Using Energy Efficiency as a Revitalization Tool: A Local Initiative for Market Transformation

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Synopsis

This paper outlines how energy efficiency can be used as a tool for community economic development and revitalization. The approach and two examples are presented.

Abstract

This paper discusses the San Francisco East Bay's partnership with the U. S. Department of Energy's Rebuild America Program, which aims to create local energy-efficiency market transformation. The goal of the East Bay project is to demonstrate that energy efficiency can be a tool for community revitalization. Implementing energy efficiency with community resources promotes self reliance through the more efficient use of energy and by employing local services. The emphasis of the project is on providing small businesses with energy services, which is a virtually untouched market in energy efficiency.

The paper examines lessons learned from the project, which includes the development of a sustainable community-based infrastructure to dramatically increase the implementation of energy efficiency. The discussion focuses on implementing projects in the small commercial market. Two successful pilot projects are examined. Successful implementation of energy efficiency in this market is sustainable and minimizes or eliminates subsidies. A working model that can be transferred to other community groups is also presented.

1. Introduction

The vitality of a community is reflected by the health and strength of its small business sector. Small businesses constitute 98 percent of all businesses in America, employ nearly 60 percent of the work force, account for 38 percent of the Gross American Domestic Product and have created two-thirds of net new jobs in the American economy since 1970. Net job growth in the 1980s in the United States is attributed solely to employment increases in small businesses, accounting for 4.1 million net new job, while large firms lost 500,000 net jobs (Dennis et al., 1994).

Given the importance of small businesses to any economy, ensuring success in this sector has obvious importance. In order for small businesses to thrive on tight profit margins, expenses must be kept to a minimum. While city economic development efforts often include facade improvement, employment services and code enforcement, efforts to reduce business operating costs may not be included. Investing in energy efficiency can play an integral role in augmenting community economic development by improving small business performance.

Cost reduction through energy efficiency directly benefits the profit picture of a business. For businesses, selling more products often increases associated costs. Therefore, reducing operating expenses can more directly benefit profit, especially if there is a short term payback associated with the measure. Other benefits include improving the aesthetics and performance of a business which will attract more customers and provide higher comfort to workers, leading to higher satisfaction for both and the potential for enhanced profitability. Besides providing the business with additional cash to perform its core business, funds from energy savings could also be reinvested

to improve business operation, decrease cost of services, or hire needed staff. On a community level this translates to improved building stock, higher employment rates, increased tax revenue for cities, increased jobs and reduced local capital spent on energy that usually leaves the community.

Small business owners have limited capital, knowledge and time to plan and implement energy-efficiency projects. Even though many retail sites are tenant occupied, the tenant usually pays for utility bills. Also, despite favorable return on investment, small businesses often lack access to the initial capital resources required to implement many energy saving measures. These barriers have been historically addressed with either costly utility sponsored marketing and direct implementation programs, or with more passive customer site surveys and rebate information campaigns that have shown limited results because they fail to address the barriers to getting energy efficiency installed. In some cases, utility sponsored programs for small business energy efficiency have had high success rates, but may be difficult to sustain in a deregulated environment. Seattle City Light's successful $mart Business pilot program (Bowman 1995) provided small businesses an 80 % incentive that attained a 69 % penetration in the target market. However, programs which provide free products and services to customers may not result in market transformation. First, they are expensive; one comparison report shows that an average cost of US$3,000 per participant was needed to provide a 100 % subsidy to each site (Detham & Associates 1994). Also, by receiving free products and services, a business is less likely to understand the total benefits of energy efficiency and thus less likely to repeat measures in the future. The message a business passes to its neighbors may be about the free services, rather than the message that energy efficiency is good for business.

The private sector (e.g., contractors, lenders, and energy service companies (ESCos)) has largely ignored the small commercial market due to the relatively high cost of marketing and providing services. For example, a lighting contractor specializing in energy-efficiency lighting retrofits must work on larger projects in order to make a profit in a tight margin business. High overhead costs relative to the revenue available on small projects quickly eliminate any profit. Therefore, the smaller business owner must rely on electricians, a group that usually doesn't have the latest energy-efficiency technologies, and are an expensive and somewhat unpredictable alternative to getting competitive pricing on labor and material.

For the energy-efficiency market to be truly transformed, permanent changes must be made to the supply of information, expertise, financing and low cost services available to small businesses. They need to benefit without large subsidies or giveaways. An infrastructure needs to be developed to deliver energy efficiency to service the smaller business community and to benefit all stakeholders.

1.1. Market Barriers to be Addressed

1. Small businesses do not have easy access to information that would help them assess the savings potential from energy efficiency. Given the need to focus on their core business they have limited opportunity to explore the significance of potential energy savings.

2. Often, small businesses lease the space they occupy, which means there will be split incentives in retrofitting that space.

3. Small businesses do not have easy access to low-cost service providers and material suppliers. This reduces the economic benefit of energy-efficiency measures and places these businesses at a disadvantage. A primary goal for a small business energy-efficiency initiative should be to improve access to affordable energy-efficiency measures.

4. Small businesses usually have only their own cash reserves or lines of credit (which usually have high interest rates) available to make the necessary capital investment to improve energy efficiency. Businesses reserve the use of high interest lines of credit mainly to invest in productive business activities. Long-term success of energy-efficiency programs for the small business market will be dependent on attaining readily available financing at competitive rates.

5. Trade allies and energy service companies pay little attention to the small businesses and do not commonly

market to this sector. This limits the amount of expertise and information on energy efficiency generally available to small businesses.

6. Small business owners / managers rarely have the time or the expertise to devote to identify, analyze, finance, or implement energy-efficiency projects. Assistance with these key elements of developing an energy-efficiency project will be crucial to gaining significant participation in any program aimed at small businesses.

2. Methodology

Our approach is to develop a broad, community-based infrastructure to dramatically increase the implementation of energy-efficiency projects in small businesses. For this project we focus on developing a model to transform the market by building local partnerships and utilizing community resources when doing energy-efficiency upgrades. This model is applicable internationally, enabling local communities to use energy efficiency as a tool for economic development and revitalization. We are currently focusing efforts in the San Francisco Bay Area.

The goal of our current project is to develop more efficient and effective ways to access the small and large commercial and multifamily markets, to analyze implementation potential, and to deliver services to create a sustainable energy-efficiency market. Not only will the focus of this project be to pursue implementation activities, it will also focus on creating model that may be utilized in other communities. We view energy efficiency as a tool for community economic development; aspects of energy-efficiency projects always include improving business performance and quality of facilities.

2.1. Components To Transforming The Smaller Commercial Market For Energy-Efficiency

1. Targeting local area or business sector to receive energy-efficiency education and project implementation;
2. Building a community coalition of stakeholders that provides necessary areas of expertise for delivering services to this market;
3. Developing marketing and outreach strategies that address the needs of the targeted community;
4. Developing new delivery methods to attract existing trade ally involvement which will transform the market into one that is significantly more self-sustainable; and
5. Testing and refining the model with pilot programs using a learn-by-doing approach.

The approach presented in this paper incorporates the following key elements to address the barriers to implementing energy efficiency in smaller businesses:

2.1.1. Choose The Target Area Or Business Sector

Targeting a small area or business sector is more manageable than the entire city or large geographic region, and cuts down on overhead costs usually associated with small business energy efficiency projects. The project also benefits from word of mouth marketing, and minimizes travel expenses and time spent visiting each site. Targeting a single business sector can simplify aggregation techniques, and may be more appealing to the local utility. Choosing areas that have a distinct commercial center and that are in need of economic development minimizes resources needed for marketing and outreach, especially if city agencies are already doing work in the area. Often, the biggest barrier to overcome in serving the small commercial sector is the associated overhead costs. Working in-concert with existing marketing and outreach programs is key to a successful project.

2.1.2. Build A Coalition Of Stakeholders

Forming a consortium of public and private organizations makes it easier for activities to happen in concert. Our partnership is composed of local stakeholders and experts including the cities and chambers of commerce in a three city area, the local chapter of a building owner's and manager's group, a national laboratory located in one of the target cities, the utility serving the three cities, and several local property management and consulting companies.

After a small target area is chosen, local government economic development departments, chambers of commerce, local business associations, and energy utilities can assist with approaching their constituents or customers. Working with entities the business already trusts, such as the business leaders, the city or the local utility builds on existing relationships rather than establishing new ones. Active business leaders, and industry or merchant associations can use their influence to access other businesses in the area and to persuade them to participate in the program.

These organizations can also provide important feedback on individual businesses such as potential need of services, past energy-efficiency interest, condition of the building, status of any remodel activity or change in ownership, business stability, and level of community involvement. This information is critical in approaching a market as large and diverse as the small commercial sector where marketing costs can be prohibitive.

2.1.3. Develop A Marketing And Outr each Strategy

The marketing and outreach strategy should also be developed for the particular community by using the coalition of stakeholders. Selling projects on the merits of non-energy benefits as well as technical and monetary savings will increase business participation. Improving lighting, especially in retail establishments, can translate directly to increased sales and profit. On a community level, the business owner can show peers his commitment to the neighborhood and to other business owners in their area. These non-energy benefits also appeal to the consortium members, especially the city agencies involved.

2.1.4. Deliver y Method

For true market transformation to occur, trade allies must be able to thrive by delivering energy-efficiency products and services with little or no external subsidy. In order for energy efficiency to be implemented at a sustained level, there need to be new methods for implementation. The four most important players for delivering services are (1) the manufacturers and vendors of energy-efficient technologies and equipment, (2) energy service professionals, (3) contractors, and (4) lenders.

It is important to test ways of making this market more attractive to traditional service providers so that smaller businesses can benefit from better pricing. For example, manufacturers and vendors, once informed of an organized initiative to access this market, can be asked to provide products at volume discounts as promotion of their products to this large, untapped market. Projects are more attractive to service providers if numerous small projects in close proximity are aggregated and bid out as one large project. Product and service costs are minimized, thereby reducing the total cost of the project.

Working with local lending institutions to develop programs specifically for community economic development is one way to finance small commercial energy-efficiency projects. Local banks in the United States are required to invest in local community development as a part of the lending portfolio. Energy efficiency projects will provide banks with a means of complying with this requirement and enhancing their community image.

Local contractors and manufacturers should be utilized as much as possible, to further retain jobs and revenue within the local economy. Since most installers are small businesses themselves, this will also relate to local job creation and economic development.

2.1.5. Test And Modify The Model

We are currently running pilot programs in the San Francisco East Bay to test our approach and refine our model. This activity includes working with area business associations; targeting and accessing specific segments and geographic regions of small businesses; performing energy assessments; structuring contractor involvement and vendor pricing; accessing affordable financing; developing tools for tracking and marketing; and maximizing businesses participation levels. The model will be developed from this learn-by-doing approach and will be refined throughout a given pilot and from one pilot to the next.

There is a demand for the services of an independent facilitator that can provide technical expertise and project management in small commercial sites. These services generally are not available to this market because the cost of providing them is prohibitive. For example, overhead costs such as marketing, travel, and report preparation can be similar to those for a large commercial site, but because the total dollars savings are much less, the amount charged for services also must be less. The approach presented in this paper reduces these costs through aggregation and utilizing local community resources.

3. Examples Of Approach

This section focuses on two different projects in the small commercial market. The first targets a specific area within a city, and attempts to achieve widespread penetration in a variety of small commercial business types in the area. The second works closely with a utility sponsored program, where clients have already shown initial interest in energy efficiency by responding to a survey sent by the utility.

3.1. The Commercial Technical Assistance Program (CTAP)

This municipal-based project tests our methodology under sponsorship, and within the jurisdiction, of the municipality. CTAP is sponsored by the City of Berkeley in California and operates within the membership of the Downtown Berkeley Business Association. Our objective with this pilot program is to provide services to a few sites in a small area, with the goal of determining the best approach to ensure energy-efficiency projects are implemented. Because the City is committed to include a full range of business types and sizes, it will subsidize the smallest businesses to ensure their participation.

Most sites in need of energy-efficiency upgrades generally have not implemented projects in the past because of a lack of information or because the time and cost involved in doing a project is too high. Meeting the need for information was easily achieved because the small geographic area allowed for more time with business owners. In terms of cost incentives we assessed: 1) providing subsidies to smaller sites, where the recommended measures have a long payback, even if the project is economically sound; and 2) aggregating the sites to reduce the cost of products and services, while at the same time providing project management to minimize the amount of time the business owner would need to spend on the project. In addition, we ensured that a quality upgrade would be included in our recommendations.

A subsidy of 50% of the total cost of the project is provided by the City of Berkeley for any sites under 280 m^2. These sites also have a direct install component, enabling the City's existing low income weatherization staff to implement basic retrofit on a long-term basis. Since Berkeley is reaching saturation in low income residential weatherization, training staff to provide new services to another sector is an ideal solution for the City.

Any sites over 280 m^2 are aggregated to buy down the cost of products and services needed to upgrade the site. No site we are servicing for CTAP is over 2000 m^2. This approach minimizes the overhead costs that make these types of programs prohibitively expensive.

3.1.1. Determine Area To Be Served

The City of Berkeley's Economic Development Department helped determine which area would most benefit from an energy-efficiency project, and provided information on owners and tenants in the area who would be most receptive to participating in the program. We chose the downtown area, which employs 9,000 people in a 79 acre area. The region showed a 4.6% growth rate from 1988 to 1991, compared to a city wide growth rate of 10.4%. There are several closed business (due to seismic reasons as well as economic), and a mixture of franchises and small local businesses. The area has approximately 200 ground floor businesses, which comprised the primary businesses we accessed for the project. Major business types in this area include:

- *Retail Establishments* bookstores, hardware stores, office supplies, and copy centers
- *Convenience Stores* delicatessens, small grocers, liquor stores, and health food stores

• *Restaurants* cafes, bakeries, fast-food, and small sit-down establishments

Typical energy end-use breakdown for these business sectors in California are shown in Figures 2 through 4. As can be seen, lighting is the primary retail end use. Convenience store end use, not shown here has a much lower lighting end us of 18%. Refrigeration is primary at 52%, while cooking, HVAC, exterior and other make up the rest.

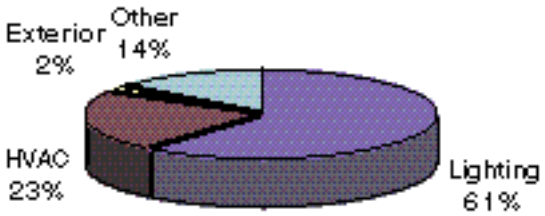

Figure 3.1 Retail Energy End Use

Energy efficient technologies addressing lighting, refrigeration, and HVAC make up the majority of recommendations for small businesses in Berkeley. Lighting technologies include T8 fluorescent lamps and electronic ballasts, compact fluorescent replacements for incandescent, and halogen lighting for retail product enhancement. Refrigeration recommendations concentrate on low cost operations and maintenance improvements such as coil and condenser cleaning, freezer/cooler door gasket replacement, humidistat controls, and new case lighting. Because of Berkeley's mild climate, HVAC use for small buildings is very low. Recommendations include mostly system maintenance. Minor capital improvements were also recommended.

3.1.2. Building a Coalition of Stakeholders

The coalition of stakeholders in the CTAP project comprise the City's Energy Office and Economic Development Department; the local business association, the local utility. The City's General Fund provided funding for the project. Its weatherization staff augmented installation labor. The City's Economic Development Department provided liaison and support to access the local businesses through its contacts with business leaders. The business association provided access to its membership. The utility supported the program by mailing out introductory letters and information about the program to targeted businesses, by providing energy usage history on accounts once permission is granted, and furnishing the ReEnergize team with small business auditing software to quickly assess savings potential.

3.1.3. Marketing and Outr each

Marketing was initiated by walking through the area to list all sites that might benefit from an efficiency project. We walked by over 140 businesses and recorded nearly 75 that had high potential for energy savings from a lighting project, (the only type of project visible at a quick overview). Narrowing outreach meant eliminating those sites that had obviously already done a retrofit, or had very little opportunity to save money or to upgrade lighting and equipment quality with a retrofit. After sending the list of 75 sites to the local utility and the City for review, we narrowed our list down to 56 sites. The second list was chosen based on such criteria as whether the business made decisions locally or at a national office (important for franchises and branches) and whether the business was stable or unstable.

We began by solicited business owners identified by the Economic Development Department as community leaders because of their inclination to support the project. As we contacted other sites, we mentioned we were working with the leaders as well, which made our services more acceptable.

The second site visit took between fifteen and thirty minutes. The purpose of the visit was to assess savings

potential and to provide information to the owner about the program and advantages of implementing a project. The total floor area surveyed at this stage was 10,400 m^2. Roughly 85% of all project recommendations were lighting related. The remaining 15% were recommendations for refrigeration or HVAC. Of the businesses where we were able to reach a decision maker, 80% wanted a site survey at this stage. We believe 47% of the sites we contacted will implement a project.

Table 3.1 CTAP Site Survey Overview.

	Number		% 0f Total
Initially identified for mailing	56		100%
Decision makers contacted	30		54%
Sites where decision maker could not be reached	13		23%
Sites not contacted, have very low potential	13		23%
	Number	**% of Subset**	**% 0f Total**
Decision makers contacted	30	100%	54%
Sites surveyed	24	80%	43%
Rejected free survey offer	6	20%	11%
	Number	**% of Subset**	**% 0f Total**
Sites surveyed	24	100%	43%
Sites expected to participate	14	74%	25%

There are several things of note in Table 1. Almost three quarters of the sites surveyed are expected to participate; we were successful at targeting and marketing to sites most likely to implement, and therefore dramatically reduced the time and resources needed to bring sites to project implementation. The 20% that turned down the initial survey generally didn't want to take the time to discuss a possible project, or did not think they could possibly benefit from energy efficiency.

During the site visit, we determined the level of interest shown by the business in a potential project. Our goal was to minimize the time spent on each project. We mailed reports back rather than delivering them by hand to eliminate extra time involved in a third site visit. Roughly 26% of the original 56 sites fit into this category.

For those businesses (74%) that seemed interested in completing a project, we presented the final report on-site. This step is to ensure they understand all the components of the project, and to work with them on different implementation options. The business can choose to implement the project on their own, to use our aggregation and project management services, or to not do a project at all.

5.1.4. Developing Deliver y Methods for Ser vices

Determining the best way to get energy efficiency installed in businesses depends on the particular needs of the area and the goals of the project. We developed a mix of service delivery to address these needs.

*Training weatherization staff*The training had two components. The first was classroom training, where the staff was introduced to lighting terminology and lighting energy efficiency. The staff also accompanied the contractor chosen for the direct install component of the pilot for one regular work shift before implementation of sites began.

Site aggregation.For sites not covered under the direct-install program, we aggregated sites that chose to have us manage the project. By aggregating and presenting a larger project to equipment suppliers and contractors, we can negotiate a lower cost of products and services and thus reduce the total cost of the project.

3.1.5. Testing And Refining The Model

As the CTAP project progressed, the steps were evaluated on their effectiveness and ability to address concerns and barriers of local businesses to implement energy efficiency. We tested the model by determining how businesses responded at various marketing and implementation stages. The lessons learned, discussed below were used in the ACCESS project and will be used in future projects.

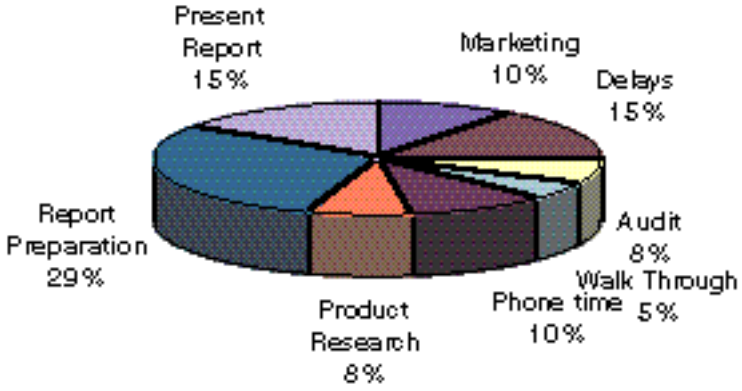

Figure 3.2 shows the breakdown of resources spent before project implementation could begin. Total time spent in marketing and outreach is roughly 40%, while total time spent preparing and presenting a report is 60%.

3.2. ACcelerating Commercial Energy SavingS (ACCESS)

The ACCESS project is aimed at implementing energy efficiency in the small business sector throughout the Oakland, Berkeley and Emeryville area of the San Francisco East Bay. The small commercial market in the three cities represents over 5.7 million m2 in conditioned floor area with an average building size of 1,100 m2. ACCESS is a utility-based pilot designed specifically as a small business initiative where the utility plays a key role in providing market data and using its resources to introduce and access its small business customers. ACCESS is much larger than the CTAP pilot since it will serve over 100 businesses in the three-city area.

The objective is to assist the local utility in doing site surveys in small commercial sites, while providing a higher level of service than the utility normally provides to these customers. For instance, the utility does not typically offer project management and follow up, but ACCESS will. The goal of ACCESS is to develop effective ways to target, access, and install energy-efficiency measures in the small commercial sector that will eventually transform the market.

The following is a discussion on how the model used for ACCESS is unique. Other elements of the model build upon the methodology used in CTAP.

3.2.1. Targeting the Market

The major difference in the approach and methodology between ACCESS and CTAP is in the way the market is targeted and reached. Potential business sites are selected from a list of sites that have already expressed interest in energy efficiency from a detailed survey performed by the utility. Therefore, a higher percentage of sites are expected to lead to energy surveys and projects. The raw list contained 6,500 customers. The list was sorted by energy use, business type, and location. This process also included the elimination of key utility business accounts.

We focused on retail businesses in the three-city area rather than a small geographic region. While the small community benefit may be lost, aggregation may be easier by business type as their is more product overlap.

Typically retail businesses have long operating hours, making the return on investment more favorable. We felt our best chances of success for a business sector oriented pilot lie would be found where businesses can benefit not only from dramatic energy savings but also from improved look and quality of the establishment. This is especially important for retail businesses where the point of sale is at the store.

3.2.2. Marketing and Outr each

Initial outreach for ACCESS was performed by the utility. A letter was sent to retail candidates in the three-city area. Site survey appointments were scheduled with businesses that return a customer data release form. Follow-up phone calls were made to businesses who had not returned the release. Because the utility had energy consumption data we did not have to make site visits but could choose sites based on energy consumption and business type.

4. Lessons Learned

Most of all, we learned to expect results, not miracles. We never expected to have success at each site, nor did we expect that each business we did a site survey on would go through with a project. In fact, the success of the project exceeded our expectations. By focusing on quality and money, rather than energy efficiency and pollution prevention we were able to sell the project to businesses. We found this was essential, even in Berkeley which is renowned for its environmental image and recently won the Governor's Award for Environmental and Economic Excellence. We did find, however, that while the environmental aspects of a project will not sell the project, it is often a key variable in winning the business over.

Aggregation is appealing to businesses, because the business can see reduced costs, and also because it provides for camaraderie and partnership. We focused on a neighborhood, so the sense of community was naturally stronger than if we did projects piecemeal throughout Berkeley. We expect a similar benefit when working within one business type.

Mentioning community leaders, and in some cases either the City or the utility, helped strengthen a business' trust in ReEnergize. In many cases, knowing we were a non-profit organization also reinforced their level of trust. Trust was very important to the success of our outreach, as that determined whether the decision makers would be open to listening to the opportunities presented to them.

Many small businesses we worked with leased the space they occupy. However, most sites paid for the utility bills. A project can still be justified if the lease term is long enough to warrant an investment in reducing costs and improving the site.

Quality is a strong selling point to businesses. Reducing costs is attractive, but if energy savings pays for the cost of improvements, a business becomes more interested, especially in areas in need of economic development. Many reports have stressed the benefits of linking non-energy benefits to promoting energy-efficiency, a point which we put to practice (Bowman 1995, Public Technology, Inc. 1989). Our relatively high implementation rate would support this theory.

In order to ensure the sustainability of small business energy efficiency, we did not provide subsidies to all the sites as other programs have. We believe a site does not truly value a project unless they pay for it. In the case of sites under 280 m^2 in Berkeley, the subsidy was only to enhance the appeal of an otherwise low-return investment.

Without the aggregation and quality component, most businesses would find the cost of the project prohibitively expensive. By cutting down on the number of visits to each site, we minimized the cost most contractors and even ESCos would see when marketing a project to a site.

In general, we did not treat a branch of a large corporation as if it were a small business, even though they may

appear as one in a small community. Branches are difficult to approach since decision makers for a site are often remote. This market is also targeted by ESCos, and therefore did not fit our parameters for the under served. There were exceptions. We approached franchises or branches where the local manager had unilateral decision-making authority, information that was provided by the city or business association. We avoided businesses where the decision-maker was difficult to reach in order to minimize our resource costs.

We feel community economic development programs should include an energy-efficiency component. Conversely, any program that is focusing on small business energy efficiency should include a economic development component. We found that working with the economic or economic development agency of a city is vitally important to the success of these projects. Their knowledge minimizes marketing and outreach by providing valuable information on the community and on individual businesses. We also benefited from the existing relationships they had with the communities.

For similar reasons, the local utility, the city, the chamber, and any other group in a community that has a stake in either the success of small businesses or in energy efficiency are all important to program success. We found that treating them as an advisory board gave them a strong commitment to the success of the project.

5. Conclusion

We have presented two models that may be combined or used separately when providing services to the small commercial sector. The first pilot program presented, CTAP, is currently being replicated in two other area cities. We plan to refine and replicate the ACCESS model with the local utility to expand services into other utility service territories. These two models will help transform the market for energy-efficiency services in the small commercial sector by addressing a number of market barriers.

1. Small businesses do not have easy access to information that would help them assess the savings potential from energy efficiency. Providing them with this access in a way they can easily understand can overcome this initial barrier.

2. Often, small businesses lease the space they occupy which means they may not fully realize the benefits of retrofitting the space they occupy. Making sure the payback fits within the lease term of the site is more appealing to the small business.

3. Small businesses do not have access to-low cost service providers and material suppliers. By focusing on a particular area, sites can be aggregated to reduce the cost of material and service costs.

4. Trade allies and energy service companies pay little attention to the small businesses and do not market to this sector. By building a model with a successful marketing and aggregation strategy, more companies are providing low cost services to this sector.

5. Small business owners / managers have neither the time nor the expertise to devote to identifying, analyzing, financing, and implementing energy-efficiency projects. By providing project management and follow up, the amount of time the owner / manager spent on each project was minimized.

Providing services such as information, access to financing, reliable contractors and quality upgrades, addresses the barriers in a small business energy-efficiency project. If a small business community can reduce costs, and perform quality upgrades on sites, local economic development efforts will benefit as well.

While we targeted three large cities in an urban area, the models presented here do not have to be limited to urban areas. A similar approach could be used in commercial centers in a variety of both rural and urban areas, and with varying involvement from the utility or local government, depending on its role and influence in the commercial center. This paper has presented a sustainable model for future projects in this sector that will aid

contractors, ESCos, community groups, cities and utilities to provide services to a sector which is often overlooked even though it is the backbone of any community.

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