

# **Best Practices in Community Energy-Efficiency and Renewable Energy Partnership Programs**

*Christopher Dyson and Jennifer E. Canseco, KEMA Inc.  
Julie Blackwell, Alliant Energy-Interstate Power & Light Company*

## **ABSTRACT**

This paper presents the results of a 2007 best practices study of community energy-efficiency and renewable energy partnership programs. These programs typically involve engagements between utilities and local governments to encourage community-wide energy efficiency, resource conservation, and/or development of community-based energy projects. These programs provide a range of services including funding, demonstration grants, training, technical support, outreach support, mentorship, and education. The paper provides profiles of seven active and inactive programs in Iowa, Massachusetts, New York, Washington, and Wisconsin based on program literature and in-depth interviews with program administrators and implementers.

Results of this research suggest that several elements may be critical to a program's success in a given community, including active involvement of community decision-makers, identification of an existing community group to maintain program momentum, and identification of a key official to champion the program in local government. This paper includes details on these and other keys to success for these types of programs. It also suggests ways that program administrators can set and maintain realistic expectations within a community regarding a program's focus and reach. These valuable considerations should help program planners and implementers to craft and operate successful community partnership programs focused on energy efficiency and renewable energy.

## **Introduction**

During the summer of 2007, Alliant Energy-IPL commissioned an evaluation of its E-Community Program. The E-Community Program was a pilot project that worked with three communities in the Alliant Energy-IPL service territory (in Iowa) to promote energy efficiency on a communitywide basis. The program design was based on the U.S. Department of Energy's "Rebuild America" program's efforts in Iowa. One part of the evaluation looked for "best practices" as well as "lessons learned" in current and inactive community partnership-type programs. In-depth telephone interviews with energy-efficiency program managers and implementers gathered information on the challenges faced by each program and the recommended strategies for addressing these challenges. Although conducted for Alliant Energy-IPL, the research provides useful guidance to other energy-efficiency program planners and implementers.

The paper begins with a brief discussion of research methods and descriptions of the E-Community Program as well as the six community-based programs we chose to study. It then discusses key challenges encountered by each program. Finally the paper outlines some best practices that program representatives recommended for overcoming these challenges.

## Overview of Methods

The ultimate objective of the evaluation was to gather ideas on ways to improve the Alliant Energy-IPL E-Community Program. Therefore the first step was to become more familiar with this program through an in-depth interview with program staff. The interview covered program design and management and any challenges to program implementation.

Once the Alliant Energy-IPL program was better understood, the evaluators then searched for community energy efficiency and renewable energy partnership programs that might offer useful lessons. In researching candidate programs, we kept two rules in mind that we have learned from conducting a number of these “external best practices” studies in the past. First while one can certainly learn valuable things from exemplary and successful programs, one can also learn useful lessons from programs that have been discontinued or have had less success. Second while most of the programs one selects should be similar to the program one wants to improve, it is always useful to add one or two programs that are very different to avoid constrained thinking about program design or implementation solutions.

Our methods for finding all these types of program included review of program evaluation literature, Internet research, and numerous phone calls – especially to track down managers of community-based programs that had been discontinued. Based on this research, the six programs ultimately included in the study are as follows:

1. Rebuild Iowa (implemented through the United States Department of Energy’s Rebuild America Program by the Iowa Department of Natural Resources);
2. Rural Communities Program<sup>1</sup> (Wisconsin Focus on Energy);
3. New York Energy \$mart<sup>SM</sup> Communities Program (New York State Energy Research and Development Authority);
4. Community Energy Opportunities Pilot Program (Massachusetts Technology Collaborative);
5. “Leading by Example” Pilot Initiative<sup>2</sup> (Wisconsin Public Power, Inc.); and
6. Resource Conservation Management Program (Puget Sound Energy, Washington).

This paper focuses on the results of a total of 10 interviews with current or former managers of these programs. While these individuals by no means represent the full range of community partnership programs, their first-hand experiences with these types of programs qualifies them to offer valuable guidance to other program designers or implementers.

## Program Descriptions

This section provides profiles of seven community energy efficiency and renewable energy partnership programs (including the E-Community Program). Partnership programs are defined as those in which, “an outside organization such as a utility ... initiates the process but it joins in partnership with the local community to develop conservation objectives and design programs. Partnership programs involve negotiations between the outside organization and the community” (Berkowitz *et al.*, 1994). Table 1 below summarizes the programs included in the

---

<sup>1</sup> This program is no longer active in Wisconsin; it was subsumed within another program due to budget cuts in late 2004/early 2005.

<sup>2</sup> This program is still in the design stage and will be implemented in early 2008.

study, including their administrators, program periods, goals, and services. Each of the programs involves a program administrator (such as a utility) working with community members.

### **E-Community Program**

The E-Community Program was a pilot program operated by Alliant Energy-IPL from approximately 2004 through 2007. The program was based on the U.S. Department of Energy's "Rebuild America" program, specifically the program's efforts as "Rebuild Iowa." Through the E-Community Program, Alliant Energy-IPL provided funding in three Iowa communities for a Community Coordinator to assist each community in drafting an Action Plan and to help the community reach the specific energy efficiency goals established in the Action Plan. The community earned financial award dollars from Alliant Energy-IPL for achieving each goal. These awards were then given to beneficiary organizations within the communities and served as a source of inspiration and motivation to encourage program participation within the community. The program provided a number of other services to participating communities including technical and marketing support, training, and other educational opportunities. The program also served as a way to inform community members about Alliant Energy-IPL's demand-side management program offerings.

### **Rebuild Iowa**

Rebuild Iowa is part of the U.S. Department of Energy's Rebuild America program. Rebuild America is a network of community partnerships across the nation designed to help communities identify, implement, and finance cost-effective energy efficiency improvements and renewable energy projects. Rebuild Iowa is administered by the Iowa Department of Natural Resources (DNR), which provides funding and other assistance to Iowa communities to help them implement comprehensive, community-wide initiatives. Rebuild Iowa initiatives were intended to help communities realize the economic and environmental benefits of energy efficiency. The program experienced major budgetary cuts and has been ramping down over the past several years, with many program activities seriously diminished by 2006.

### **Rural Communities Program**

The Rural Communities Program is an inactive program that was administered by Wisconsin Focus on Energy (Focus) until late 2004/early 2005. Focus is a public-private partnership offering energy information and services to Wisconsin residents through program delivery contractors administered by the Wisconsin Department of Administration's Division of Energy. The Rural Communities program was designed to assist local communities with hiring a community coordinator (funded entirely or in part by Focus) to support Focus in marketing its suite of energy efficiency programs in rural communities. While active, the program provided a number of services to participating communities including financial assistance, demonstration grants, technical support, training, outreach, and education.

## **New York Energy Smart<sup>SM</sup> Communities Program**

The Energy Smart Communities (ESC) Program is an active program administered by the New York State Energy Research and Development Authority (NYSERDA) and implemented by multiple program partners throughout the state of New York. NYSERDA is a public benefit corporation designed to support energy efficiency, environmental protection, and economic development initiatives in the state, primarily through the multifaceted New York Energy Smart<sup>SM</sup> program. The ESC Program is one component of the statewide New York Energy Smart<sup>SM</sup> initiative and engages implementation contractors to serve as Regional Coordinators throughout the state. The Coordinators promote New York Energy Smart<sup>SM</sup> programs, recruit program partners (such as builders, contractors, retailers, and engineers), refer projects to other energy-efficiency programs, coordinate local resources for energy efficiency projects, and coordinate educational opportunities relevant to their regions.

## **Community Energy Opportunities Pilot Program**

The Community Energy Opportunities Pilot Program is an active program administered by the Massachusetts Technology Collaborative (MTC) as part of the Renewable Energy Trust. MTC is the state renewable energy development agency for Massachusetts. The Community Energy Opportunities Pilot Program is the “information-gathering” stage of a forthcoming program that will assist Massachusetts municipalities in identifying measures to increase energy efficiency and renewable energy applications while reducing air pollution and saving money. The Pilot program assists communities in identifying effective measures through informational web presentations targeted specifically to municipal representatives and through free consulting services to address specific energy questions regarding renewable energy, energy efficiency, green buildings, and other topics. MTC is in the process of crafting a formal program to replace the Pilot based on the needs expressed by the communities currently participating in the pilot.

## **“Leading by Example” Pilot Initiative**

The “Leading by Example” Pilot Initiative is another pilot program currently in the final phases of the design stage at Wisconsin Public Power, Inc. (WPPI). WPPI is a member-owned wholesale power company that provides electricity and related services to Wisconsin municipal utilities. The “Leading by Example” Initiative is a multi-year community energy-efficiency project that will provide partial funding for a community coordinator position within each community to help them coordinate local resources to undertake energy efficiency upgrades. The program will encourage communities to work with both residential and non-residential sectors and provide mentorship, facilitation, and support to help the communities achieve their goals.

## **Resource Conservation Management Program<sup>3</sup>**

The Resource Conservation Management (RCM) Program is an active program administered by Puget Sound Energy (PSE) in their service territory in the state of Washington. PSE is Washington's largest electric and gas utility. PSE's RCM program is open to public—

---

<sup>3</sup> While this program is open to participation from not only to communities but also other nonresidential customers, this memorandum focuses on the program as it relates to communities (community participants).

sector government agencies, school districts, and other nonresidential customers with a primary focus on larger customers with multiple facilities. Through the program, PSE provides partial funding for a Resource Conservation Manager to be hired by each participant to help them reduce the costs of electricity, natural gas, water, solid waste disposal, and recycling. If a participating customer's total resource bill savings achieved by RCM activities do not exceed the salary of the Resource Conservation Manager, PSE will pay the difference up to the value of the natural gas and electrical savings achieved by the RCM. PSE also provides participating customers with assistance in selecting, purchasing, setting up, and paying for resource accounting software; assistance in developing a Resource Management plan for their facility or facilities; and electronic copies of their PSE energy bills.

**Table 1. Program Summaries**

Program	Administrator	Program Period	Goals	Services
E-Community Program*	Alliant Energy-Interstate Power & Light (IP&L)	2004 – 2007 (approx.)	Encourages communities to promote energy efficiency, environmental responsibility, renewable energy optimization and responsible growth on a community-wide basis.	Provides funding for Community Coordinators, financial incentives for meeting goals set in community's Action Plan, technical support, marketing support, training, education.
Rebuild Iowa*	Rebuild America/Iowa Department of Natural Resources	1996 -- 2006 (approx.)	Reduce community energy use so communities can save money, improve productivity, stimulate the local economy, and reduce pollution.	Provides funding for Community Coordinators, conference fee subsidies, other financial assistance, periodic meetings with representatives of other participating communities, training, technical support, outreach, education.
Community Energy Opportunities Pilot Program	Massachusetts Technology Collaborative (MTC)	Active since early 2007	Pilot program will serve as the scoping phase to determine the services most needed by communities; a community partnership program will be designed to address those needs.	Provides education and consulting services to address specific energy questions on topics including energy efficiency, renewable energy, and green buildings.
Rural Communities Program	Wisconsin Focus on Energy	2002 – 2005†	Change energy consumption behavior and attitudes in rural communities throughout Wisconsin.	Provides financial assistance, demonstration grants, technical support, training, outreach, education.
New York Energy Smart <sup>SM</sup> Communities Program*	New York State Energy Research and Development Authority (NYSERDA)	Active	Increase energy efficiency in neighborhoods across New York state.	Provides funding for Regional Coordinators who educate communities about energy-related opportunities, establish/manage partnerships with communities, and match energy-related projects with available resources (e.g., from NYSERDA and the U.S. Department of Energy).
“Leading by Example” Pilot Initiative‡	Wisconsin Public Power, Inc. (WPPI)	Scheduled to begin late 2007	Achieve a 10% reduction in energy consumed by the community by 2010.‡	Provides funding for Community Coordinators, other financial assistance, training, technical support, marketing support, mentorship, education.
Resource Conservation Management Program	Puget Sound Energy (PSE; Washington)	Active since 2002	Reduce facilities' usage and costs for electricity, natural gas, water, sewer, and solid waste.	Provides funding for 25 percent of the first year salary for Resource Conservation Managers as well as guidance/assistance in hiring and training, electronic downloads of PSE bills, access to interval metering data, educational materials, technical assistance. Participants may include government agencies, school districts, other non-residential customers.

\* Based on Rebuild America. Note that Rebuild Iowa currently exists in a different form; for more information, visit

[http://www.eere.energy.gov/buildings/program\\_areas/rebuild.html](http://www.eere.energy.gov/buildings/program_areas/rebuild.html)

† The Rural Communities Program was scaled back considerably in 2004 as a result of budget cuts.

‡ Program name and goals are tentative and subject to change; initiative had not yet been launched at time of interview.

## **Challenges**

Community energy-efficiency and renewable energy partnership programs typically involve engagements between utilities and community entities to encourage community-wide energy efficiency, resource conservation, and/or development of community-based energy projects. “Participants” in the program are generally responsible for implementing the program and may include local governments, community groups, and other entities. Because many of these players are not involved in the delivery of typical demand-side management programs, programs of this nature present unique challenges to administrators. Administrators of the seven programs profiled above cited several broad challenges faced by their programs. These challenges are described in greater detail below.

### **Identifying Program Participants**

Program budgets are generally fixed and thus cannot support a limitless number of participating communities. During the program design stage, program administrators face the challenge of deciding whether to allow communities to self-select into the program or to actively recruit communities. Allowing self-selection gives equal opportunity to all communities, but the program may waste resources on communities that are interested but unable to ultimately commit. Recruitment enables administrators to choose the communities they feel will most benefit from the program, or which will likely achieve the greatest success, but excludes all other communities.

### **Lack of Understanding Regarding the Value of Energy Efficiency or Renewable Energy**

Program representatives encountered difficulty in combating the perception among community members that energy efficiency and/or renewable energy are not relevant concerns for the community and/or do not make economic sense.

### **Confusion Regarding Roles of Key Players in the Program**

Program representatives reported challenges in defining the roles of program administrators and participants and keeping these roles distinct. One indicated that it was difficult to prevent the program managers or administrators from becoming the program implementers, because “[t]here is a fine line between supporting [the communities’] actions and doing things for them.” Another cautioned that many of the community members tasked with implementing the program may not have any experience running programs, so they may expect program administrators to take on more of those responsibilities than the administrators anticipate.

## Generating and Sustaining Motivation Within the Community

Some of the community partnership programs had a distinct funding period. For example, Rebuild Iowa provided funding for Community Coordinator positions within the communities with the goal of creating self-sustaining programs that would continue after the funding period had ended. Several program representatives indicated that they had difficulty sustaining motivation within their communities, particularly after the funded period of their programs ended. One of these contacts reported that energy savings were fairly easy to achieve during the program's first couple of years, but motivation in the community flagged after the "low-hanging fruit" among energy-efficiency measures had been implemented – arguably the time when the program's initiative was needed most.

## Unrealistic Expectations Among Some Participants/Stakeholders

Some of the program representatives said that one of the greatest challenges faced by their program was guarding against unrealistic expectations and "boutique projects." In the words of one administrator, "[p]eople tend to get excited about big ideas, but big ideas are not necessarily good ideas. They want to go straight for big solar installations without addressing the lower-cost, less-glamorous upgrades first, like lighting measures." The program representatives said that program administrators need to handle these situations delicately, as these ideas may be the pet projects of individuals whose support is crucial to the program's success.

## Best Practices

Many of the challenges described above can be mitigated during the program planning and implementation stages. Table 2 below links these challenges to solutions proposed by program administrators. These best practices are described in further detail below.

**Table 2. Community Energy Efficiency and Renewable Energy Partnership Programs – Challenges and Solutions**

Challenge	Solution							
	Participant self-selection	Appropriate application process	Relevant messages	Frequent communication	Educational component	Partner with community groups	Involve local officials	Offer technical expertise
Identifying participants	✓	✓						
Convincing community of value		✓	✓		✓			
Addressing confusion regarding roles		✓		✓				✓
Generating and sustaining motivation			✓		✓	✓	✓	
Guarding against unrealistic expectations		✓		✓				

## Identifying Participants

**Participant self-selection.** The majority of the program representatives included in the study indicated a strong preference for allowing participating communities to self-select rather than a



scenario in which communities must be invited to participate. In the words of one program representative, “Being recruited probably feels to the communities like, ‘good idea! I never thought of that’ and they’re interested for awhile – but they soon go back to business as usual.” This program representative and others said that communities that take the trouble to self-select may be more likely to make a strong commitment.

**Appropriate application process.** Rather than allowing any interested community to participate in the program, nearly all of the program representatives said that the communities should be forced to “jump through a few hoops” or otherwise “demonstrate commitment” prior to being accepted into the program. In the words of one program administrator, “self-selection is really useful so long as there’s some sort of a bar or hurdle that [the potential participants] need to clear to demonstrate that they’re willing to bear the time and responsibilities of participation.” An appropriate application process will ensure that program administrators do not waste resources by working with communities that ultimately don’t commit to the program.

An application process may also help set realistic expectations within the communities and clearly communicate the value of the program. A process that clearly and succinctly explains the roles of the program’s key players, as well as the program’s goals and requirements for participation, may also position the program for success. The application process should make clear the types of projects supported by the program, educate the applicant about the types of projects that will generally be cost-effective and feasible given the community’s composition and circumstances, and set a maximum payback period for projects supported by the program.

### **Relevant Program Messages**

Because some community members may not immediately perceive the value of energy efficiency and/or renewable energy, relevant messages are vital to a program’s success. The interviews revealed that, since motivating factors may differ from community to community, programs must tailor their messages to their target audiences. Financial concerns are often the most effective drivers of energy efficiency behaviors, but other social and environmental concerns (such as global warming and air pollution) may also motivate community members to change. It is often useful to first determine the most meaningful messages for a particular community before implementing full-scale program marketing efforts.

However, even the most relevant messages are useless unless communicated effectively. As described below, community groups may be particularly well-positioned for this task.

### **Frequent Communication Between Administrators and Implementers**

Program representatives suggest that frequent communication between program administrators and the program implementers within the community provide several benefits. These communications allow program administrators to communicate expectations to the community and underscore the roles of key players in the program. Periodic check-ins also give administrators an opportunity to provide guidance if implementers within the community are steering the program off course. Finally community members may use these regular communications as opportunities to ask questions and obtain advice.

## **Educational Component**

All of the seven programs profiled in this paper have (or had/will have) key educational components. More than half of the program representatives said that their respective programs' community educational services were the most valuable program offerings. These services take different forms in different programs. All of the programs provide (or provided/will provide) general educational support to program implementers within the community in the form of basic information regarding energy and energy efficiency. One program administrator said, "A lot of communities don't know how to start thinking about energy. We help them figure out what they need to be thinking about... and help them become more knowledgeable about their buildings and their energy use."

Some of the programs partnered with schools to bring the program's messages to students and then hopefully to the children's families. One Rebuild Iowa Community Coordinator said that this partnership was especially valuable: "We got into elementary, middle, and high schools to raise awareness of energy efficiency and renewables... Once I had a year or two under my belt I had twelve hundred kids out there educating their parents about it."

A program's educational component can also help the program communicate the relevance of energy efficiency and/or renewable energy. As explained above, financial considerations may be the most relevant message in a particular community, and in cases such as these, educational efforts could focus on establishing links between the program's energy-related goals and financial benefits.

Finally, the evaluation literature on community-based programs emphasizes the importance of the continuation of the educational effort to insure the sustainability of program achievements. Although existing community members may already be "transformed" by the energy efficiency message, there is inevitably turnover in the community residents and new community groups may also want to get involved with the program.

## **Partnership with Existing Community Groups**

Program representatives said that the most successful community partnership programs identify and work with existing community groups. One of these groups (or a coalition of groups working together) should be responsible for project planning and for keeping the project moving. Some program representatives suggested that during the program application process, groups should be required to show that they have a track record of successfully implementing community programs.

Community groups can also play a key role in reaching out to community members to educate them about the program's relevance, services and benefits. The majority of community representatives included in the study mentioned organizations such as a local college, a church, a conservation board, a department of economic development, or an energy office as being particularly suited for this role. The organizations they mentioned were at the local, county, and state levels. They indicated that a group already familiar to the community might lend additional legitimacy to the program and be better positioned than external groups to motivate community members. However, the evaluation literature also indicates that when employing such community groups, it is important to separate social goals from program impact goals by providing separate funding for community development efforts.

## **Active Involvement of Community Officials/Decision-makers**

Program representatives said that the most successful programs identify a key official who will act as the program's champion in local government channels and serve as a representative of the community group(s). Many program representatives stressed the importance of requiring potential participants to identify this individual during the program application process. In the words of one program representative, "unless [the community has] buy-in from community officials, the program can go nowhere." Community officials may also be able to communicate a program's relevance within the community and provide a source of motivation for community members.

## **Technical Expertise**

In addition to the educational components of their programs, many program representatives indicated that communities must have access to technical expertise related to specific energy-efficiency or renewable energy projects. In some cases, the program administrators may be able to provide such expertise, or to refer community members to an individual within their organization who has such expertise (for example, a utility's engineering group). In other cases, the key community official identified at the program's outset may have such expertise (for example, the community energy officer may have a background in energy efficiency). Alternatively, a local community group may have relevant experts within their membership. Regardless of the source, however, program administrators stressed the importance of access to such expertise for participating communities.

Program representatives also said that if the program administrator will not be serving as the key contact for community members with regard to technical expertise, administrators should provide clear direction regarding whom the community members should contact with questions on specific topics. This direction can be reinforced during periodic communications with the community and may strengthen community members understanding regarding the roles of key players in the program.

## **Summary**

Through interviews with administrators and implementers of community energy-efficiency and renew renewable energy partnership programs, several best practices have emerged:

- Allow participants to self-select through a rigorous application process;
- Ensure that program messages are relevant to the target community;
- Include an educational component;
- Encourage frequent communication between administrators and implementers;
- Partner with local organizations for program delivery;
- Actively involve community officials/decision-makers; and
- Provide access to technical expertise.

## References

- Adams, Dionne, K. Cooney, M. Thornsjo, and C. Tyler. *Effectiveness of a Community-Wide Outreach Program in Achieving Energy and Demand Reduction Goals: Evaluation of the San Francisco Peak Energy Partnership (SFPEP)*, Proceedings from the 2006 ACEEE Summer Study, Asilomar, Calif., pp. 11-1:11-12: American Council for an Energy Efficient Economy.
- Berkowitz, Paul I., S.L Karl, and J. Ramsay, 1994. *Capturing Conservation through Community Energy Management*. Home Energy Magazine Online, March/April 1994.
- Johnson, K., E. Thomas. *Energizing Communities: Leveraging Non-Profit Organizations to Promote CFLs*. Proceedings of 2007 Energy Program Evaluation Conference, Chicago, Ill., pp. 1167-1175: IEPEC.
- Pettit, T., R. Wall, J.G. Clendenning. *The Green, Green Grassroots of Home: Measuring Community-Based Clean Energy Market Development Initiatives in Connecticut*, Proceedings of 2007 Energy Program Evaluation Conference, Chicago, Ill., pp. 520-531: IEPEC.