

Wisconsin Power and Light Company's Community Based Project: An Opportunity for a New Approach to Demand-Side Management

Jack Hanks, Wisconsin Power and Light Company
Paul I. Berkowitz, Wisconsin Energy Conservation Corporation

Introduction

The Wisconsin Power and Light Company's (WP&L) community-based project, developed in conjunction with Wisconsin Energy Conservation Corporation (WECC), is a unique, three-year, demand-side management program. By using non-price factors, the program aims to increase energy-efficiency measures in all customer sectors while reducing the cost of conservation programs to utilities. The estimated project budget is \$1.5 million.

WP&L and WECC will implement a community-based approach in two adjoining communities with a population of approximately 8,000. The project will demonstrate that a community-based, demand-side program, which is planned and delivered with substantial community involvement, will produce more long-term conservation at a lower cost than existing utility demand-side programs. By using new and creative marketing and motivational techniques, this project will: (1) increase the community's awareness of energy conservation benefits; (2) increase the rate by which energy-efficient technologies and practices are adopted; and (3) influence the behavior of customer sectors to transform the energy conservation market beyond the project timeline.

The Public Service Commission of Wisconsin, Wisconsin Class A electric utilities, and consumer groups developed this community-based effort to determine the market or achievable potential of demand-side management through innovative program designs.

Selection of a Community

Presentations were made to four, interested communities after contacting governmental and community leaders of each city or town. Each community was asked to submit an application for participation, responding to a list of questions based on the following attributes: diversity of trade ally infrastructure; retail distribution system; WP&L supplied fuels (preferably both electric and gas); fuel switching potential (to WP&L gas); ability to meter impacts at the substation; presence of local media (newspaper); demonstration of community spirit and goals; civic group availability; and environmental awareness.

Attributes were assigned points and each application was ranked by a point score.

Three of the four communities submitted an application for the project. The adjoining communities of Mayville and Horicon received the highest point score and were selected for the project.

Description of Interaction With the Selected Community

The following methods will be used to succinctly ascertain community needs: (1) customer surveys, (2) trade ally stocking and product availability survey, (3) customer/trade ally focus groups, (4) community/group meetings, and (5) a review of energy and end-use applications by sector (e.g., end-use saturation data).

Besides collecting baseline information on community consumption, end-use saturation data, and community attitudes toward energy conservation, committees of community residents were formed to assist in directing the project. A group of residents from both communities comprise a project advisory committee. The subcommittees formed include residential, retail/commercial, industrial, institutional, and media. The committees will: (1) serve as a "sounding board" for program design; (2) suggest marketing directions; (3) aid in gaining community support for the program; and (4) assist in defining the community goal and award structure for the project. Community involvement at project inception should provide for the identification and incorporation of specific community needs into program development.

Project Elements

Since the primary goal of the project is to create new motivational and marketing methods which will produce a higher penetration rate of energy conservation measures than do existing programs, substantial community involvement is essential. Therefore, project elements must flexible to allow for community input during all phases of the project.

The community-based project is based on five elements: (1) creatively incorporate non-price factors to increase conservation; (2) select community residences and businesses for area demonstrations to showcase efficient technologies and potential energy savings; (3) increase promotional and educational methods to induce individuals to make energy conservation decisions and act on them; (4) constantly evaluate and develop the program throughout the project's duration; and (5) transform the energy conservation marketplace to ensure the persistence of the program's conservation goals beyond the project's completion.

Non-price factors, such as environmental themes, community incentives in lieu of individual incentives, and the ease of purchase and payment for conservation equipment and products, will play a predominant role in the project. The primary marketing/motivational strategies will stress that customers can easily reduce their energy bills while helping their community and the environment. Project incentives will be community financial or non-financial awards based on the amount of energy saved by the community (e.g., WP&L purchases high-efficiency lighting for a new soccer field or assists in developing a nature trail for the community).

The project also will help the individual customer make energy conservation decisions easier and less expensive to implement. The customer could use the Energy Saver's Card™ to pay for energy-efficient equipment/products on their monthly utility bill. This card, which will be sent to all residences in Mayville and Horicon, is similar to a credit card and will be accepted by local contractors and retailers. The bill from Energy Saver's Card™ purchases is paid for from the savings produced by lower energy usage.

Area demonstrations will occur during the project and will target a mix of buildings in the residential and commercial sectors. The intent is to show the range of energy-efficient technologies available in the marketplace and their adaptability to different building stock. Emerging technologies also will be used in the demonstrations after their viability and applicability are researched. Demonstration sites will be selected by lottery to allow all community residents and businesses an equal opportunity to participate.

The development and implementation of creative promotional and educational methods will make it easier for an individual to make and act on conservation decisions. Promotions will not emphasize utility benefits; the primary benefits will be better service and lower costs to customers. Promotional methods will provide useful information on how to conserve and non-price reasons to conserve in order to solicit a response from customers (e.g., how

conservation can contribute to the economic health of the community, environmental benefits of conservation, attainment of the community project goals, etc.). WP&L and WECC will incorporate interactive communication and educational approaches within the project that will assist individuals, organizations within the community, and the community as a whole to achieve their desired goals.

Education will be both specific and general, such as delivering in-home education to homeowners, providing operations and maintenance education to trade allies and businesses, or community meetings to provide project updates and information. The project will assist community schools in the development of energy curriculum for all grades, which will include providing resources for events such as an Energy Fair. Trade allies also will be trained on the installation and maintenance of energy-efficient equipment.

Special events and promotions will be developed and initiated on a quarterly basis to maintain interest and participation throughout the three-year duration of the project. This element may include the introduction of emerging technologies and/or alternate cooling strategies in the residential sector. Programs will be designed for all customer sectors, and delivery will occur sequentially: Residential programs will be implemented first (June 1992), followed by the small commercial/industrial sector (October 1992), and the large commercial/industrial sector (January 1993).

Successful market transformation will ensure that conservation savings will persist beyond the duration of the project. Trade ally and retail incentives will impact the stocking and displaying of high-efficient equipment and conservation products. Also, ERAD™--Environmentally Responsible Appliance Dealer--certification will be given to retailers who sell only high-efficient equipment and dispose of existing appliances in an environmentally-responsible manner.

Evaluation

Impact and process evaluations will be undertaken by a consortium of consulting firms retained by the Wisconsin utilities. These firms will evaluate the market or achievable potential of the different demand-side program approaches being designed and implemented throughout the State. Community baseline data is being collected before implementation of the community-based effort in Horicon and Mayville. A control community will be identified and database requirements defined to allow for a thorough evaluation of the project.

Conclusion

The key to a successful demonstration will be to identify and effectively use all the "community interests" that may persuade customers to increase their conservation actions. There will be many different "community interests" ranging from the broad desire to help the global environment to wanting one's community recognized as a leader in energy conservation; or, a more narrow interest such as to benefit a particular group such as Boy or Girl Scouts,

church, or fraternal organizations, etc. In addition, coordination with other types of community efforts, such as housing renovation projects, also will be pursued. The goal will be to use these non-price interests to expand the penetration of energy conservation in the communities. The measures of success will be the transformation of the marketplace and the creation of a conservation ethic that diminishes the need for utility intervention to induce the acceptance of energy-efficient technologies and practices.