

The Community Energy Challenge: A Place-Based Approach to Changing the Market for Energy Efficiency

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ABSTRACT

This paper describes the groundwork laid for an innovative program, the Community Energy Challenge (CEC) based in Bellingham, Washington, which is transforming the local market for energy efficiency structurally, socially, and economically. A unique structure has been created using strong organizational partnerships to make energy efficiency nearly effortless for households and small business owners. Founded in a partnership between a local business network and weatherization experts from a community action agency, the CEC draws together a technical college, state and federal agencies, eight municipalities, two utilities, a financial institution and several non-profits in order to implement a pioneering energy efficiency program. The CEC seeks to drive demand for energy efficiency through community-wide social change, shifting attitudes and behaviors surrounding energy use. This is being achieved by combining the convenience of a one-stop-shop for energy efficiency with proven social marketing strategies of branding, goal setting, feedback, and social diffusion. The CEC addresses multiple economic barriers. It coordinates the market and works toward economies of scale by aggregating smaller retrofit projects, packaging and bidding them out to vetted contractors, and thereby reducing costs and strengthening the local energy efficiency industry. The program tailors incentives to encourage implementation of multiple measures simultaneously, and uses financing tools such as a loan loss reserve to extend long-term efficiency measures to historically underserved segments of the population. By focusing this wide-ranging set of structural, social and economic tools on a concentrated geographic area, the CEC hopes to create a game-changing model that can be replicated nationwide.

An Introduction

Promoting energy efficiency for homes is not a new idea. For decades utility companies, government bodies, environmental groups and others have been taking pains to make the public aware of the immense potential benefits of reduced energy use. Efficiency saves money, improves comfort, adds value to a home and reduces environmental impacts; it makes simple economic sense. Yet the problem remains that most households fail to cash in on this opportunity to save money and improve their homes. A 2009 report by McKinsey and Company entitled “Unlocking Energy Efficiency in the US Economy” identifies the major barriers in the residential market as awareness, agency/ownership, competing uses for capital, transaction costs, and savings capture (McKinsey 2009). Their analysis states that in order to successfully achieve savings, not just one but all of the barriers must be addressed. The Community Energy Challenge (CEC) is a pilot program based in Bellingham, Washington which has created a one-stop-shop to do just that; addressing all barriers simultaneously and thereby transforming the local market for energy efficiency. The program is breaking new ground by creating a unique programmatic

structure, incorporating social drivers for change, and providing a range of economic tools. By focusing on deep efficiency within a single community, the CEC aims to find solutions that can be replicated nationwide.

Building a New Structure for Residential Energy Efficiency

Pioneering Partnerships

The Community Energy Challenge is founded on strong organizational partnerships, drawing on the existing strengths of organizations within the local community. The program is rooted in a partnership between the Opportunity Council (OC), a community action agency, and Sustainable Connections (SC), a network of local independent businesses. The Opportunity Council serves predominantly low-income populations and through its Building Performance Center (BPC) has conducted federally subsidized weatherization projects for over 25 years. The BPC has provided technical training and worked with contractors on energy efficiency projects throughout Washington State. Sustainable Connections is a network of local independent businesses working towards sustainable economic development. Over the past 8 years, SC has seen measurable success in engaging the local business community and Bellingham residents around issues of buying locally, green building, waste reduction, sustainable food systems, and renewable energy. For the Community Energy Challenge each organization brings its perspective and strengths. Motivated by the potential for the creation of local sustainable jobs for laborers, as well as reducing energy costs and consumption for homeowners, the Opportunity Council's expertise in home performance contributes the technical training and program management for home retrofit projects. Looking at the environmental benefits of improved energy efficiency and the potential for businesses to model best practices, Sustainable Connections provides the community-wide outreach and commercially-tailored elements of the program. Through the Community Energy Challenge, these two organizations have experienced a terrific synergy, resulting in a new program that is both thorough and wide reaching.

The next set of invaluable partnerships is those with the utility providers, Puget Sound Energy and the Cascade Natural Gas Corporation. Relationships with both privately held utility companies have gone well beyond that of funding partners, as they have provided access to data, software tools, in-billing promotional materials and marketing support which are essential to the program. Utilities stand to benefit from efficiency by eliminating the need for expensive new infrastructure projects and generation facilities. According to the most recent Northwest Power and Conservation plan, 85 percent of the projected demand in the Northwest region can be met by efficiency. Both utilities have spent decades building credibility in the community and their cooperation on marketing efforts in turn lends credibility to the Community Energy Challenge. The utilities also gain additional public relations benefits through positive exposure from participating in a community-based campaign. Working through program development with each utility however has not been without complexity. With service territories extending well beyond Whatcom County, the utilities expressed concerns over equal treatment of customers and equal promotion of contractors within their service territory. Regarding data and project tracking, both utilities also remained cautious to protect customer privacy. In addition, co-branding materials required establishing clear guidelines for when approval from each utility was needed and the

timeframe in which it could be expected. Understanding these issues has been critical to establishing cooperative relationships with both utilities. As partners in the CEC, utility companies supply critical data access, build marketing support, add credibility, and enhance long-term program sustainability.

Even with a strong foundational partnership and the aid of utility companies, the Community Energy Challenge would not be possible without the support of local governments. The municipal government bodies of the City of Bellingham, City of Ferndale and Whatcom County have assisted in administering federal funding for the program, accessing grants, providing community leadership, and extending marketing efforts to spread awareness of the Community Energy Challenge. The cooperative support of all municipal governments reduces barriers to implementing a county-wide program and boosts credibility. Local governments also stand to gain economic development benefits and progress toward their established climate and environmental goals. Because the Community Energy Challenge is a place-based approach to energy efficiency, connecting the program to local governments in the public eye is critical to solidifying the message that energy efficiency is part of local identity.

With a goal of motivating the entire community to take action to address energy efficiency, partnerships with a number of educational and non-profit institutions have greatly expanded the reach of the Community Energy Challenge message. Western Washington University is conducting an awareness campaign and an energy reduction competition between dormitories. Bellingham Technical College is providing weatherization training and has partnered with Whatcom Community College to hire a resource conservation manager to advance energy efficiency on its campus. The Bellingham and Whatcom County Housing Authorities received funding for a \$9,000,000 energy efficiency retrofit of three large residential towers. In addition, every professional Resource Conservation Manager (RCM) in Whatcom County participating in Puget Sound Energy's RCM program has been encouraged to promote and utilize the branding of the Community Energy Challenge. All of these activities, though not always directly benefiting from the services provided by the OC and SC, help to create a community-wide momentum for energy efficiency action. Serving as an umbrella for the promotion of energy efficiency, the Community Energy Challenge can streamline messaging and reinforce energy efficiency as the norm for businesses, schools, hospitals, government, and every other aspect of community life.

Finally, the active engagement of financial institutions allows the Community Energy Challenge to extend energy efficiency opportunities to more homes and businesses, and to encourage deep efficiency measures. The CEC has worked closely with a bank to create an exclusive new Community Energy Challenge loan program. The collaborative relationship with a small financial institution has allowed flexibility with the loan program and could serve as a model for energy efficiency loan products at other financial institutions in the future.

Managing so many partnerships can carry its difficulties. For many of the parties involved, the Community Energy Challenge is not a primary focus, and managing communication requires a steady effort. During the year-long program development phase, regular program updates by email or phone kept all partners up to speed. Together these partnerships not only broaden the reach of the Community Energy Challenge, they also extend grant opportunities, lend legitimacy, increase feasibility and work toward long-term program

sustainability. These partnerships allow for a seamless public image, synchronizing and uniting diverse efforts across Whatcom County to demonstrate energy efficiency as a community priority.

Addressing Multiple Barriers

The Community Energy Challenge seeks to address multiple barriers to energy efficiency simultaneously. In 2009, the report by McKinsey and Company entitled “Unlocking Energy Efficiency in the US Economy” outlined five major barriers to achieving energy efficiency in the residential existing building sector. These barriers were identified as awareness, agency/ownership, competing uses for capital, transaction costs, and savings capture (McKinsey 2009). The Community Energy Challenge aims to address each one of these barriers simultaneously on a local scale, recognizing that each barrier alone cannot explain energy efficiency inaction but that together they inhibit the potential for improvements and therefore must be addressed concurrently.

The first barrier addressed is awareness, acknowledging that most homeowners do not know how to accurately recognize energy waste or identify the repairs that would be most cost effective for their home. Many consumers may also be unaware of how to locate a whole-house energy auditor and solicit impartial information. A typical understanding of home energy use has been analogized to shopping in a grocery store, with the condition that the buyer cannot see the prices for each item, only the total cost at the check-out. This scenario would seem outrageous to grocery shoppers, however it is exactly this level of obscurity that occurs when a household receives its energy bill each month. The Community Energy Challenge aims to cultivate greater energy awareness by providing a thorough, fuel-neutral home energy audit, a real-time energy monitor for one week thereafter, and a follow-up a visit from a Home Energy Advisor. The energy audit examines air leakage in the building envelope, ventilation, insulation levels, heating and cooling equipment, water heater and piping, efficiency of doors and windows, and includes combustion safety tests. The energy monitor provided at the time of the audit is a digital device reading from the home’s electricity meter which displays the home’s real-time energy use and costs, allowing household members to identify which appliances or practices consume the most resources. In order to maximize the effectiveness of a limited supply (50 devices) they are collected by the Home Energy Advisor after one week of use and rotated through Community Energy Challenge customers. This visit by the Home Energy Advisor is intended to occur when energy awareness is at its peak.

Because energy auditors are selected to be excellent technicians but not necessarily exceptional communicators, the Community Energy Challenge has staffed a Home Energy Advisor whose principal task is to sit down with the homeowner about one week following the audit and explain the results. The Home Energy Advisor walks the participant through recommended efficiency improvements one by one explaining their impact on energy use and expenditures and answering any questions. The Advisor provides information on available utility rebates, tax incentives and low-interest loans, and helps the homeowner to establish a course of action. The Advisor then produces a work-order to hand off to pre-screened program contractors. Because the Community Energy Challenge audit is fuel neutral and not profiting from the sale of any service or product, it eliminates much of the potential for biased recommendations and

quells apprehensions about conflict of interest. This sequence of interactions including an audit, the use of an energy use display device, and a visit with the Home Energy Advisor intend to heighten energy awareness and then seamlessly transition awareness into action.

The second barrier identified in the McKinsey report is agency and ownership. In the case of rental property, occupants are typically reluctant to improve the efficiency of a home because their time occupying the space is limited or of unknown duration. Likewise, property owners have little incentive to take action to improve energy efficiency as they are often not responsible for energy costs. Energy efficiency has the potential to raise property value for landlords and reduce expenses for tenants; however, due to split incentives these benefits are rarely realized. The Community Energy Challenge has reviewed several options piloted elsewhere for overcoming the rental split incentive problem including green lease addendums, setting a utility cap, and energy performance certification. After one year of demonstrating savings among owner-occupied homes, the Community Energy Challenge plans to meet with local landlords to present a variety of arrangements for improving the energy efficiency of rental properties. It is anticipated that in combining Sustainable Connections' positive reputation with the local business community with low-interest loan offers and reduced project costs achieved through economies of scale, landlords will be receptive to a mutually beneficial proposal for making energy efficiency upgrades.

Competing uses for capital are often cited as justification for forgoing energy efficiency projects. Particularly in difficult economic times, household budgets are restricted. The Community Energy Challenge aims to address this concern by prioritizing the most cost-effective energy efficiency improvements, by providing unique financing opportunities, and by emphasizing the non-pecuniary benefits of participating in the program. The program uses an audit report format which indicates the expected cost savings of each measure and has developed a tiered system of retrofit recommendations which visually demonstrates to homeowners which measures are most cost-effective.¹ Low interest loans made possible by the use of a loan loss reserve fund and interest rate buy-downs are also a key component in making projects cash-flow positive.

In addition, messaging surrounding the Community Energy Challenge frames home energy efficiency as a collective effort and underscores indirect benefits such as green job creation, support of local industry, and environmental protection. As a place-based initiative, notions of local identity and community relationships are strongly leveraged, encouraging Whatcom County residents to think of energy efficiency not only as a smart financial decision, but as an act which contributes to the health of the entire community. Bellingham residents have seen 8 years of Sustainable Connections messaging encouraging residents to support local businesses, and by doing so support the values of strong community, meaningful employment, and a healthy environment. A survey conducted in 2006 demonstrated that 69% of Bellingham residents were familiar with the "Think Local First" campaign and 58% of residents reported deliberately choosing local independently-owned businesses more than they had 3 years prior (Applied Research Northwest 2006). The Community Energy Challenge builds on the brand recognition of Sustainable Connections, incorporating energy conservation as part of a broader movement championing a healthier, more sustainable, economically independent community.

¹ Graphic outlining tiered system based on cost-effectiveness included as Appendix A

Transaction costs are one of the most pervasive barriers to achieving home energy efficiency. Households spend time identifying problems, searching for available rebates and financing, and finding and evaluating the quality of contractors to perform the work. The One Stop Shop model of the Community Energy Challenge eliminates these transaction costs almost entirely. First, through extensive marketing homeowners in Whatcom County know precisely where to go to obtain good information about home energy efficiency, eliminating the search time and potential for frustration or uncertainty in addressing energy concerns. Second, a highly-trained auditor performs a comprehensive energy audit for only \$95, a cost which is then credited towards any efficiency measures taken within 6 months. This makes identifying efficiency problems easy, reliable, and essentially cost-free. All available rebates, incentives and financing opportunities are then presented to the homeowner in person by the Home Energy Advisor, including details about any required documentation and providing the opportunity to have questions answered immediately. When the homeowner has decided which measures to proceed with, a work-order is automatically generated and handed off to pre-screened and comprehensively trained contractors. These contractors have been extensively evaluated by the Community Energy Challenge, ensuring they possess all necessary training, experience, certification, insurance, and licensing, as well as an exceptional quality of work. For those interested in financing, customer information and estimated project costs can be directly forwarded to a local bank providing exclusive low-interest loans for energy efficiency projects through this program. The Community Energy Challenge leads participants through the retrofit process from start to finish, working behind the scenes to make taking action for improved energy efficiency practically effortless.

The final barrier to realizing the full benefits of energy efficiency home improvements is savings capture. Unfortunately, weatherization work is often performed inconsistently or equipment is improperly installed. “Experts estimate that contractors install some 90 percent of HVAC equipment and insulation sub-optimally, reducing efficiency by 20 to 30 percent” (McKinsey and Co. 2009). In order to address this issue, the Community Energy Challenge supports the establishment of a qualified workforce and provides thorough quality assurance. The Opportunity Council’s Building Performance Center will provide training and job skills locally to support the growth of the emerging energy efficiency industry. It is expected that the CEC program will create 35 new jobs and stimulate 10 million dollars in local construction activity over the next two years. The CEC has also vetted all contractors participating in the program and provides an additional quality assurance review upon project completion. A request for qualifications was posted to allow all local contractors an opportunity to participate in the program. From the initial pool of 16 applications 7 were selected for further review based upon experience performing home retrofit work, experience working with municipal or other regulatory agencies, familiarity with Davis-Bacon and prevailing wage requirements, demonstrated capacity for successful weatherization project completion, proficiency in combustion safety tests, lead-safe weatherization and other relevant trainings, status as a trade ally with the utility companies, membership in Sustainable Connections, and headquarters in Whatcom County. These 7 finalists were then critically examined through an interview process and inspection of past job sites, narrowing the pool to 5 superior quality contractors. By vetting contractors and providing quality assurance, the Community Energy Challenge ensures that the maximum potential energy savings are captured. The Community Energy Challenge also seeks

to address the limited availability of whole-house contractors by providing expert training for interested contractors through the Building Performance Center and by scaling up the number of these contractors directly participating in the program as the demand for energy efficiency services rises.

The Community Energy Challenge is changing the structure for energy efficiency in Whatcom County. A strong network of committed partners is transforming efficiency from an elusive ideal to a tangible community initiative. The establishment of a one-stop-energy-shop is confronting multiple barriers to efficiency action simultaneously. This unique structure forms the foundation of the Community Energy Challenge.

Driving Demand through Social Change

The Community Energy Challenge seeks to drive demand for energy efficiency through community-wide social change, shifting attitudes and behaviors surrounding energy use. The program communicates to community members that energy efficiency is smart, simple, and provides significant cost savings. This is being achieved by combining the convenience of a one-stop-shop for energy efficiency with proven community-based social marketing strategies of branding, goal setting, feedback, incentives and social diffusion (McKenzie-Mohr and Smith, 1999). The One Stop Energy Shop is designed to make energy efficiency as hassle-free as possible for homeowners. Through this streamlined process a homeowner finds informational resources, signs-up for a low-cost audit, receives a fuel-neutral audit, and consults with a Home Energy Advisor. The advisor meets with the homeowner a week after the assessment to explain the results, the cost-effectiveness of potential upgrades and any available incentives and financing opportunities. When the homeowner has decided which measures to implement, the work order is fed directly to a vetted contractor who completes the work which is then inspected by a quality assurance team. If financing is desired, preliminary project eligibility information is passed on to the participating bank. The One Stop Energy Shop provides start-to-finish guidance for homeowners, from the first steps of an audit to the final financial details.

Branding is a critical tool utilized by the Community Energy Challenge. With a 40 year history providing services in Whatcom County, the Opportunity Council has built a strong brand based on creating positive change through community action. The Opportunity Council is a large non-profit organization encompassing a variety of community action projects including home and energy, child care support, food and nutrition, homelessness prevention, and other social services. Attaching this brand of community outreach to the CEC leverages the trust and authority already established by their years of community work. As previously mentioned, a prevailing 69 percent of Bellingham residents recognize the Sustainable Connections brand. The Sustainable Connections communications team has developed a unique and consistent look which appeals to the local community, and the Community Energy Challenge builds on the strength of this brand. The Community Energy Challenge carries a logo, color scheme, and font set that all fit with the overall Sustainable Connections brand. Sustainable Connections over the past eight years has constructed a brand which communicates the values of local social, economic and environmental sustainability, therefore a connection with the SC brand deepens

the message behind the Community Energy Challenge logo. The CEC uses branding to gain receptivity and recognition as well as to link energy efficiency to the wider goal of local community sustainability.

A focal point of the Community Energy Challenge outreach campaign is the community energy savings barometer. Posted in 10 public locations around Whatcom County, the barometer sets a goal of reaching one million dollars in energy savings over a two year period. Community members can witness progress over time as the barometer rises to meet this target. Initially it was imagined that Bellingham would seek out recognition as the nation's most energy efficient community, as it had in 2006 with the Green Power Energy Challenge encouraging renewable energy purchases. Efficiency however is not consistently measured, and even with a widely used indicator such as the Energy Use Index (BTU per square foot per year) there is little concise and usable data allowing for a meaningful comparison between communities. It was therefore decided to display rising energy efficiency in dollars saved, setting aggressive but achievable targets for each program element and stacking them to establish an overall community goal. In order to show incremental progress towards this target, a system was put in place to track progress through periodic reports from each program partner. As some partners must correct for independent variables (such as a hospital recording energy use while correcting for patient-days) it was important to examine the methodology behind each to ensure an accurate energy savings estimate. The Community Energy Challenge barometer will act as a symbol of how individual actions across the community can achieve impressive results.

Many energy efficiency initiatives have tapped into the behavioral science concept of a feedback mechanism as an instrument for influencing energy consumption behavior (EPRI 2009). One strategy is to provide customized reports utilizing utility data to indicate how the energy use of a given house compares with similar houses in the area, inducing positive peer pressure to conserve energy. The Community Energy Challenge will be sending comparative energy use reports to roughly 50% of single-family houses in Whatcom County. Though typically it is preferred to assign these reports to a randomized sample, it was decided that many benefits could be gleaned from providing the reports to either all odd or all even street addresses. First, CEC staff can know immediately when a potential participant contacts the program whether or not the home has been receiving the comparative feedback reports by recording the home address rather than relying on the participant to acknowledge receipt of the reports. This can be tracked to determine how the comparative reports drive participation in the CEC and how the reports in combination with the Community Energy Challenge approach affect the likelihood that a homeowner will follow-through with energy efficiency measures. Second, the use of odd or even street addresses reduces concerns about customer privacy and eliminates the need for a participating utility to reveal any personal information about the customer to other utilities or third parties such as the Community Energy Challenge. Some concern was expressed as to whether the location of natural gas supply lines along streets might affect the randomization of including houses with and without gas service, but this was considered to be of only minimal statistical significance considering the scale of the study. It is anticipated that customized feedback reports alone will reduce energy use by up to 3 percent over the two year program.²

² According to the Home Energy Reports Proposal: City of Bellingham produced by Positive Energy (renamed OPower) to Puget Sound Energy in 2009.

A final pillar of the Community Energy Challenge is the use of neighborhood sweeps as a means of social diffusion. Neighborhood associations and other community groups such as schools and faith communities will be invited to act as local energy leaders, disseminating information and recruiting neighbors to participate in the program. Neighborhoods will be asked to “take the challenge” which will entail committing volunteer time for recruitment. Participating neighborhoods will be incentivized to participate by competing to win a \$1000 cash prize for a “green” neighborhood improvement project (for example tree planting or bus stop improvements). One month long neighborhood sweeps will be scheduled so that no more than two neighborhood sweeps are being conducted simultaneously. During the assigned month, volunteers will be provided with materials and training to recruit their neighbors door-to-door. Homeowners will then proceed to contact the CEC one-stop-energy-shop for an energy audit.

In combining the convenience of the One Stop Energy Shop with Sustainable Connections strong branding, support from highly recognized local institutions, a community goal barometer, customized in-bill feedback, and neighborhood-by-neighborhood intensive outreach, the Community Energy Challenge aims to make energy efficiency action the new social norm.

Transforming the Local Market for Energy Efficiency

The Community Energy Challenge is transforming the economics of energy efficiency in Whatcom County by pursuing economies of scale, encouraging deep efficiency measures, and coordinating innovative financing. In pursuit of lowering the cost of retrofit projects for households, the Community Energy Challenge plans to group projects together geographically and bid them out to a single contractor. As of yet, there is no known precedent for achieving economies of scale in the residential retrofit sector in this manner. The CEC, as a pilot project, is actively pursuing this potential. In the first year, the program will execute an extensive outreach campaign, gaining momentum until it cultivates a steady flow of projects. Once this pace is reached, contractors will be approached with a proposal to buy-down the cost of projects by bundling them by neighborhood or city blocks. By synchronizing the projects in a given area, contractors can reduce transportation time, buy materials in bulk, and manage labor more effectively. The bundling of projects will also reduce time spent by contractors marketing for and acquiring individual projects. In the current economic climate, which has greatly affected the construction industry, contractors are likely to find a substantial contract with guaranteed work more appealing than many smaller projects which are sporadic and spread out. It is with this logic, that the CEC plans to reduce the costs of energy efficiency improvements for individual homeowners by achieving economies of scale.

To boost demand for energy efficiency services, incentives are used at three points in the Community Energy Challenge residential One Stop Energy Shop process. First, participants receive an audit for only \$95 (at an actual cost of \$600). The \$95 fee can then be credited to any efficiency measures implemented within 6 months of the audit. This scenario makes the audit effectively cost-free but reduces the potential for participants to take advantage of the audit service without any intention of making improvements. Second, The CEC packages energy efficiency upgrades in a tiered system which encourages homeowners to prioritize cost effective measures and to implement a single holistic efficiency plan rather than make intermittent

incremental changes. Projects are incentivized according to the extent of investment. Homeowners completing the second tier of recommended measures receive a \$500 incentive, those completing measures up to and including the third tier and above receive a \$1500 incentive. Additional incentives for appliances would mirror the applicable utility rebates. This ensures that investments meet existing high standards for energy efficiency without duplicating verification efforts. This incentive structure is intended to encourage homeowners to implement multiple efficiency measures at once and to execute those which are most cost-effective first.

As a key element to making energy efficiency accessible, affordable and attractive, the Community Energy Challenge provides preferential term financing through the use of a loan loss reserve fund. This credit enhancement tool extends financing to those who might not otherwise be eligible, reduces the interest paid by borrowers and lengthens the payment period. The Energy Efficiency Finance Corporation (EEFC), a financial advisory firm specializing in financing for energy efficiency projects, acted as a consultant at every step of the CEC financing development process. Early on in program development, a brainstorming meeting was held to receive ideas from local financial institutions (FIs) on how to best utilize a loan loss reserve mechanism. Three months later when an estimate of the available funding could be made, FIs were gathered to discuss what would make a request for proposals attractive and what barriers or challenges were perceived. Once funding was secured, FIs were invited to respond to a formal request for proposals. A pre-bid meeting and presentation provided an opportunity for questions to be addressed. A six-person panel including representatives of each of the funders as well as the Opportunity Council, Sustainable Connections, and EEFC evaluated and scored the proposals. Negotiations with the final FIs involved determining the extent of buying down interest rates versus the amount of funding held as support for the loans. An interest rate buy-down would make loans more attractive to borrowers but would not allow loan payments to be fed back into the “revolving” fund. A partial guarantee would create enhanced eligibility and allow for payments to replenish the revolving fund but would do only a little to improve the attractiveness of the loan. It was agreed that a combination of these elements would be used, beginning with elements of each and adjusting according to the responses of prospective borrowers. A creative and cooperative relationship with the FI partner lends flexibility to the program, ensuring that the use of credit enhancement funds can be optimized.

Conclusion

Through structural realignment, social engagement, and economic innovation, the Community Energy Challenge has laid the foundation for a holistic approach to energy efficiency. Over the next two years the program will provide services for 1800 homes, an estimated 900 of which will make significant investments in energy efficiency. These projects will result in an estimated \$397,978 of annual energy savings, reducing energy use by 2.6 million kWh and 209,200 Therms. At its core, the program rests on the goal of making energy efficiency more accessible, attractive and affordable than ever before. The CEC is not designed to be a universal solution, but rather a multifaceted organism which can adapt to the responses and needs of the community overtime. Though the program is uniquely tailored to the local community, these place-based approaches of strong partnerships, social marketing, and local economic strengthening can be shared with peers across the nation.

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Appendix A

