd conducted 22 group interviews with consumers from the populations served by the Community Outreach Program. Some of the interviews were conducted in conjunction with the CBOs that received EET grants. However, most of the consumers were recruited for these interviews through other organizations to be sure they had not yet received educational services.

The interviews included consumers from language minorities (Chinese, Spanish, and Vietnamese), immigrant, and refugee populations, the elderly, low-income families, communities of color, low-income youth living independently, small businesses, rural and urban populations, the visually impaired, and communities with low literacy. In all, seventeen community non-profit organizations in both southern and northern California., most not affiliated with the EET Outreach Program, hosted the interviews

Each group interview lasted about one hour and was composed of between four and fourteen people. WestEd was able to include 214 consumers in the group interview process. Most of the participants received an honorarium of \$35 for their time. However, in a few instances where direct payment to the individuals would have been inappropriate, WestEd made an equivalent donation to the host organization.

CBO grantees. WestEd designed and distributed written surveys to all 97 cycle one grantees. Most were asked to complete and return the survey. In addition, a sub-sample of 30 grantees were provided the survey instrument, but were asked to respond during a telephone interview with WestEd and Duerr Evaluation Resources (DER) staff rather than in writing to allow the interviewers clarify some of the written responses they had already received. Of the telephone interview sub-sample, 25 interviews were completed. Five CBOs declined to participate, for a response rate of 83%. Of the 67 mail surveys sent, 41 were

returned for a 61% response rate. The overall response rate from cycle-one grantees was 66%. Because of the improved quality of responses received during the telephone surveys of cycle one participants, all 113 cycle-two grantees, including those who participated in the cycle-one interviews, were asked to respond to mailed survey instruments during telephone interviews. Of those, 83 of the cycle two grant recipients (73%) completed the interviews.

Data Analysis

All interview data were coded and analyzed following accepted procedures for analyzing qualitative data (See Bogdan and Biklen 1992, Clandinin and Connelly 2002). Data were examined to identify common themes and concerns. Additionally, the quantitative data from the CBO survey were entered into SPSS v.10.1 statistical software to prepare response frequencies. There is no clear definition for the “hard-to-reach” population. The absence of an easily definable target population presented practical difficulties for the research and evaluation as well. Taking a sample of an unknown population is the social research equivalent of dividing by zero; the answer is undefined. Instead, subjects for the consumer interviews were recruited using grantee and non-grantee CBOs serving similar consumer groups.

The questions were designed as open-ended prompts that would generate responses (in the case of questionnaires) and discussions on the general topics of interest. Because reporting numbers or counts of the respondents who mentioned particular perspectives would be falsely precise and inappropriate, only broad categories (i.e. “most”; “a small number”) are used to describe responses. The goal of the research was to identify issues and ideas that merit further exploration. Because the questions were carefully designed to avoid biasing responses, the rigor applied to this data collection effort leaned toward the validity rather than the low sampling error of the results.

Findings

The findings presented in this paper address only CBO implementation strategies and consumer knowledge and understanding of electricity issues. Other aspects of the EETAC Consumer Outreach Program are reported elsewhere (WestEd, 2001; GeM Communications, 2001). Additional reports will follow completion of the program and evaluation.

The CBOs reported that energy conservation, understanding electricity bills, and subsidy programs grew in importance to their clients as choosing an electricity provider became a moot point as the last of the ESPs abandoned the residential consumer market in California. They also corroborated a shift in the educational focus of the CBOs from electricity deregulation toward conservation, energy efficiency, and subsidy programs.

Effectiveness of CBO education/outreach strategies. CBOs were able to describe many ways that they worked effectively with consumers. Despite the fact that their target groups had similar information needs, the specific strategies that they found useful were varied. We asked cycle one grantees to tell us about what they found were effective strategies for working with their clients. The most common responses related to using the clients’ home languages instead of English, presenting information through one-on-one interactions and/or

through workshops, and media outreach. While these strategies are interrelated, they are broken down thematically in the following discussion.

Prior experience in the community. Virtually all of the funded CBOs indicated one of the keys to successful outreach was having a strong, trustworthy presence in the community before receiving the EET grants.

Use of primary languages and culturally appropriate education strategies. Many of the CBOs that worked with language-minority communities reported that one of the most effective communication strategies they found was communicating with clients using their primary language. A more subtle element of this rather obvious finding is that the *cultural* appropriateness of the communication was as, if not more, important than the language itself. Many CBOs reported explaining the translated materials using colloquial language or adapting the translations to be better understood by their clients. Others reported using cultural festivals and other public events as opportunities to make contacts. In one case, an agency serving a non-literate Hmong community developed puppet shows to stage at community events. They explained that puppet shows have been the medium through which Hmong have communicated with each other for generations.

One-on-one interactions. Many agencies found that one-on-one interactions were the most helpful way of communicating with clients about electricity issues for several reasons. Agency workers found that talking to residents at their home allowed them to relate to energy use issues. For example, a Southern California agency reported that, “Since we canvas door-to-door in a neighborhood approach, and are in their home, we evaluate individual behaviors and make recommendations for positive change.”

Ten CBOs reported that door-to-door encounters allowed their staff members to ask clients more detailed questions about their specific situations. As one CBO representative said, “Door-to-door canvassing was the most successful way to educate residents. It gave the freedom to ask questions without [residents] feeling threatened and we took the time to answer questions as thoroughly as possible.”

Other CBO staff felt that one-on-one interactions at the agency facility allowed them to explain complicated issues about deregulation or help their clients (seniors) fill out application forms for discounted rates and weatherization programs. A respondent from one agency stated, “Talking one-to-one and explaining with illustration and reaching them with their own culture has been very significant.” Another commented, “It is difficult for clients to access information, and it’s a challenge getting them to one site because transportation is always a major challenge.”

Finally, several CBOs found helping clients one-on-one was most effective with difficult topics, such as understanding energy bills. One agency had clients bring in their bills to compare their usage “before” and “after” conservation efforts. They reported that their “clients learned from experience about the benefits of conserving energy.” Another respondent reported that talking one-on-one about energy bills was “successful because most [clients] have never talked about [their bills] or take[n] time to read [them]; they just pay [them].” Another respondent observed, “By offering a service (e.g. explaining their bills) we could better understand the problems our clients were having.”

Workshops. While many agencies reported that one-on-one sessions were most helpful, others said a combination of both one-on-one and small group workshops was most effective in reaching their consumer groups. One representative CBO response was: “Workshops were effective because of two-way communication—we provided information and got information from clients about ongoing and changing needs, as well as learn[ed] about scams and abuses that were occurring.” The presentations gave basic information and were also a forum for seniors to ask questions. One-on-one was effective for people who don’t want to bring up issues in a group but workshops are better for serving more individuals.”

Several agencies reported that clients responded better to knowledgeable staff with the most up-to-date information, enhancing their agency’s credibility. A Northern California agency that incorporated current information from news reports into their presentations, summarized it best: “People like to be able to have their questions answered onsite and to feel they are getting the most current information in an easily understandable way.”

A few of the agencies reported successfully using a variety of educational materials and formats during workshops. These included using brief and simple fliers, videos, PowerPoint presentations, and pictures to help clients visualize and remember information. CBOs also found a series of educational materials produced by GeM Communications, using feedback from CBO representatives, easy to read and understand. Several agencies used demonstrations such as changing light fixtures or demonstrating compact fluorescent bulbs when explaining about ways to conserve.

Consumer Information Needs: Group Interview Results

In general, the consumers who participated in group interviews expressed strong interest in electricity-related issues. The large amount of publicity that electricity issues attracted during the twelve months prior to the group interviews had apparently affected their level of awareness. In general, consumers demonstrated some knowledge of the electricity crisis when they discussed electricity deregulation. They expressed strong interest in cost and reliability issues, frequently using examples from their own recent experiences. Most of them reported having already responded to increasing electricity costs by cutting back on their electricity consumption, often to the point that they were not sure that they could reduce consumption any further. Most respondents expressed concerns about not being able to afford higher bills and remained open to suggestions about ways to lower them further.

General interest in electricity issues. The group interviews began by asking consumers to talk about what they had thought or felt about electricity during the past year, a general question designed to raise the topic without introducing bias and to help the interviewer develop prompting questions to use later in the discussion. Respondents typically began talking about a rich mix of issues indicating that electricity was an important concern due both to recent media publicity and their own experiences with higher electricity bills. While many issues were raised over the course of 22 group interview sessions, the major recurring issues included: suspicions of utility actions, concern about the government’s ability to protect consumers and foresee supply shortages, and conserving electricity. Only a few respondents indicated that they had given only limited thought to electricity issues, explaining that they “just pay” their electricity bills.

Electricity conservation. Most of the group participants were already making attempts to use less energy. They reported hoping that conserving could reduce their electricity bills. Most individuals also felt it was their responsibility to do their “fair share” during the electricity crisis. They described a number of different strategies they were using to reduce their electricity use, including shutting off unneeded appliances and lights and turning down thermostats. Because these interviews were conducted during the colder months and during a period of very high natural gas prices, heating came up as an energy issue more often than did air conditioning. While it is possible some of these respondents were dependent on electric heat, especially portable resistance heaters, these discussions indicated some confusion over heat sources and energy costs. The electric fans driving most gas furnaces and wall units can be mistaken for electric heating; the distinction between electric and gas energy appeared lost by some respondents, especially those who receive combined energy bills. Some respondents with families reported that they were encouraging their children to watch only one television, and turn off unneeded lights and unused appliances.

Most of those interviewed expressed frustration that they could not conserve more than they already had. As one participant, whose response suggests he uses portable electric resistance heaters, said:

“In the past, I have done all that I could. In the future I don’t know that there is anything I can cut. One thing, in the winter I need to turn the heat on because we have a senior and a youth, and no matter what, I cannot turn off my heat because I have my old father, who is 90, and a 16-month-old. Because my family is very crowded and some people have to live in the basement and it is very cold down there. If I want to reduce my heat to reduce my electricity, I can’t.”

Further, many participants felt they were prevented from conserving more because of the cost of some conservation measures. Energy efficient appliances were often mentioned as too expensive. Even low-energy light bulbs were out of reach of many low-income participants. Although rebates were available at the time, many respondents were not familiar with them or felt that the rebates didn’t make new appliances or \$10 light bulbs any more affordable than they were before.

Virtually all of the interviewees indicated a need for more information on how to conserve energy. A number of people felt that if they were given information on no-cost and low-cost energy-saving steps, they could and would take advantage of them. They did, however, feel they were at a point where it would be difficult to conserve more.

Many participants followed what they perceived as commonly known energy-savings ideas such as not using hair dryers, irons, microwaves or other small appliances, and vacuuming refrigerator coils to reduce their consumption of electricity. Because the actual amount of electricity all of these strategies save is minimal, these responses suggest that the quality of conservation information needs to be improved. Old dictums that have since been disproven (such as the value of refrigerator coil cleaning) need to be corrected in updated literature. In addition, peak-load (kW) demand reduction strategies need to be distinguished from conservation (kWh) savings.

Some participants expressed frustration that not everyone in their communities was pulling their own weight during the electricity crisis. Businesses, shopping malls, amusement

parks, even municipalities were listed among those groups and organizations that appeared to use as much energy as they wished. Participants pointed out that some buildings remained lit even when offices and buildings are closed. Those who voiced this concern felt that conservation was falling disproportionately on the poor and disadvantaged. This perception was compounded when many low-income workers lost wages because they were sent home from work because of rolling blackouts. While such concerns are valid, especially during a period when wholesale electricity markets saw extremely high prices in off-peak hours, these complaints reveal an inaccurate understanding of electricity demand, load shapes, and other more complex details of electricity demand/supply imbalances.

Some respondents who were also small business owners reported having attempted to conserve, but believed their efforts had not accomplished much. They found that the potential blackouts reduced their income while increasing overhead. One respondent had considered closing his office, laying off employees, and working from his home. Others were considering moving their business to smaller spaces that would reduce their overhead.

Electricity billing and metering. Virtually all participants in the group interviews reported that they had difficulty either paying their electricity bills or understanding them. Most participants were frustrated that their bills increased despite their conservation attempts.

Most respondents, including both native and non-native English speakers, reported having difficulty understand their bills. They considered the bills so complicated that they couldn't figure out how much electricity they had used. Many admitted not having paid attention to their bills until the electricity situation became a crisis. "I simply looked at the amount due and paid that," many said. As costs increased, however, many tried to figure out how much they used but couldn't. This was an even greater problem among groups with low literacy rates, immigrants, migrant workers and refugees who did not speak English. A number of group participants stated that they did not understand electricity meters and how they worked. They did not understand how electricity is measured and, as a consequence, how they were being charged. Possibly because of these difficulties, many were also concerned about being over-charged. The highly technical language of the bills and the lack of translations made understanding energy usage and conservation nearly impossible.

A number of participants, both English- and non-English speaking, reported instances where electricity providers failed to respond to questions when they phoned for clarification or help. Several participants also reported being put in perpetual telephone loops, transferred from one person to another, until they simply gave up trying to get answers to their questions. Many felt that such treatment was intentional—an attempt to drive them away. Others also reported that they found some energy providers misreading their meters with subsequent incorrect billing, causing their low-income families financial hardships.

A number of participants registered concern for the elderly and those in need of medical equipment powered by electricity. They were concerned that adequate steps be taken to ensure the health and safety of these populations.

Few participants volunteered that they were the recipients of low-income subsidy programs. It is possible that many of these respondents were in fact participants in these programs but were unwilling to share that information in the context of the group interview. One participant who originally reported a desire to apply for a subsidy program and went on to say, "We're also a low-income family and they pay my husband cash. I've applied to a lot of organizations but they don't accept me because they need a paycheck stub from my

husband's work. Not everyone gets a paycheck stub. It's hard for me to apply for programs." CBOs reported very high levels of interest in signing up for rate discounts, weatherization programs, bill assistance, refrigerator replacement, window unit a/c replacement, free Compact Fluorescent Bulbs and other programs that were available during the this period. The high rates of interest and low self-reports of program participation suggest that many of these programs are not adequately reaching their intended target populations.

Discussion

The story about deregulating California's electricity market has taken many twists and turns since the cycle one CBOs received their EET grants. The many changes that occurred, including across the board rate increases as well as threats of rolling blackouts, affected the State's electricity consumers and the EETAC Outreach Program.

The strategy of using CBOs to educate hard-to-reach consumers rests on the assumption that members of specific target groups are often not easily served by educational efforts directed at the general population through the mass media. It also assumes CBOs are trusted in their communities, have a proven track record of service, and understand the needs of their communities. The overall expectation is that the CBO's unique place in the community allows their education efforts to be much more effective than education campaigns designed for the general public.

The data collected so far indicate that most of the CBO grantees in this program did know their communities well and developed effective strategies for education their clients. CBOs found that working with consumers one-on-one and in small groups enhanced their ability to help their clients with specific problems. With the flexibility to develop specific techniques, CBOs noted that as the electricity crisis unfolded, their responsiveness to the needs of their clients allowed them to refocus the subject matter of their education efforts from deregulation to conservation and facilitating their clients' access to available programs.

Electricity consumers interviewed as part of this program reported having actively taken steps to conserve electricity with many feeling that it was their duty to do so. Many consumers, however, felt very limited in the conservation steps that they could take since their incomes were limited and they could not afford to purchase energy-saving light bulbs or energy-efficient appliances. We found that consumers would like some very clear information about conservation and no- or low-cost ways to save on their electricity bills.

Consumers found electricity bills to be complicated and of little use in understanding electricity consumption. There were many participants in our group interviews who did not understand how to measure the relative energy use of different devices. Consumers also did not understand how to read their electricity meters. While CBOs are working with their clients to help them understand their electricity bills and consumption, our findings suggest that electricity consumers would greatly welcome bills that are simple, easy to understand, and in appropriate languages. The challenge of producing such a bill involves more simplified rate designs as well as more reader-friendly formats.

While it seems rather obvious that more intensive communication efforts by people with strong ties to their clients would be more effective than brochure distribution, the CPUC was initially reluctant to fund this type of effort. The evaluation effort described here was designed to identify consumer perceptions and issues in a way that has not previously been

attempted, to provide feedback to the CBOs about their clients' needs and their effectiveness in educating them, and to document the effectiveness of the program for the funding agency. At this middle stage of the program, the evaluation suggests the underlying program design is sound. The next stage of evaluation, currently underway, will document the process of adapting educational materials to reflect the understanding of consumer needs developed in this phase of the study and well as measure CBO outcomes for the CBO client population.

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