

Energy Efficient Lending to Small Businesses: Assessing Opportunities in Hartford, Newark and Portland

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In January 2011, the Community Reinvestment Fund (CRF) asked a Humphrey School of Public Affairs Capstone group to investigate the feasibility of offering a Small Business Administration 7(a) loan to new clients in three markets: Hartford, Connecticut; Newark, New Jersey; and Portland, Oregon. The purpose of this paper is to highlight best practices in “green” lending, summarize existing financing and programmatic support in Hartford, Newark and Portland, and outline organizations in each market that could serve as partners to CRF as it enters each market.

Introduction

In January 2011, the Community Reinvestment Fund (CRF) asked a Humphrey School of Public Affairs Capstone group to investigate the feasibility of offering a Small Business Administration 7(a) loan to new clients in three markets: Hartford, Connecticut; Newark, New Jersey; and Portland, Oregon.

CRF is a Minneapolis-based non-profit financial institution that seeks to help “change the lives of people living in economically distressed communities across the country.” Their business model has historically centered on purchasing economic development and affordable housing loans from community development lenders, and pooling them to create asset-backed debt securities and New Markets Tax Credit investment funds to sell to investors on the secondary market. After years operating in this market, CRF is stepping into the role of direct lender by becoming an accredited Small Business Administration (SBA) lender. Specifically, CRF aims to offer 7(a) loans to clients that wish to improve the energy-efficiency of their businesses.

CRF’s goals are two-fold: first, to offer an innovative new loan product first to its existing client base in Minneapolis, and ultimately to new clients in several cities including Hartford, Newark and Portland as a way to broaden and diversify its portfolio. Secondly, these energy efficiency loans will serve as way to further CRF’s mandate relating to socially conscious lending.

This project also serves an academic purpose. The University of Minnesota’s Humphrey School of Public Affairs requires its graduate students to undertake a large-scale project as a requirement for completing their respective degrees. Working with CRF to complete this report fulfills this requirement for the four students involved: Marcus Grubbs, Nicholas Hannula, Anne Huart, and Catharine Richert.

The purpose of this paper is to highlight best practices in “green” lending, summarize existing financing and programmatic support in Hartford, Newark and Portland, and outline organizations in each market that could serve as partners to CRF as it enters each market.

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Energy Efficiency and Green Finance

For decades, energy efficiency has been a cornerstone of United States environmental policy. It is viewed as a key strategy for reducing greenhouse gas emissions, which are widely believed to cause climate change, and for decreasing America's dependence on foreign oil. Energy efficiency is essential to the country's economic and environmental interests.

The World Energy Council defines an energy efficiency improvement as, "a reduction in the energy used for a given service (heating, lighting, etc.) or level of activity."¹ This reduction can come from technological changes or adjustments in human behavior. In his influential report, former World Bank Chief Economist Sir Nicholas Stern argued,

"Energy efficiency is one way to meet climate change and energy security objectives at the same time. Policies to promote efficiency have an immediate impact on emissions. More efficient use of energy reduces energy demand and puts less pressure on generation and distribution networks and lowers the need to import energy or fuels."²

A 2009 report by the Rocky Mountain Institute pointed out that U.S. energy consumption is half of what it would have been had trends remained constant since 1970; improvements in energy efficiency account for 65-70 percent of these savings.³ The authors of that report also estimated that energy efficiency could reduce energy usage in the U.S. by 30 percent with currently available technology. This paper will address some of the barriers to investment in energy efficiency despite the compelling economic, environmental and political arguments in favor of it.

Drivers

More efficient energy usage within the United States is driven by a number of related factors:

Education and Public Awareness

Consumers learn about environmental issues through many different channels. Political debates about national climate legislation, fluctuating gas prices and the growing popularity of

environmentally-friendly products all contribute to increased public awareness of issues related to energy conservation and efficiency. At federal level, ENERGY STAR is a program run by the U.S. Environmental Protection Agency and the U.S. Department of Energy to promote energy efficiency. In 2003, 50 percent of consumers surveyed were aware of the ENERGY STAR label, which is applied to appliances and other consumer electronic devices to indicate a product's lower energy usage relative to similar products.⁴ By 2010, 83 percent of surveyed consumers were aware of the brand and 43 percent had knowingly purchased an ENERGY STAR-labeled product in the previous year.⁵

Federal, State and Local policies

Government initiatives and legislation facilitate improvements in energy efficiency across multiple dimensions by influencing consumer behavior, stipulating requirements for the public sector and creating incentives for private sector investments. Recently, the American Recovery and Reinvestment Act (ARRA) of 2009 allocated \$20 billion in funding for energy efficiency. This funding includes an Executive Order signed by President Obama that directs federal agencies to “achieve zero net energy by 2030.”⁶ In addition to these investments, President Obama announced his “Better Buildings Initiative” in 2011, which calls for a 20 percent improvement in energy efficiency in all commercial buildings by 2020. The Better Buildings Initiative makes several proposals:

- New tax incentives and financing for building upgrades and retrofits
- Competitive grants to encourage states and local governments to make similar investments in public and private buildings
- Incentives for CEOs and University presidents to make their facilities more energy efficient, and
- Reforming employment programs to train the “next generation of commercial building technology workers”⁷

These new initiatives build on existing standards; the U.S. federal government, 15 states and 46 cities require new public buildings to meet the U.S. Green Building Council's LEED standards,

and 4 of the 15 states offer incentives to develop certified green buildings.”⁸ Renewable portfolio standards (RPS) or alternative energy portfolio standards (AEPS), which require that electric utilities generate a certain percentage of their electricity from renewable sources, have been adopted in 30 states. See *Appendix I* for a map of states with such policies.⁹

Private Market Standards

Within the U.S., public and private companies alike have become increasingly outspoken with respect to their environmental initiatives. This is driven in part by the belief that a company can improve its image by being viewed as a responsible environmental steward, but this trend also arises from the growing realization that lower energy usage often means lower operating expenses. Consulting giant McKinsey & Company released a report in July 2009 that estimated that within the commercial and industrial sectors, companies could achieve \$732 billion in energy savings by 2020 and in doing so, reduce annual greenhouse gas emissions by 660 million tons annually.¹⁰

Wal-Mart has led the way by committing itself to significant cuts in its environmental impact. In 2010 the company announced that it would cut 20 million metric tons of greenhouse gas emissions from its supply chain by 2015.¹¹ Wal-Mart will try to accomplish this in part by pressuring its suppliers to green their own supply chains and will carry products with environmental labels similar to the nutrition data labels familiar to consumers. Wal-Mart’s substantial bargaining power means that many of its suppliers will have to transform parts of their operations, the effects of which will spill over to other areas of the economy. Furthermore, the effort will educate Wal-Mart shoppers on the impact of their buying habits.

Green Financing

Green financing is a relatively new phenomenon that has been driven by increased demand for energy efficiency. The scope of energy efficiency is broad: federal, state and local policies, consumer demand for environmentally-friendly products and business models, and programs run by utility companies affect energy conservation efforts, but financing such activities is a crucial part of the field.

Financing investments in energy efficiency is more complex than rebate programs because it involves extra risk in collecting principal and interest payments over many periods and frequently requires credit checks. *Figure 1* below lists some reasons why financing programs exist despite this added complexity.

| Figure 1. Benefits of Using Financing for Energy Efficiency | |
|--|---|
| 1. Financing expands the amount of capital available to invest by attracting new sources of capital for energy efficiency and renewable energy projects.” | Financing energy efficiency projects can provide investors with a return, an option unavailable to participants of rebate programs. |
| 2. Financing expands the number of players that can support energy efficiency or renewable energy.” | Banks and other lending institutions – not just utilities and government agencies – can provide capital for energy efficiency projects. |
| 3. Financing means “skin in the game” for customer/borrowers.” | Financing can motivate both sides to work toward improved outcomes. |
| 4. Financing programs extend the life of limited government funds. | By generating positive returns, financing programs can fund energy efficiency investments many times over, unlike rebate funds. |
| 5. Financing programs can complement rebate or grant programs. | Utility companies can use on-bill financing together with rebates, for example. |
| Source: Brown, Matthew H., and Beth Conover. Recent Innovations in Financing for Clean Energy. Rep. Boulder: Southwest Energy Efficiency Project, 2009. Print. | |

There are several different kinds of products available for financing energy efficiency investments:^{12,13} See *Figure 7* in *Appendix I* for advantages and disadvantages of these financing options.

Traditional Debt (loans or bonds): This can include conventional loans from institutional lenders or raising bonds for public entities. The loans are then repaid as the borrower uses energy more efficiently and accumulates savings as a result.

On-Bill Repayment: Residential or commercial customers can elect to have a contractor retrofit some piece of equipment or part of their home or building. This is often paid for by the utility company, which then recovers its expenses through on-bill repayments.

Shared Savings: With an energy performance contract, an energy services company (ESCO) assumes the risk of a loan that finances improvements and then is paid some percentage of the savings generated from lower energy bills. This type of model is not generally relevant to small businesses.

Capital Lease: This model allows a building owner to benefit from tax advantages by temporarily transferring ownership to the financier of equipment that is part of an energy efficiency project.

Lease or Bond Pools: This model, which includes revolving loan funds, allows agencies, cities or other types of jurisdictions to pool funds that will be used to finance energy efficiency projects. These funds are able to lend at lower rates than borrowers might otherwise be able to obtain.

Tax-Lien Financing (PACE): In a Property-Assessed Clean Energy (PACE) bond, local governments can provide capital to property owners to finance energy-efficiency upgrades. To secure the loan, the borrower agrees to have a lien placed on the property (this is only a feature of some fee-based financing programs). The borrower pays for the loan through “an adder placed on the property tax bill.”¹⁴ The mortgage debt is then subordinate to the lien.

Energy Efficient Mortgages: In mortgage-based financing programs, lenders agree to provide loans at lower interest rates if a home meets some energy efficiency standard, such as ENERGY STAR. This type of financing is more common in residential settings, but can be applied to commercial buildings as well. This model allows borrowers to tie any

energy efficiency improvements to the building's cost, which can result in lower interest rates.

Program Enhancers: Performance contracting and green leases are two relatively new mechanisms that work with several different kinds of financing options to make energy efficient investments more attractive.

The Role of Utilities

The dismantling of the state-regulated utility system in the 1990s was meant to create competition among energy providers. As a result of deregulation, utilities became focused on offering the lowest priced energy to as many customers as possible to meet demand, rather than conserving energy to avoid the construction of new power plants. In the process, many demand-side management programs fell by the wayside.¹⁵ Since deregulation, demand for electricity has only grown, and many utilities have once again turned to demand-side management strategies to avoid the massive capital costs associated with building new facilities. These strategies frequently include energy efficiency programs such as loans and tax credits for higher efficiency buildings.

The American Clean Energy and Security Act of 2009 (ACES) requires that many retail electricity providers meet a Renewable Electricity Standard (RES), which stipulates that such providers draw a certain percentage of their electricity from renewable sources. In Minnesota, Xcel Energy is required to generate 30 percent of its electricity from renewable sources by 2030, while other electricity suppliers have to obtain 25 percent of their energy from such sources by 2025.¹⁶ Minnesota passed the Next Generation Energy Act in 2007, which requires that Xcel Energy spend 2 percent of its annual gross operating revenues on the Conservation Improvement Program (CIP), which is partially aimed at equipping customers with the resources to reduce their energy costs.¹⁷ To meet that requirement, Xcel is offering a rebate to commercial facilities that upgrade to energy efficient lighting.¹⁸

Demand for energy efficiency incentives is not limited to those offered by utilities. Homeowners and business owners are looking beyond utility resources to finance their projects. As of 2007, Wells Fargo had spent over \$700 million on making energy efficiency improvements in commercial buildings.¹⁹ Meanwhile, green has become trendier and easier to achieve with the advent of efficiency accreditation programs such as the U.S. Green Building Council's LEED certification and the Environmental Protection Agency's ENERGY STAR for new construction and existing homes. In particular, the number of green commercial buildings has been growing at a remarkable rate over the last decade; in 2000, only 1 percent of all non-residential buildings in North America were considered "green," but by the end of 2006, that percentage had increased to 6 percent.²⁰

Challenges

Green financing for new and existing construction comes with many challenges. There are many studies documenting and attempting to explain what is known as the energy-efficiency gap or energy-efficiency paradox. Many profitable investments, often with payback periods shorter than one year, are not undertaken by a business, which begs this question: what is preventing decision-makers in these businesses from making such investments? One recent study found that managers are "more influenced by upfront costs than by net benefits."²¹ The order in which recommendations are presented also impacts managers' decisions: managers are more likely to adopt initiatives presented earlier in a list of possible energy-savings investments.

Furthermore, potential customers may not have the time or resources to apply for funding; or they may not anticipate living or working in a building long enough to reap the financial benefits of energy efficiency. For small businesses, financing is chief among those challenges; communities most successful in encouraging small businesses to green their operations typically offer several funding mechanisms, including rebates, tax credits and, in some cases, loans that cover all upfront financing.²²

The Role of Small Businesses

Indeed, small businesses are a largely untapped market when it comes to energy efficiency financing. Such firms comprise more than 99 percent of all businesses in the United States, but many of them are not saving energy by upgrading their equipment, commissioning their buildings, or retrofitting their spaces because many of them simply cannot afford it.²³ Small businesses frequently have little cash on hand and maintain tight margins. As a result, they are unable to qualify for loans or are hesitant to borrow money for efforts that may not expand business or reduce operating costs. Furthermore, many small businesses lease space rather than own it, which creates split-incentives: while the building renter may be interested in greening their business, the building owner may have no interest if the renter pays the utility bills. However, according to a 2007 study conducted by the Energy Policy Institute, more than 90 percent of survey respondents said they would adopt energy efficiency measures if they were able to get 100 percent financing at the start.²⁴

There remains relatively little interest in the U.S. banking industry to supply such loans because small businesses tend to be risky investments, and because financing products for small, green enterprises tend to be difficult to create; they require a certain level of innovation because small businesses have very different needs than larger, more established firms. Furthermore, working with small businesses can be very costly for banks because banks have limited resources and tend to prefer larger deals. Financing should also involve education and technical assistance; borrowers should be comfortable with and knowledgeable about the entire process, they should be able to understand the savings that will accrue to their business.²⁵ Green finance has several benefits over rebates and government grants, which are gone once they are spent, or tax credits, which do not cover upfront costs; once clients are invested in paying back their loan, they are more likely to maintain improvements after the balance is paid off.²⁶ However, there are often benefits to using multiple types of financing mechanisms, like rebates and loans, in conjunction, to shorten payback periods or make investments more affordable.

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- ¹ "Energy Efficiency Policies around the World: Review and Evaluation." *World Energy Council*. Jan. 2008. Web. <http://www.worldenergy.org/publications/energy_efficiency_policies_around_the_world_review_and_evaluation/1_introduction/1175.asp>.
- ² Stern, Nicholas. *STERN REVIEW: The Economics of Climate Change*. Oct. 2006. Page 274. <http://webarchive.nationalarchives.gov.uk/+http://www.hm-treasury.gov.uk/stern_review_report.htm>.
- ³ Mims, N., Bell, M., & Doig, S. (2009). *Assessing the Electric Productivity Gap and the U.S.*
- ⁴ "Public Awareness of Energy Star Surges, Helps to Fight Climate Change." United States Environmental Protection Agency, 10 Apr. 2008. <<http://yosemite.epa.gov/opa/admpress.nsf/a883dc3da7094f97852572a00065d7d8/e68659035c18a32885257427004d39f2!OpenDocument>>.
- ⁵ EPA Office of Air and Radiation, Climate Protection Partnerships Division. *National Awareness of ENERGY STAR® for 2010: Analysis of 2010 CEE Household Survey*. U.S. EPA, 2011.
- ⁶ The White House. Office of Media Affairs. *President Obama's Plan to Win the Future by Making American Businesses More Energy Efficient through the "Better Buildings Initiative"*. *Whitehouse.gov*. 3 Feb. 2011.
- ⁷ The White House. Office of Media Affairs. *President Obama's Plan to Win the Future by Making American Businesses More Energy Efficient through the "Better Buildings Initiative"*. *Whitehouse.gov*. 3 Feb. 2011.
- ⁸ *Green Financial Products and Services: Current Trends and Future Opportunities in North America*. United Nations Environment Programme Finance Initiative, Aug. 2007, p. 39.
- ⁹ "Renewable & Alternative Energy Portfolio Standards | Pew Center on Global Climate Change." *Pew Center on Global Climate Change | Working Together ...Because Climate Change Is Serious Business*. 7 Apr. 2011. Web. <http://www.pewclimate.org/what_s_being_done/in_the_states/rps.cfm>.
- ¹⁰ Granade, Hannah, Jon Creyts, Anton Derkach, Philip Farese, Scott Nyquist, and Ken Ostrowski. *Unlocking Energy Efficiency in the U.S. Economy*. McKinsey Global Energy and Materials, July 2009.
- ¹¹ Rosenbloom, Stephanie. "Wal-Mart Unveils Plan to Make Supply Chain Greener." *The New York Times* 25 Feb. 2010.
- ¹² Brown, Matthew H., and Beth Conover. *Recent Innovations in Financing for Clean Energy*. Rep. Boulder: Southwest Energy Efficiency Project, 2009. Print.
- ¹³ Supple, Derek. *Financing Models for Energy Efficiency and Renewable Energy in Existing Buildings*. Issue brief. Johnson Controls, 2010.
- ¹⁴ Ibid.
- ¹⁵ Tester, J. W. (2005). *Sustainable energy: Choosing among options*. Cambridge, Mass: MIT Press.
- ¹⁶ "Minnesota Incentives/Policies for Renewables and Efficiency." *DSIRE: DSIRE Home*. North Carolina State University, 2011. Web. 11 Apr. 2011. <http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=MN14R>.
- ¹⁷ Office of Energy Security. *Conservation Improvement Program*. Minnesota Department of Commerce, 2011. Web. 11 Apr. 2011. <<http://www.state.mn.us/portal/mn/jsp/content.do?subchannel=-536895041&programid=536917273&sc3=null&sc2=null&id=-536893853&agency=Energy>>.
- ¹⁸ "Federal Energy Management Program: Energy Incentive Programs, Minnesota." *EERE: EERE Server Maintenance*. Web. 05 Mar. 2011. <http://www1.eere.energy.gov/femp/financing/eip_mn.html>.

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¹⁹ *Green Financial Products and Services: Current Trends and Future Opportunities in North America*. United Nations Environment Programme Finance Initiative, Aug. 2007.

²⁰ *Green Financial Products and Services: Current Trends and Future Opportunities in North America*. United Nations Environment Programme Finance Initiative, Aug. 2007, p. 39.

²¹ Muthulingam, Suresh, Charles J. Corbett, Shlomo Benartzi, and Bodhan Oppenheim. *Managerial Biases and Energy Savings: An Empirical Analysis of the Adoption of Process Improvement Recommendations*. Rep. Los Angeles: University of California, Feb. 16, 2009.

²² Hurley, Kathy, Michael Louis, and David Solan. *Energy Efficiency Financing Mechanisms*. The Energy Policy Institute, May 2010, p. 3.

²³ Hurley, Kathy, Michael Louis, and David Solan. *Energy Efficiency Financing Mechanisms*. The Energy Policy Institute, May 2010, p. 3.

²⁴ Hurley, Kathy, Michael Louis, and David Solan. *Energy Efficiency Financing Mechanisms*. The Energy Policy Institute, May 2010, p. 3.

²⁵ "Characteristics of Strong Programs." Solution Center: Technical Assistance for EECBG &SEP. U.S. Department of Energy. <<http://www1.eere.energy.gov/wip/solutioncenter/financialproducts/financingoverview.html>>.

²⁶ "Characteristics of Strong Programs." Solution Center: Technical Assistance for EECBG &SEP. U.S. Department of Energy. <<http://www1.eere.energy.gov/wip/solutioncenter/financialproducts/financingoverview.html>>.

Product Description

The Community Reinvestment Fund (CRF) is developing a loan product under the Small Business Administration's (SBA) 7(a) loan program, a federal plan designed to increase access to capital for businesses that would otherwise face difficulty in accessing private capital markets. CRF will make loans to small businesses seeking to make energy-efficiency improvements to their businesses, and participating businesses will use savings created by the improvements to pay the balance of the loan. CRF plans to offer two related loan products using these 7(a) funds: one dedicated to financing improvements to a business's real estate,¹ and one dedicated to financing improvements to a business's equipment.²

CRF's stated purpose for the business equipment loan product is:

"[To provide] financing for major equipment providing energy conservation and/or alternative energy improvements for businesses. Equipment can include, but is not limited to: recommissioning of HVAC systems, process/production equipment upgrades, lighting technology improvements, and installation of renewable energy sources such as solar panels."

Similarly, the purpose of the loan for business real estate is:

"[To provide] financing [for] significant energy conservation and/or alternative energy improvements for businesses seeking to purchase, construct (new or expansion), or retrofit buildings occupied by their businesses. Improvements include, but are not limited to: recommissioning of HVAC systems, process/production equipment upgrades, lighting technology improvements, building shell improvements—including new energy efficient windows, etc. and installation of renewable energy sources such as solar panels. Refinancing of existing debt is a permitted use of funds with a significant energy efficiency retrofit to the facility and there are compelling reasons for the refinance of the other debt."

Businesses seeking these loans must meet operation size and financial standing standards set by CRF and the SBA. The loans themselves must meet a number of requirements relating to their purpose and size set by the SBA and by CRF.

Qualifying as a “Small Business”

Under SBA regulations, a business must be considered to be “small” to receive 7(a) loan funds.

A “small” business must meet three criteria:

1. It must be independently owned and operated
2. It must not be dominant in its field
3. It must meet size standards, in terms of annual revenue and number of employees³

Generally speaking, these criteria are met by any business with less than \$7 million in annual receipts and fewer than 500 employees.⁴ However, this is not consistent for all businesses, as the size of a business that is considered “small” differs by industry.⁵ Size standards can be met by a business making up to \$35.5 million in annual revenue, but this is only the case for a small number of business types.

CRF has described their ideal client as having ten or more employees, with \$1 million or more in annual revenue, and with a number of local competitors of similar size.⁶ Meanwhile, the SBA requires that businesses make no more than \$7 million.

Loan Requirements

SBA 7(a) loans can only be used for certain activities:

Figure 2. Approved and Prohibited SBA 7(a) Fund Uses

| Approved | Prohibited |
|---|--|
| Purchase land or buildings | Refinance existing debt, where lender is in a position to sustain a loss and SBA would take over that loss through refinancing |
| Cover new construction or the conversion of an existing facility | Effect a partial change of business ownership, or a change that will not benefit the business |
| purchase of equipment, machinery, furniture, fixtures, supplies, or materials | Reimburse funds owed to any owner, including owners' equity used to sustain business until SBA funds are dispursed |
| Refinance existing business debt that is not already structure with reasonable terms and conditions | Pay delinquent state or federal withholding taxes, or funds that should rather be held in trust or escrow |
| Long-term working capital (A/P, inventory) | Non-sound business purpose |
| Short-term working capital (seasonal, contract, construction) | |
| Collateralizing with existing inventory and receivables | |
| Purchase an existing business | |

Source: Small Business Administration. "Use of 7(a) Loan Proceeds | SBA.gov." *The U.S. Small Business Administration | SBA.gov*. 2010. Web. 9 Apr. 2011. <<http://www.sba.gov/content/use-7a-loan-proceeds>>.

Of these activities, CRF's loan can be used for the following.

- The purchase or land or buildings;
- The construction of a new facility or conversion of an existing facility;
- The purchase of equipment;
- And the refinance of existing business debt.

Financial Requirements

Below are the financial requirements for 7(a) loan borrowers. Where applicable, their combined requirements are included.

| Figure 3. Additional CRF Requirements for Green Loan Product | |
|--|--|
| Security (real estate) | Must be secured by a first lien on the financed property |
| Security (equipment) | First secured purchase money interest in equipment being financed. A first or second lien on other equipment being financed, or a subordinate real-estate mortgage on property owned may also be required. |
| Credit Score | One principal (with 20 percent+ of ownership) must have a FICO credit score of 680+ |
| Credit History | Must have good history; no bankruptcy of company within past 10 years |
| Repayment Ability | Average cash flow coverage ratio of 1.2 to 1 for past 3 years; at least 1:1 for 2 of the past 3 years. Pro-forma cash flow for 1 year must show at least 1.2 to 1 coverage. |
| Maximum Loan Advance | Up to 80 percent of eligible costs; up to 50 percent of costs for used equipment |
| Source: Community Reinvestment Fund. CRF Green Loan for Businesses— Real Estate. Minneapolis: Community Reinvestment Fund, 2010. | |

¹ Community Reinvestment Fund. *CRF Green Loan for Businesses— Real Estate*. Minneapolis: Community Reinvestment Fund, 2010.

² Community Reinvestment Fund. *CRF Green Loan for Businesses— Equipment*. Minneapolis: Community Reinvestment Fund, 2010.

³ Small Business Administration. "INFORMATION FOR SMALL BUSINESS SIZE DETERMINATION." Small Business Administration, 30 Nov. 2010. Web. 5 Apr. 2011. <http://www.sba.gov/sites/default/files/tools_sbic355.pdf>.

⁴ Small Business Administration. "Summary of Size Standards by Industry | SBA.gov." *The U.S. Small Business Administration | SBA.gov*. 2010. Web. 10 Apr. 2011. <<http://www.sba.gov/content/summary-size-standards-industry>>.

⁵ To find the SBA's size requirements by business type, see the following website: http://www.sba.gov/sites/default/files/Size_Standards_Table.pdf

⁶ "Kevin Riba Check-in Conference Call." Telephone interview. 4 Apr. 2011

Broader Recommendations

There are several factors that can enhance the attractiveness of a green loan program. At the 2010 American Council for an Energy-Efficient Economy (ACEEE) Energy Efficiency Forum, Clean Energy Solutions, Inc. identified four program elements that can increase participation rates:¹

Accessibility: Clients want financing programs to be streamlined and straightforward. They're looking for an uncomplicated application process, responsive lenders and an easy payment system.

Affordability: A major barrier to participation is upfront expenses. As a result, a program that brings together multiple funding sources is ideal.

Availability: This element is meant to mitigate concerns about creditworthiness by targeting a "utility bill payer in good standing," a "property taxpayer," including a "loan loss reserve or loan guarantee fund," or allowing for additional collateral from a third party.²

Flexibility: Flexibility in energy efficiency financing programs can be implemented with respect to loan terms, prepayment terms, or links to other financing mechanisms. The U.S. Department of Energy (DOE) lists several financing program pitfalls on its website.

The following recommendations are based on the DOE's insights:

- Recognize that financing alone will not generate sufficient demand.
- Choose a specific market segment to serve with a single loan product, or develop a portfolio of products to serve multiple markets.
- Aim to provide financing to those who currently lack access to other funding sources, or offer products that are attractive enough to spur additional energy efficiency improvements.
- Offer a streamlined approval process that does not require a full energy audit. Alternatively, audits should be included in the financing package.

Marketing and administering the CRF loan will require additional funds; CRF has grants in each market that will help support these costs. In general, marketing residential programs is more expensive, as marketing budgets for such programs typically comprise 10-15 percent of the total budget for a particular program. This figure is 3-10 percent for commercial programs. However, costs tend to fall over time across both categories as customer awareness improves.³ See *Appendix I* for a sample marketing budget for residential and commercial customers.

Risk Factors

Economic and political changes could undermine the significant amounts of capital already allocated to enhancing energy efficiency. For instance, a second recession could dampen demand for building or equipment upgrades; a new president in 2012 could mean energy efficiency is no longer a priority; states strapped for cash could trim energy efficiency incentives; and a drop in energy prices could make commercial customers less willing to consider expensive upgrades, even with a short payback period.

Since the success of CRF's loan product depends on finding customers who do not have access to other types of financing for energy efficiency improvements, an expansion of available capital for such projects may push CRF out of a market or block its entrance.

¹ Morgan, Steve. "The Constraints to Financing Opportunities for Energy Efficiency: What Else Needs to Be in Place." ACEEE Energy Efficiency Forum. Chicago. 20 May 2010. Speech.

² Ibid

³ Lemoine, Peter. "Rapid Deployment Energy Efficiency (RDEE) Toolkit: Planning & Implementation Guides." U.S. EPA, 9 Dec. 2009. Page 38. <http://www.epa.gov/cleanenergy/documents/suca/rdee_toolkit.pdf>.

Portland, Oregon

Citizens of Portland, Oregon, take seriously their city's reputation as one of the greenest in America. Portland boasts some of the most progressive sustainability practices in the country, including community composting programs, substantial renewable energy tax credits and the support of more than 135 buildings certified by the U.S. Green Building Council.¹

Portland's "green" tradition has a long history, in no small part due to the astounding natural beauty of the area. As early as 1904, city planners consulted with Frederick and John Charles Olmsted to construct a 40-mile greenway around the city center so locals wouldn't have to go far to enjoy outdoor activities.² More than 100 years later, Portland merged its sustainable development and planning branches to create the Bureau of Planning and Sustainability, sending "a clear message that sustainability goals are integral within all aspects of development."³ And in 2009, Multnomah County, where Portland is located, adopted a Climate Action Plan that calls for an 80 percent reduction in greenhouse gas emissions by 2050.⁴

Portland, Oregon

Population: 582,130

Number of Businesses

(By Annual Revenue)

\$0 - \$1 million: 54,631

\$1 - \$5 million: 9,430

\$5 - \$10 million: 1,538

\$10 million+: 1,762

(By Employees)

1-9: 63,681

10-49: 8,527

50-99: 1,356

100-249: 721

250-499: 197

500+: 181

Largest Business Sectors

(Number of Establishments)

Food Service: 3,714

Shopping and Stores: 6,077

Consumer Services: 4,166

Electricity Rates (cents/kWh)

Residential: 9.19

Commercial: 7.97

Industrial: 5.31

Climate Zone: Cool, dry-summer

Green Building Council

LEED Certified Projects: 126

Energy Efficiency Scorecard Ranking

2009: 4th

2008: 2nd

Existing Programs and Partners

Small businesses abound in Portland; roughly 54,000 of the 77,000 Portland-area businesses bring in less than \$1 million in revenue annually. At least 19 banks offer Small Business Administration loans, and a few target emerging or minority owned operations. Businesses looking to expand or an upstart looking to open shop can tap free counseling provided by Portland SCORE, a non-profit aimed at helping small businesses.

Going green is also relatively easy – and for many businesses owners, a necessity to attract customers – in Portland. Firms interested in larger-scale projects can apply for a state-level business tax credit; larger projects involving renewable energy resource generation or high efficiency combined heat and power receive a credit that covers 50 percent of the project’s cost, while smaller projects such heat and cooling retrofits or high efficiency lighting installations receive credits that cover 35 percent of the project’s costs. The state also offers energy efficiency loans for lighting, weatherization and solar power systems, among others, for sums ranging from \$20,000 to \$20 million. Loans last from five to 20 years depending on the amount of energy the project saves. Rebates for equipment upgrades are available through the Energy Trust of Oregon, which administers a state-wide utility energy efficiency program.

While the above programs are also available to smaller businesses, most do not apply because the process can be time consuming and requires resources that most businesses simply don’t have; furthermore, tax credits don’t cover the upfront costs of a project, which is a major concern for small businesses with little cash on hand to finance a project.⁵ As a result, the Portland Development Commission’s (PDC) Green Features Grants (GFG) targets this market. Small, locally-owned businesses in the Interstate Corridor and Lents Town Center Urban renewal areas can apply for urban renewal funding to install energy reducing equipment and solar panels, among other technologies.⁶ Grants can be up to \$50,000, though any amount over \$25,000 must be matched by private investment at a 1:3. All operations, including those participating in the GFG program, can contact the Portland BEST Business for free energy audits and financing advice.

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Below is an overview of loans, grants and tax credits available in the Portland area.

| Figure 4. Portland Energy Efficiency Programs | | ODOE: Tax Credits | ODOE: Energy Loans | PDC's Green Features Grants | Clean Energy Works Oregon | Energy Trust of Oregon |
|---|---------------|----------------------|----------------------|--------------------------------|---------------------------|------------------------|
| Funding Type | Cash Rebate | | | | | X |
| | Loan | | X | X | X | |
| | Tax Incentive | X | | | | |
| | Other | | | Grant | | |
| Uses | Building | X | X | X | X | |
| | Equipment | X | X | X | X | X |
| | N/A | | | | | |
| Client | Owner | X | X | X | X | X |
| | Renter | X | X | X | | X |
| | N/A | | | | | |
| User Type | Commercial | X | X | X | | X |
| | Residential | X | X | | X | X |
| Targets Small Businesses | | No | No | Yes | No | No |
| Funding Source | | State appropriations | State appropriations | Urban renewal taxes/CDFI loans | CDFI loans/federal grants | State utility revenue |
| Program Level | State | X | X | | | X |
| | Municipal | | | X | | |
| | Other | | | X | X | |

Recommendations

Oregon is rich with energy efficiency financing options for residents and large businesses. But for smaller operations, there are fewer options. To tap the Portland market, CRF will need preexisting connections in the community and the ability to build a client base through referrals and partnerships with other organizations. As a result, we recommend a three-fold strategy:

Develop a relationship with the Portland BEST Business Center. The non-profit's mission is to be "a 'one-stop shop' for businesses in Portland that want to become greener and more profitable."⁷ The BEST Business Center provides free energy audits

and customized upgrade plans for Portland-area businesses. Once a business has its energy upgrade plan in hand, the BEST Business Center helps its client find the best financing opportunity for the project. CRF could gain market share by becoming one of the BEST Business Center's go-to financing sources. When speaking with Portland BEST, CRF should emphasize:

A commitment to green financing. While state-level efficiency loans and tax credits appeal to large-scale businesses, and small rebates are an easy fix for simple equipment upgrades, few lenders are offering large loans to small businesses specifically for the purpose of being greener.

An energy savings guarantee: To distinguish its product

from others offered by traditional banks, CRF should consider building an energy savings guarantee into its product to demonstrate the long-term payoff of taking out a CRF loan.

Develop a relationship with the Portland Development Commission's Green Features Grant program. It's a small initiative, and limited by law to the redevelopment of the two Portland neighborhoods;⁸⁹ redevelopment dollars can only be used for certain

"I don't have to sell them on green. I have to sell them on the idea that the stuff that they're already doing is sustainable."

– Stephen Green,
Green Futures Grants
Program

projects.¹⁰ Still, GFG's mission to help small, locally-owned and minority-owned businesses squares with CRF's. According to program administrator Stephen Green, the goal of the grants is not to help businesses that already have a strong financial footing. Nor are the grants meant only to green the city. Rather, they're meant to help growing businesses become financially and socially sustainable – environmental benefits are an added benefit, says Green. While Green has access to regular funding from the city, he

Business Profile: The People's Food Co-op

The People's Food Co-op is a nearly 40-year-old institution in Portland, OR. In 2002, the grocery decided to expand its 2,400 square foot shop to 5,400 square feet, and incorporate green technologies such as a geothermal heating and cooling system and a rainwater harvesting system.

The mission of the renovation and expansion was not only to make the business bigger and greener, but also to highlight the Co-op's commitment to sustainability by incorporating technologies that underscored the building's connection to the natural environment. Overall, the project cost \$900,000, with technologies including:

- A new HVAC system costing \$63,000 (\$11.50/sf)
- A rainwater harvesting system costing \$2,500
- An ecoroof costing \$4,750
- And a new lighting system costing \$3,850

As a follow-up to the project, the project design team devised a building operations manual meant to help future occupants and owners keep the Co-op running optimally. It serves as a day-to-day manual, outlining everything from cleaning procedures using non-toxic products, to a training document meant to help institutionalize knowledge about the building's intricate systems.

Financing came from a range of sources, including:

- A \$9,100 Business Energy Tax Credit from the State's Office of Energy and a \$10,000 Emerging Technology Grant from the City of Portland's Office of Sustainable Development (\$5,000 of which was for the HVAC system) as an incentive to build the system.
- A \$2,500 grant from the Community Watershed Stewardship Program that reduced the cost of the ecoroof by \$2,250 – roughly \$9 per square foot.
- A \$360 lighting rebate from Pacific Gas and Electric Company.

The building now uses 16 percent less than the Oregon Energy Code and saves roughly \$1,700 a year in energy costs based on rate of \$.07/kWh. The store also experienced a 50 percent increase in sales since construction finished.

Source: Portland Bureau of Planning and Sustainability, "People's Food Co-op: Integrated, community design responds to sun and rain," accessed May 7, 2011

meets many clients that he cannot help due to restrictions placed on the redevelopment dollars. As a result, he's eager to partner with other financial institutions that can help him assist clients in bigger projects. When speaking with the PDC, CRF should emphasize:

The value a CRF loan adds to a Green Features Grant: Businesses interested in going green are eager to have all their upfront costs covered either through loans, rebates, grants, or a combination of these measures. GFG does not have the financial capacity to support larger-scale projects. Enter CRF, an organization that can add value and much-needed financing for businesses that want to go above and beyond the basic efficiency upgrades.

Monitor the expansion of Clean Energy Works Oregon. Until recently, the program catered only to residents in Portland looking to make their homes more energy efficient. With a \$20 million grant from the Department of Energy, Clean Energy Works recently announced that it will expand to the entire state; within the next three years, it hopes to start offering financing to businesses as well.

¹ Svoboda, Elizabeth. "America's 50 Greenst Cities | Popular Science." *Popular Science | New Technology, Science News, The Future Now*. 28 Feb. 2008. Web. 17 Apr. 2011. <<http://www.popsci.com/environment/article/2008-02/americas-50-Greenst-cities?page=1>>

² "History of 40 Mile Loop - Portland Oregon." *40 Mile Loop Land Trust Board - An Advocacy Group Promoting a System of Connected Recreational Trails in the Portland Metro Area*. Web. 17 Apr. 2011. <<http://www.40mileloop.org/history.htm>>

³ Mitchell, Katrina. "Current Structures, Strategies and Examples for Green Economic Development." *www.bluegreenalliance.org*. The Blue Green Alliance, July 2009. Web. 17 Apr. 2011. <http://www.bluegreenalliance.org/admin/private_publications/files/Current-Structures-Strategies-and-Examples-for-Green-Economic-Development-vFinal.pdf>

⁴ "Portland Adopts Climate Plan," *The Portland Business Journal*. 28 Oct. 2008. Web. 17 Apr. 2011. <<http://www.bizjournals.com/portland/stories/2009/10/26/daily45.html>>

⁵ Interview, Stephen Green, Green Features Grants program, and Marlowe Kulley, City of Portland.

⁶ "Green Features Grant Program Guidelines and Requirements." *Portland Development Commission - Economic Prosperity, Quality Housing, Employment Opportunities*. 6 Sept. 2010. Web. 17 Apr. 2011. <http://www.pdc.us/pdf/bus_serv/greenfeatures/Green-Features-Grant-Guidelines.pdf>

⁷ "BEST Business Center - Home." *Portland BEST Business Center - Business for an Environmentally Sustainable Tomorrow*. Portland BEST Business Center. Web. 17 Apr. 2011. <<http://bestbusinesscenter.org/>>

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⁸ "Interstate Corridor Urban Renewal Area." *Portland Development Commission - Economic Prosperity, Quality Housing, Employment Opportunities*, Aug. 2007. Web. 17 Apr. 2011. <<http://pdc.us/pdf/maps/interstate/interstate-ura-map.pdf>>.

⁹ "Lents Town Center Urban Renewal Area." *Portland Development Commission - Economic Prosperity, Quality Housing, Employment Opportunities*. Sept. 2008. Web. 17 Apr. 2011. <<http://www.pdc.us/pdf/maps/ltc/lents-ura-map.pdf>>

¹⁰ See Appendix II for more details.

Newark, New Jersey

Newark is a part of the New York City metropolitan area, and sits ten miles west of Manhattan. With median family income at \$35,507 per year and 21.1 percent of families living below the poverty line, Newark is a relatively impoverished city.¹ While city government is committed to becoming greener, the process has been slow due in large part to the city's strained economy.

New Jersey has made energy efficiency a priority and adopted an Energy Master Plan that calls for the reduction of commercial building energy use of 30 percent by 2020.² And while residential energy efficiency construction is strong in Newark – in 2006, the state-sponsored ENERGY STAR for Homes program claimed 36 percent of the market³ - energy efficiency in the commercial and industrial sectors remains weak. There are no LEED certified buildings in Newark, and only one LEED Gold in Neighborhood Design certification has been awarded in Newark.⁴ However, 17 LEED projects are currently registered for evaluation.

Cory Booker, Newark's mayor, wants to make Newark "the greenest city in the Garden State,"⁵ a goal that emphasizes on the creation of green collar jobs. To lead by example, the city has completed a greenhouse gas

Newark, New Jersey

Population: 277,140

Number of Businesses

(By Annual Revenue)

\$0 - \$1 million: 8,774

\$1 - \$5 million: 2,135

\$5 - \$10 million: 357

\$10 million+: 411

(By Employees)

0-9: 15,029

10-49: 2,061

50-99: 350

100-249: 202

250-499: 54

500+: 73

Largest Business Sectors

(Number of Establishments)

Healthcare: 2,637

Shopping and Stores: 1,935

Consumer Services: 1,434

Climate Zone: Humid subtropical

Energy Rates (cents/kWh)

Residential: 16.14

Commercial: 13.29

Industrial: 12.04

Green Building Council

LEED Certified Projects: 1

LEED Certified Pros: 12

Energy Efficiency

Scorecard Ranking

2009: 13th

2008: 10th

emissions inventory of their municipal buildings and will be retrofitting particularly inefficient structures.⁶

According to Stephanie Greenwood, the city's Sustainability Officer, Newark's relative lack of wealth is a major contributing factor to what has been a tepid market for "green"

"Green' in Newark is in its early stages."

- Stephanie
Greenwood,
Sustainability Officer
City of Newark

improvements. Greenwood notes that businesses considering environmentally friendly upgrades are most likely to make upgrades for the purpose of reducing operating costs, as opposed to doing so for environmentalist reasons. A small business in Newark would likely view making an upgrade that advances environmental interests at the expense of their business interests as an unaffordable luxury.⁷

In coming months, the City's Sustainability Office will use citizen and business input to begin creating and putting into place new city incentives and/or ordinances that will push businesses towards greening themselves. It is unclear what actual incentives and ordinances will result from this process. This process will take some time to come to fruition because, as Greenwood notes, "Green' in Newark is in its early stages."⁸

Existing Programs and Partners

In Newark, small businesses can choose from a wide range of incentives for energy-efficiency improvements through the New Jersey Clean Energy Program and its three sub-programs directly targeted to businesses:

- SmartStart Buildings
- Direct Install
- Pay for Performance

Among these three sub-programs, Direct Install is the only one that directly targets small businesses. Both SmartStart Buildings and Pay for Performance have minimum size standards in

terms of square footage and peak energy usage that will preclude many, but not all, small businesses from participation.⁹

Incentives in each program vary. Businesses can qualify for equipment improvement financing, including lighting and lighting controls, heating and cooling equipment, water heating, motors and variable frequency drives. Incentives are also available for insulation, shell improvements, and many other types of improvements that decrease energy demand. Qualified businesses may also receive per-watt incentives for the reduction of their total energy usage.

NJCEP's covers a portion of any given project's total cost, but does not pay for it entirely, and

Business Profile: D'Orsi's Bakery

D'Orsi's Bakery is a small, privately-owned business offering specialty baked goods made from scratch in central New Jersey. It was founded in 1960, and, until recently, was in desperate need of improvements to its outdated equipment. The bakery's original 400-square-foot oven was far too large for its needs, was highly inefficient and caused the bakery's natural gas bills to top \$10,000 annually.

Bakery owner Steve Cianci shopped for and found a newer, smaller, and more efficient oven that he wished to install. The total cost of purchasing and installing the oven would end up being \$36,675. However, Cianci used incentives under the SmartStart Buildings program to help him defray the financial burden. NJCEP approved his application, and he was awarded a total incentive of \$11,925 for the new oven, making his total cost for the project \$24,750.

Since the installation of the new oven, D'Orsi's Bakery is saving substantial sums of money on its utility bills. The new oven uses 3,030 therms of natural gas annually, which is 61% lower than the old oven. This represents a \$6,678 in savings annually for the bakery. When maintenance are added to the overall calculation, D'Orsi's Bakery will surpass the breakeven point on the project in 3.3 years.

Source: New Jersey Clean Energy Program. "D'Orsi's Bakery: Energy-Efficient Oven Takes the Cake." *New Jersey Clean Energy Program*. New Jersey Clean Energy Program, 2010. Web. 21 Apr. 2011.

<http://www.njcleanenergy.com/files/file/success_stories/Dorsis%20Bakery%20Success%20Story.pdf>.

total incentives are capped at a certain level, which differs from sub-program by sub-program.¹⁰

A notable feature of the NJCEP’s programs is that they all offer “cradle-to-grave” support. Program representatives assist each business from the beginning of their project (the audit) to the end of the project (the final installation). Additionally, NJCEP maintains an online list of contractors certified to perform energy-efficiency upgrades, along with their contact information in order to make the process easier for businesses.¹¹

Alternatively, a small business in Newark can seek new construction tax abatement. The city has broad authority to determine the size and purpose of these abatements. Historically,

Figure 5. Newark Energy Efficiency Programs

| | | SmartStart | Pay for Performance | Direct Install | Local Tax Abatement |
|---------------------------------|---------------|---------------|---------------------|----------------|---------------------|
| Funding Type | Cash Rebate | | | | |
| | Loan | | | | |
| | Tax Incentive | | | | |
| | Other | X | X | X | X |
| Uses | Building | X | X | X | X |
| | Equipment | X | X | X | |
| | N/A | | | | |
| Client | Owner | X | X | X | X |
| | Renter | | | | |
| | N/A | | | | |
| User Type | Commercial | X | X | X | X |
| | Residential | | | | |
| Targets Small Businesses | | Yes | No | Yes | No |
| Funding Source | | State Utility | | | City of Newark |
| Program Level | State | X | X | X | |
| | Municipal | | | | X |
| | Other | | | | |

abatements have been aimed at incentivizing economic development and local hiring, but the Mayor and Municipal Council may use them to push environmental or energy-efficiency improvements if they so choose.¹²

Recommendations

Newark businesses have access to a wide range of incentives for energy efficiency through the statewide Clean Energy Program, as well as tax abatements at the city level. Yet none of these incentives includes a financing tool for energy efficiency or green upgrades. We recommend a four-fold strategy:

- 1. Approach the New Jersey Clean Energy Program about adding value to existing state incentives.** While NJCEP has offered sizeable incentives, they rarely cover the entire cost of a project. CRF's loan can provide additional financing to larger-scale efficiency upgrades.
- 2. Coordinate with Newark Sustainability Office to leverage tax abatements for new construction projects.** Newark's tax abatement authority can be offered to businesses looking to green their operations. This, in addition to existing NJCEP incentives and CRF loan funds can create the best possible overall incentive and financing package for businesses.
- 3. Monitor policy changes at the City level for potential future business incentives.** The Booker administration has demonstrated a strong commitment to improving environmental conditions in Newark. To date, there are no city-level incentives directly aimed at businesses, but Newark is exploring its options. As a result, CRF should monitor these developments for opportunities to implement its efficiency loans in tandem with new city incentives.
- 4. Partner with a local Community Development Financial Institution (CDFI) to administer the loan.** Should CRF enter this market, it will become necessary to find a local CDFI to administer the loan. There are currently six certified CDFI's in the city of Newark: City National Bancshares Corporation, City National Bank of New Jersey,

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Greater Newark Business Development, Greater Newark Enterprises Corporation, New Community Federal Credit Union and St. James AME Federal Credit Union.

¹ U.S. Census Bureau. "United States - Fact Sheet." *American FactFinder*. U.S. Census Bureau, 2009. Web. 12 Apr. 2011. <http://factfinder.census.gov/servlet/ACSSAFFacts?_event=>>.

² Coakley, S. "New Jersey 2020 Project: Strategic Overview of Energy Efficiency." Lecture. *New Jersey Clean Energy*. Northeast Energy Efficiency Partnership, Inc. Web. 22 Feb. 2011. <<http://www.njcleanenergy.com/files/file/NEEP%20Presentation%208-12-08.pdf.>>.

³ Martin J. Swett B. Wein D. 2007. Residential Green Building; Identifying Latent Demand and Key Drivers for Sector Growth. University of Michigan, Master's Project. Accessed February 22, 2011 online at <<http://www.erb.umich.edu/Research/Student-Research/Full%20Report%20-%20Residential%20Green%20Building.pdf>>.

⁴ Martin J. Swett B. Wein D. 2007. Residential Green Building; Identifying Latent Demand and Key Drivers for Sector Growth. University of Michigan, Master's Project. Accessed February 22, 2011 online at <<http://www.erb.umich.edu/Research/Student-Research/Full%20Report%20-%20Residential%20Green%20Building.pdf>>.

⁵ Apollo Alliance. 2009. Imagining Newark's Green Future. Accessed February 22, 2011 online at <http://www.ci.newark.nj.us/userimages/downloads/green_GreenFutureSummit.pdf>.

⁶ "City of Newark, NJ - Green Newark." *City of Newark, NJ - Home*. Web. 07 Mar. 2011. <[http://www.ci.newark.nj.us/residents/green_newark/.](http://www.ci.newark.nj.us/residents/green_newark/)>.

⁷ Greenwood, Stephanie. "Green in Newark." Telephone interview. 2 May 2011.

⁸ Greenwood, Stephanie. "Green in Newark." Telephone interview. 2 May 2011.

⁹ New Jersey Clean Energy Program. "New Jersey's Clean Energy Program." *Home | NJ OCE Web Site*. New Jersey Board of Public Utilities, 2011. Web. 05 Apr. 2011. <<http://www.njcleanenergy.com/commercial-industrial/home/home>>.

¹⁰ New Jersey Clean Energy Program. "New Jersey's Clean Energy Program." *Home | NJ OCE Web Site*. New Jersey Board of Public Utilities, 2011. Web. 05 Apr. 2011. <<http://www.njcleanenergy.com/commercial-industrial/home/home>>.

¹¹ New Jersey Clean Energy Program. "New Jersey's Clean Energy Program." *Home | NJ OCE Web Site*. New Jersey Board of Public Utilities, 2011. Web. 05 Apr. 2011. <<http://www.njcleanenergy.com/commercial-industrial/home/home>>.

¹² Greenwood, Stephanie. "Green in Newark." Telephone interview. 2 May 2011.

Hartford, Connecticut

Connecticut's approach to energy efficiency is straightforward: energy efficiency is legislatively mandated. In 2007, the legislature passed a law that required all buildings built on or after January 1 of 2009, costing more than \$5 million and any renovation on or after January 1 of 2010, costing \$2 million, are made to meet or exceed the same standards as LEED silver rating (excluding multifamily buildings with four or more units).¹

An example of the energy conscious-thinking in Hartford is the Hollander Center renovation.² In 2009, partnership between Common Grounds, a non-profit housing developer, the City of Hartford, the Connecticut Department of Economic Development and the Connecticut Housing Finance Authority built the Hollander Center. The Hollander is the first LEED residential building in Connecticut with the first green roof in the City of Hartford. The Hollander is further ground braking because of its 70 units, 56 are below-market rate housing.

In addition, state-wide energy efficiency programs facilitated by utilities are targeted at residential, commercial, and industrial energy consumers. One of these programs, oriented toward small businesses and

Hartford, Connecticut

Population: 124,060

Number of Businesses

(By Annual Revenue)

\$0 - \$1 million: 8,807

\$1 - \$5 million: 1,256

\$5 - \$10 million: 203

\$10 million+: 260

(By Employees)

0-9: 10,486

10-49: 1,306

50-99: 211

100-249: 165

250-499: 46

500+: 80

Largest Business Sectors

(Number of Establishments)

Healthcare: 2,488

Legal Services: 1,621

Business Services: 907

Electricity Rates (cents/kWh)

Residential: 18.03

Commercial: 16.02

Industrial: 14.11

Climate Zone:

Green Building Council

LEED Certified Projects: 14

LEED Certified Pros: 79

Energy Efficiency Scorecard

Ranking

2009: 3rd

2008: 3rd

of interest to CRF, is the Small Business Energy Advantage Program. It provides small businesses with energy audits, cash incentives, and zero percent interest financing.

Traditional lenders in Hartford and the state may also provide financing for energy efficiency products. Among them is the Connecticut Community and Economic Development Fund (CEDF), which does a significant amount of small business lending throughout the state. They also provide small business development services to clients. It is likely that CRF's target market may already be captured by local small business lenders. The state-wide energy efficiency programs, including but not limited to the Small Business Energy Advantage program would be CRF's most direct competitor in Hartford.

Existing Programs and Partners

A small Hartford business interested in improving energy efficiency can choose from few state-wide programs that offer incentives and financial support, all of which are a subset of initiatives managed by the Connecticut Energy Efficiency Board (CEEB) and utility providers, and funded by the Connecticut Energy Efficiency Fund (CEEF). The CEEF is funded by a ratepayer fee and in 2010 boasted four dollars in energy savings for every one dollar spent.

In Hartford, a small business might first approach Connecticut Light and Power or Connecticut Natural Gas Corporation about participating in the Small Business Energy Advantage (SBEA) program, which is available to operations using a 12 month average peak demand of between 10 kW and 200 kW. The SBEA program offers energy assessments, recommendations, cash incentives, and financing. SBEA participants can expect cash incentives for about one-third of their recommended energy efficiency improvements. They can expect the remaining two-thirds be covered by a SBEA loan. SBEA loans offer zero-interest financing for amounts ranging from \$50,000 to \$100,000, a 36 month repayment term, and on-bill repayment.

The SBEA has been successful and is currently oversubscribed. Its budget for 2011 was based on serving approximately 1,000 small business clients. As of April 2011 it has over 2,000 participants. Utilities have made the SBEA program successful by marketing it through

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| Figure 6. Hartford Energy Efficiency Programs | | Small Business Energy Advantage | Energy Opportu-nities | FIRM | Express Rebates | Prime Manu-facturing | Retro Commi-ssioning |
|---|---------------|---------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| | | | | | | | |
| Funding Type | Cash Rebate | X | X | X | X | X | X |
| | Loan | X | X | X | | X | X |
| | Tax Incentive | X | X | X | | X | X |
| | Other | | | | | | |
| Uses | Building | X | X | | | | X |
| | Equipment | X | X | X | X | X | X |
| | N/A | | | | | | |
| Client | Owner | X | X | X | X | X | X |
| | Renter | X | X | X | X | X | X |
| | N/A | | | | | | |
| User Type | Commercial | X | X | X | X | X | X |
| | Residential | | | | | | |
| Targets - Small Businesses | | Yes | No | No | No | No | No |
| Funding Sources | | Energy Efficiency Fund | Energy Efficiency Fund | Energy Efficiency Fund | Energy Efficiency Fund | Energy Efficiency Fund | Energy Efficiency Fund |
| Program Level | State | X | X | X | X | X | X |
| | Municipal | | | | | | |
| | Other | | | | | | |

contractors, reaching out to businesses through trusted organizations, and going door-to-door in selected geographies. An example of how the SBEA program works is illustrated below in the

Energy Efficient Lending to Small Businesses: Assessing Opportunities in Hartford, Newark and Portland



Business Profile: World Fulfillment, LLC. The SBEA provided the necessary improvements, created a positive return, and did it all without interrupting work at World Fulfillment. The positive return, simplicity of on-bill repayment, and uninterrupted work make the SBEA program appealing to small business.

Slightly larger businesses that consume more energy might look to the some of CEEF's small industrial or commercial loans for financing, which range from \$2,000 to \$250,000. These loans

Business Profile: World Fulfillment, L.L.C.

The Story

World Fulfillment, L.L.C. is a packaging, shipping, and storage company. It specializes in providing clients with full-service services, including warehousing, distribution, custom packaging, and freight management.

World Fulfillment found that its lighting was inadequate and inefficient. It was old and didn't provide the necessary light required for employees to accurately do the detailed work that they needed to.

Improvements

Through the Small Business Energy Advantage (SBEA) program World Fulfillment was able to replace the lighting fixtures in its work spaces, increasing energy efficiency, reducing costs, and increasing brightness.

- Replaced 200 HID high-pressure sodium fixtures with 213 high-bay fluorescent units in warehouse work space
- Added 41 occupancy sensors
- Office, hallway, and receiving bay lighting upgrades

Benefits

- Reduced worker eye-strain
- Peak demand reduced by 44.9 kW
- \$26,374 per year savings
- SBEA contractors were applauded for not disturbing or slowing the work of World Fulfillment's employees
- Net monthly savings during loan period = \$80
- Net monthly savings after loan period = \$2,198

Source: "Connecticut Light & Power : Success Stories." *Connecticut Light & Power : For My Business*. North East Utilities Service Company, 2011. Web. 11 May 2011. <<http://www.cl->

are arranged through a third party lender and feature subsidized interest rates for the first \$100,000.³ Likewise, small businesses have financing options available through more traditional routes, like the Hartford Community Loan Fund (HCLF), CEDF, and community banks. The CEDF, which has been in operation since 1994 and manages a \$22 million loan pool, currently provides SBA loans with terms similar to the proposed CRF green loan. For instance, it offers a *Grow Your Business* loan. The *Grow Your Business* loan is an SBA 7(a) loan program that provides: a term loan or line of credit; payment tied to cash flow; up to a 10 year term, business development support; and at a rate of prime plus 4 percent.

Recommendations

In Connecticut, utilities serve as a one-stop-shop for small businesses looking to improve their bottom line by increasing energy efficiency. They reach out to and cater to small businesses in a way that has led to overwhelming success. Furthermore, other opportunities exist for small business to find financing, particularly through CEDF. As a result, we make three recommendations.

- 1. Learn from the SBEA program.** The Energy Efficiency Board and utilities of Connecticut have created an energy efficiency program for small businesses that is in relatively high demand. Simply put, it works.
- 2. Build a relationship with the SBEA program.** SBEA may be interested in working with third party lenders in the future, as utilities see this as a more efficient way to administer their program. See *Appendix III* for more details. Therefore utilities and the Energy Efficiency Board may be ready to hear from a third party lender. Furthermore, financing constraints within the SBEA program mean it cannot offer long-term loans for larger equipment. The SBA 7(a) loan program offered by CRF may be a way to fill this gap. All that said, such a relationship and lending arrangement, if at all possible, may take a long time to cultivate and see through to fruition. Spend your time and energy wisely.

- 3. Communicate with the Community and Economic Development Fund.** Given its extensive experience lending in and operating in Hartford, CEDF should have good advice about the viability of CRF's loan in the market. They also may be a potential partner to facilitate this loan should the utilities not want to partner.

¹ "Codes and Standards Committee Position Statement Sustainable Design Requirements Connecticut State Building Code." *ct.gov*. The State of Connecticut, 27 May 2009. Web. 7 Mar. 2011. <http://www.ct.gov/dps/lib/dps/office_of_state_building_inspector_files/position_statement_pa-07-242-sustainable_design_requirements_5-27-09.pdf>.

² "Bett Ruth and Milton B Hollander Foundation Center." *Common Ground.org*. Common Ground, 2011. Web. 11 Apr. 2011. <http://www.commonground.org/?page_id=373>.

³ The Connecticut Light and Power Company, The United Illuminating Company, Yankee Gas Services Company, Connecticut Natural Gas Corporation, and The Souther Connecticut Gas Company. *2011 Electric and Natural Gas Conservation and Load Management Plan*. Rep. 1 Oct. 2010. Web. 20 Mar. 2011.

Going Forward

This analysis provides an overview of existing programmatic infrastructure in three markets where CRF would like to expand its energy efficiency loan program. The next step for CRF is to consider how it might distinguish its loan product in places like Portland, Hartford and Newark where existing programs already have a foothold.

Potential barriers in each market include the following:

- ***Proliferation of SBA qualified lenders:*** In Portland, for instance, at least 19 traditional banks offer SBA 7(a) loans, and a handful of those lenders cater to small or minority owned businesses – precisely the same clients CRF targets.¹ In Connecticut, 89 lenders are approved to offer SBA 7(a) loans.² And in New Jersey, 824 SBA 7(a) loans and 504 loans were administered in fiscal year 2011.³ Furthermore, some traditional banks in each market waive fees, offer interest only-payments or other perks on similar, non-government loans.
- ***Repayment difficulties:*** Small business clients prefer on-bill repayment because it streamlines loan payments. Utilities increasingly view this mechanism as a way not only to ease repayments, but also to attract new clients who are looking for a “one-stop shop” for green financing. However, SBA 7(a) loans are difficult to apply to on-bill financing options.
- ***Major market penetration:*** In each market, most notably Hartford, existing programs dominate the market.

To carve out a niche for CRF’s loan product, it might consider doing the following as it moves into new markets:

- ***Form partnerships where CRF plays a “value-added” role:*** Research and anecdotal evidence demonstrate that financing packages that draw on a number of sources, including loans and rebates, have proven successful in certain markets.⁴ In Hartford, Portland and Newark, some form of green financing exists; however, programs in

these three markets share the common problem of not being able to meet demand for financing for small businesses. In Portland, this is a chronic issue for the Green Features Grants program, which cannot serve all potential clients due to legal restraints. And in Newark, existing financing does not cover larger investments. As a result, CRF's loans might be most successful if the organization is willing to be a secondary or "value-added" loan product in tandem with existing products.

- **Frame a target market:** Successful green financing ventures typically focus on one *product* such as utilities, or one *market*, such as small businesses. That being said, small businesses can range from operations with one or two employees to firms that make more than \$1 million in revenues annually. CRF will have to carefully consider the needs of clients in each market. For Portland, it may be focusing its efforts entirely on those locally-owned firms that do not have the time or resources to apply for the larger state programs. In Hartford, it may involve rethinking CRF's role as a third-party lender as utilities push to outsource the burden of administering loans.
- **Reduce risk to the customer:** Customers are more likely to participate if they understand the long-term benefits of a CRF loan. To differentiate itself from other loan products, CRF should consider offering its clients an energy use guarantee.

Finally, this initial report opens opportunities for additional research. To further explore next steps, CRF might research the following:

- How CRF's product fits into the larger landscape of federal grants, loans and other programs meant to boost energy efficiency.
- How CRF can leverage the grants it has been given to administer loans in Portland, Hartford and Newark to the biggest financial advantage.
- How CRF can learn from best practices in green financing marketing.

¹ "SBA Lenders." *Sba.gov*. Small Business Administration, 2011. Web. 11 Apr. 2011. <http://www.sba.gov/sites/default/files/Lenders%20for%20PDO_2011.pdf>.

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² "Active SBA Lenders in Connecticut." *Sba.gov*. Small Business Administration, 7 Mar. 2011. Web. 11 Apr. 2011. <<http://www.sba.gov/sites/default/files/CT%20Lenders%203%207%202011.pdf>>.

³ "Active SBA Lenders in New Jersey." *Sba.gov*. Small Business Administration, 7 Mar. 2011. Web. 11 Apr. 2011. <<http://www.sba.gov/sites/default/files/NJ%20Lenders%203%207%202011.pdf>>.

⁴ Brown, Matthew H., and Beth Conover. *Recent Innovations in Financing for Clean Energy*. Rep. Boulder: Southwest Energy Efficiency Project, 2009. Print.

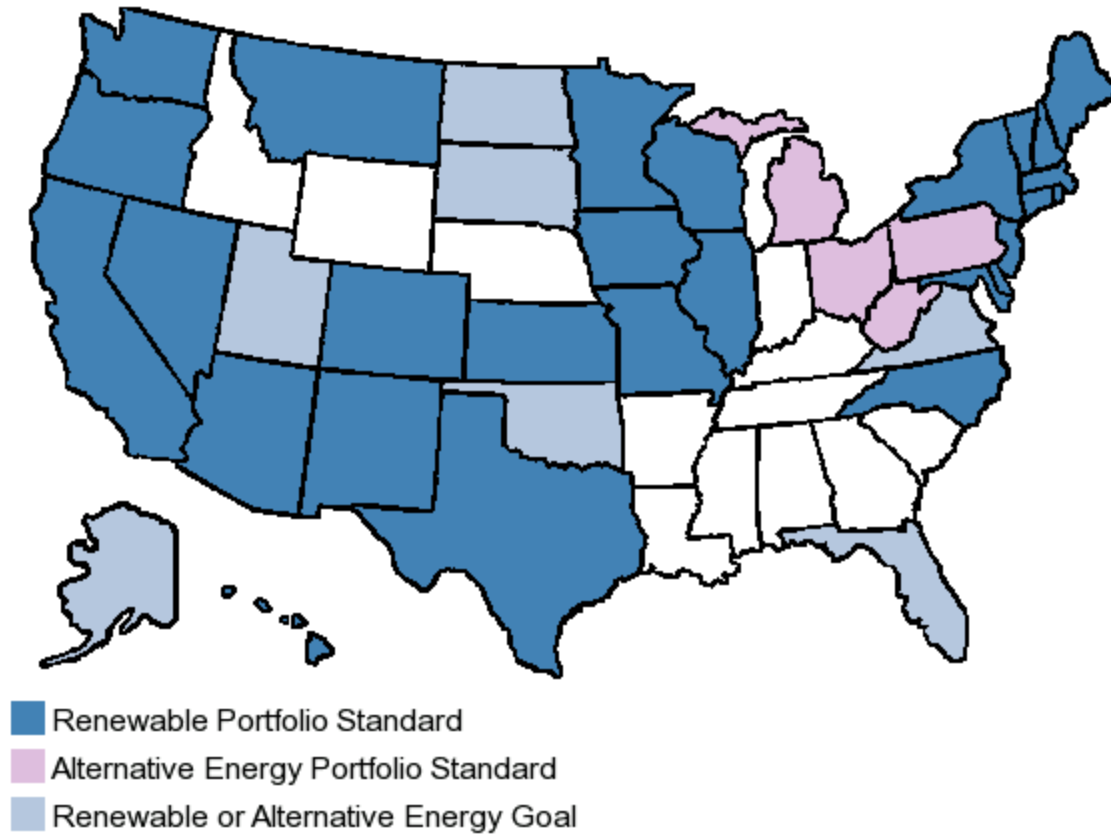
Appendix I: Energy Efficiency Financing

Figure 7. Advantages and Disadvantages of Financing Models

| Model | Pros | Cons |
|---|---|--|
| Traditional Debt (Loans or Bonds) | <ul style="list-style-type: none"> • Mature and widely available financing vehicle | <ul style="list-style-type: none"> • Medium to high interest rates • Limits project payback to owner's holding period |
| Shared Savings | <ul style="list-style-type: none"> • Aligns incentives for deepest energy savings possible | <ul style="list-style-type: none"> • Large risk profile for ESCOs (e.g., utility rate increases) • More likely to lead to M&V disputes |
| Tax-Exempt Lease Purchase Agreement | <ul style="list-style-type: none"> • Low rates due to income tax exemption for financier • Considered an operating rather than capital expense • No debt concerns, need for taxpayer/legislative approval | <ul style="list-style-type: none"> • Only available to public organizations • Limits project payback to owner's holding period |
| Capital Lease | <ul style="list-style-type: none"> • Allows deductions for depreciation & interest payments | <ul style="list-style-type: none"> • May create balance sheet or debt concerns • Limits project payback to owner's holding period |
| Lease or Bond Pools | <ul style="list-style-type: none"> • Lowers rates and reduces transaction costs | <ul style="list-style-type: none"> • May delay projects to reach sizeable package • Requires legislative approvals |
| Tariff-Based On-Bill Financing (OBF) | <ul style="list-style-type: none"> • No long-term debt, balance sheet, collateral concerns • Financing is linked to meter, not owner, and transfers with property ownership or tenant turnover • Streamlined collections and link to utility incentives | <ul style="list-style-type: none"> • Difficult to include fuel savings from multiple utility providers (electricity, natural gas) • Requires regulatory approval & public benefit funding • Outside traditional utility expertise and business model |
| Tax-Lien Financing (PACE) | <ul style="list-style-type: none"> • No long term debt/balance sheet concerns • Transfers with property ownership or tenant turnover • Low rates due to low lender risk (senior lien position) • Solves owner/tenant problem along with triple net lease • Possible tax deduction benefit to borrower • "Commoditization" leverages markets to scale capital inflow | <ul style="list-style-type: none"> • Immaturity: lack of awareness, experience, standards • Requires enabling state legislation • Requires significant municipality training & creation of program administration infrastructure • Potential opposition from first mortgage holders • May not apply to property tax exempt entities |
| Power Purchase Agreements | <ul style="list-style-type: none"> • 3rd party owner maintains system to maximize output • Stable power price provides valuable hedge against volatility | <ul style="list-style-type: none"> • A risk of 3rd party's financial stability • Lose direct tax benefits, renewable energy credits |
| Energy Efficient Mortgages | <ul style="list-style-type: none"> • Low cost capital linked to full property purchase rather than to clean energy measures and equipment alone • Long contract terms allows deep energy savings and incorporation of longer payback measures | <ul style="list-style-type: none"> • Immaturity and lack of availability • Narrow window of opportunity (time of resale, refinance) • Limits project payback to owner's holding period • Only covers measures "affixed to property" |
| Finance Model "Superchargers" | Performance Contracting | <ul style="list-style-type: none"> • Savings guarantees overcome skepticism amongst owners • Lowers rates due to reduced risk for both building owner and lenders • Focuses and streamlines process for developing, implementing, and verifying projects |
| | Green Lease Structures | <ul style="list-style-type: none"> • Tenants both incur cost and reap the benefits of energy savings |

Source: Supple, Derek. *Financing Models for Energy Efficiency and Renewable Energy in Existing Buildings*. Issue brief. Johnson Controls, 2010.

Figure 8. States with Renewable and Alternative Energy Portfolio Standards



Source: "Renewable & Alternative Energy Portfolio Standards | Pew Center on Global Climate Change." *Pew Center on Global Climate Change | Working Together ...Because Climate Change Is Serious Business*. 7 Apr. 2011. Web.
<http://www.pewclimate.org/what_s_being_done/in_the_states/rps.cfm>.

Figure 9. Sample Marketing Budgets for Energy Efficiency Programs

| Marketing Cost Category | Residential Programs (% of Total Marketing Budget) | Non-residential Programs (% of Total Marketing Budget) |
|---|---|---|
| Market Research and Creative Development | 15% | 15% |
| Web Related | 10% | 10% |
| Mass Media (i.e. Radio, TV & Print) | 25% | 10% |
| Direct mail, bill stuffers, etc. | 10% | 10% |
| Marketing Collateral (i.e. Brochures, point-of-purchase displays) | 20% | 25% |
| Recruiting and Training Allies | 20% | 30% |

Source: Lemoine, Peter. "Rapid Deployment Energy Efficiency (RDEE) Toolkit: Planning & Implementation Guides." U.S. EPA, 9 Dec. 2009.
<http://www.epa.gov/cleanenergy/documents/suca/rdee_toolkit.pdf>.

Appendix II: Portland, OR - Detailed Program Descriptions

Oregon Department of Energy: Business Energy Tax Credits

Oregon's energy department offers a highly structured tax credit program meant to help small, medium and large businesses become greener. Credits are available to businesses that "invest in energy conservation, recycling, renewable energy resources and less-polluting transportation fuels."¹

Target market

Trade, business or rental property owners are eligible –anyone who pays taxes on a business site. Owners can also be non-profits, tribe or public entities that partner with Oregon businesses. Generally speaking, businesses that take advantage of this tax credit are large either in number of employees or by annual revenue. The process to apply is time consuming and requires resources that small, locally-owned businesses typically don't have.

Program features

Tax credits cover all costs directly related to the project, including equipment, engineering, design fees, materials, and installation costs. Loan fees and permit costs may also be claimed. However, businesses looking to use these loans to replace equipment at the end of its useful cycle are ineligible for the program. Credits are divided into different categories, two of which are relevant to CRF's goals:

- *Renewable Energy Credits:* These credits cover 50 percent of a project's cost, and can be applied to projects that include High Efficiency Combined Heat and Power, Renewable Energy Resource Generation and Renewable Energy Resource Equipment Manufacturing Facilities.

Credits are available in three tiers:

- Less than \$500,000;
- between \$500,000 and \$6 million;

- or greater than \$6 million.

Eligibility Requirements:

- Applicants must be a trade, businesses or rental property owner with a site in Oregon;
 - an Oregon non-profit, tribe or public entity that partners with an Oregon business;
 - owner or the contract buyer of a facility in question;
 - use the equipment, or lease it to another person or business in Oregon;
 - and not have started construction.
- *Energy Conservation Credits:* These credits are for smaller scale projects, including firms that are retrofitting HVAC, lighting, insulation, etc. To qualify, projects must be 10 percent more efficient than the existing installation. Credits cover 35 percent of the project's cost, and most are redeemed over five-to-eight years. Very small projects – valued at less than \$20,000 – may use the entire credit in the first year.

Oregon Department of Energy: State Energy Loan Program (SELP)

Oregon's energy department also offers loans meant to businesses become more energy efficient. Businesses eligible for the tax credit program can also apply to the loan program.

Target Market

The program is far more flexible than the state's tax credit program. Loans are available to businesses, residents, schools, cities, state and federal entities, among other organizations.

Program features

Many projects are eligible, including lighting improvements, weatherization projects, wind and solar systems, HVAC upgrades and recycling programs. The loans cover most project costs, including: engineering and design; permitting; loan fees; project commissioning; general construction; and for matching funds or grants.

- Loans range from \$20,000 to \$20 million. Terms can last as few as 5 years and up to 20 years or longer depending on the payback period and the energy saved by the project.

Loans are usually structured so that repayments are made using dollars saved from increased energy efficiency or from new income from the project.

- Loan rates are based on bond rates and are fixed for the full term of the loan. Loan fees vary, and can be paid out of the loan funds.

Portland Development Commission's Green Features Grants (GFG)

This program began in 2009 as a pilot program meant to help Portland's small businesses green their operations. The program provides cash reimbursements for relatively small projects that have a big impact on cash flow and on reducing carbon emissions. Funds are available through the City's tax increment financing strategy (TIF), and therefore must be used for infrastructure improvement.

Target Market

These grants are specifically targeted at small, emerging businesses that might otherwise not have access to cash to adopt green technologies; grants are given based on need and the desire to adopt green practices. GFGs are only available to businesses with fewer than 50 employees and fewer than five stores nationwide, and they must be located in the Interstate Corridor and the Lents Town Center Urban Renewable Areas. Furthermore, businesses must either own their building or have express consent from the building owner to conduct upgrades.²

As program director Stephen Greene explained in an interview, he's looking for businesses that show promise; if they learn how to incorporate economic and environmental sustainability into their business model now, they're more likely to carry that forward. "The future is in the smaller firms," he said. "They're going to be the future, so we should get them now, not later."

The Cherry Sprout Produce grocer is a classic example of the type of business these grants are meant to fund. The store used a grant to install "night shades" over their produce overnight. The shade prevented the store's cooler from working as hard overnight, all while keeping fruits and vegetables fresher longer.³ Other grantees have included a music school and a design firm.

Program Features

| Figure 10. Uses of Green Features Grants | |
|--|--|
| GFG – Yes | GFG – No (but outside financing OK) |
| Energy use - reducing equipment | Ongoing administration |
| Storm-water management systems | Purchase of energy efficient lighting |
| Water conservation systems | Purchase of energy efficient appliances |
| Solar power generation systems | Purchase of environmentally friendly cleaning products |
| Green roofs | Purchase of carshare memberships |
| Composting facilities | Maintenance costs |
| Heat recapture systems | Working capital |

The GFG program does not base grants on a prescribed list of technologies as other Oregon-area programs do. Rather, each upgrade package is tailored to meet the client’s needs.

- Businesses first work the Portland’s BEST Business Center (see below) to get a free energy audit and list of potential upgrades that will help the businesses save money and energy. This is a crucial step in the process, says Greene because one of the things that put businesses under is growth. “We’ve found that if they talk with BEST early, businesses come away early with the idea that there’s a cost in *not* going green.”
- The business then applies for a Green Features grant. These grants can be up to \$50,000, though any amount over \$25,000 must be matched at a 1:3 ratio of private investment. These are not direct reimbursement grants. Rather, applicants get a loan through local CDFI Albina Community Bank, and then use loan to complete the upgrade. The Portland Development Commission then reimburses the bank, not the grantee. The system has the added benefit of helping the grantee develop better credit which, in turn, will help them get bigger loans in the future.
- The GFG program faces two financing challenges. First, only projects in specific neighborhoods can be funded. As a result, Greene is constantly looking for additional partners to help finance projects he cannot. Furthermore, GFG funds are legally bound

to support only infrastructure projects, though outside financing can be used for other upgrades. Below are some examples of the types of projects the grants fund.⁴

Marketing

Greene has focused less on traditional marketing and more on developing relationships and referrals with people in the two communities that the GFG program serves. This is especially necessary when reaching out to minority business owners that Greene's program aims to accommodate. People of color aren't going to "head downtown" to find financing for their projects, he said. "They have a general aversion to working with the city." As a result, Greene has spent a lot of time developing "spheres of influence" – identifying trusted organizations and community leaders that can help spread the word about the GFG program.

Measurements of Success

Greene measures program success by dollars leveraged. Since 2009, more than \$400,000 has been invested in the program, along with \$1.3 million in private investment – about \$3 for every \$1 the city puts into the program.

Clean Energy Works Oregon

Clean Energy Work Oregon (CEW) is in the process of growing. It started as a non-profit focused only on Portland, but has now expanded to the entire state thanks to a \$20 million DOE grant. Within the next three years, CEW aims to broaden its offerings to small commercial businesses as well. CEW is a key partner in the City of Portland and Multnomah County Climate Action Plan 2009.

Target Market

Currently, CEW focuses on residential construction. To date, more than 500 homeowners are participating in the program. Though CEW focuses primarily on residential construction, it has a goal to retrofit 3.5 million square feet of commercial buildings by 2013.

Program features

Clean Energy Works Oregon provides loans to homeowners to help them retrofit energy inefficient structures. Loan sizes vary depending on the complexity of the work, the expected

energy savings and homeowner income. Among other partners, Energy Trust of Oregon recruits and qualifies homeowners to participate (see “Potential Partners: Oregon” for more details). ShoreBank Enterprise of Cascadia, a certified CDFI, funds the home improvement loans.

- Basic weatherization are offered with no money down, no financing fee, and a 7.99 percent APR. Loans for deeper retrofits are offered at 5.99 percent APR. Customers 250 percent of the federal poverty level and below can secure loans at 3.99 percent APR.
- Loan amounts are based on how much energy a retrofit can save and how much a homeowner is willing to spend. Loans range from \$4,300 for a basic weatherization package to \$19,850 for broader energy efficiency upgrades, so long as they provide 30 percent energy savings.
- Loan repayments are included on energy bills. Payments are closely matched with expected retrofit energy savings to ensure homeowners are never saddled with bills bigger than they can afford.

Added perks include an instant \$3,700 rebate for projects expected to product higher energy savings, and initial audits that can be paid for with the loan.

The Energy Trust of Oregon

The Energy Trust of Oregon is a non-profit formed to administer state utility residential energy efficiency rebates and incentives required by law. Customers of PGE, NW Natural, Pacific Power and Cascade Natural Gas pay a small amount on each utility bill that is funneled to Energy Trust. That money is reallocated in the form of energy efficiency programs and rebates to consumers.

In addition to administering efficiency incentives, Energy Trust of Oregon partners with Clean Energy Works Oregon to screen potential clients for that organization’s efficiency programs.

Target market

Funding is targeted to both homeowners and businesses looking to upgrade their equipment or do major retrofits. Incentives come in the form of cash or rebates, and are offered to myriad new and existing businesses, including restaurants, laundromats, grocery stores, and health care facilities.

Program features

Energy Trust of Oregon has an array of cash incentives and rebates for businesses looking to green their new or existing operations. Financing come in several forms:⁵

- Businesses interested in developing a whole-building energy model can apply for an incentive that covers 50 percent of the costs, and does not exceed \$25,000.
- Restaurants can pick from cash incentives that range from \$3 to \$1,300 for energy efficient upgrades to faucets, fryers, cookers, and dishwashers, among other things.⁶ A variety of cash incentives are also available for newer, more efficient display cases and heating and cooling equipment depending on the scope of the project.
- Nearly any business can take advantage of these cash incentives, which cover wind and solar power installations, heating and cooling upgrades, new insulation, and biopower, among other things.

Portland's BEST (Businesses for an Environmentally Sustainable Tomorrow) Business Center

Portland's BEST describes itself as a "one stop shop for businesses in Portland that want to become greener and more profitable."⁷ The organization is a partnership of city and regional governments and energy utilities, including the City of Portland Bureau of Planning and Sustainability, the City of Portland Water Bureau, Pacific Power, Portland General Electric, etc.

Unlike other organizations listed in this report, BEST does not offer any direct financing. Rather, it provides streamlined, free access to energy and conservation evaluations, access to conservation experts and financial incentives for Portland-area businesses. For instance, a small business will contact BEST and ask for an energy assessment; a member of BEST's staff will conduct the work and collaborate with BEST's technical staff to come up with an upgrade plan tailored to that business's needs. BEST will also provide information on where the business can get financing, such as the GFG offered by the Portland Development Commission.

Albina Community Bank

There are numerous banks in Portland and in Oregon that are SBA approved lenders. Among them is Albina Community Bank, which offers SBA 7(a) and 504 loans. In addition to partnering

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with the GFG program to help small businesses finance energy efficiency projects, Albina offers several products that would be attractive to the same clients CRF would be targeting in the Portland market. Among them are:⁸

- Working Capital Lines of Credit: interest only payments due monthly; 1-1.5 percent annual fee.
- Equipment Loans: fully amortized, rates fixed for life, 1.5-3 percent upfront fees.
- Microenterprise loans: targeted at small, emerging, women and minority-owned businesses; line of credit up to \$50,000.

¹ "ODOE: Information for Businesses Business Energy Tax Credits." *Oregon.gov Home Page*. Web. 11 May 2011. <<http://www.oregon.gov/ENERGY/CONS/BUS/BETC.shtml>>.

² "Green Features Grant Program: Guidelines and Requirements." *Pdc.us*. Portland Development Commission, 6 Sept. 2010. Web. 11 Apr. 2011. <http://www.pdc.us/pdf/bus_serv/greenfeatures/Green-Features-Grant-Guidelines.pdf>.

³ *Green Features Grant Program*. Portland Development Commission, 2011. Web. 11 Apr. 2011. <http://www.pdc.us/bus_serv/greenfeatures.asp>.

⁴ "ODOE: Information for Businesses Business Energy Tax Credits." *Oregon.gov Home Page*. Web. 11 May 2011. <<http://www.oregon.gov/ENERGY/CONS/BUS/BETC.shtml>>.

⁵ "Create a Better Climate for Business." *Energy Trust of Oregon*. EnergyTrust.org, 2011. Web. 11 May 2011. <<http://energytrust.org/business/>>.

⁶ "Program Information 194F Incentives—Lodging and Foodservice Equipment Existing Buildings." EnergyTrust.org, 1 Feb. 2011. Web. 11 Apr. 2011. <Program Information 194F Incentives—Lodging and Foodservice Equipment Existing Buildings>.

⁷ *BEST Business Center - Home*. City of Portland, Oregon, 2011. Web. 11 Apr. 2011. <<http://bestbusinesscenter.org/>>.

⁸ "Lending Products and Services." Albina Community Bank, Nov. 2010. Web. 11 Apr. 2011. <[http://www.albinabank.com/Slip%20-%20Lending%20Products%20\(rev%2011.2010\).pdf](http://www.albinabank.com/Slip%20-%20Lending%20Products%20(rev%2011.2010).pdf)>.

Appendix III: Hartford, CT – Program Details

Connecticut Energy Efficiency Fund

The following is a list of available programs sponsored by the Connecticut Energy Efficiency Fund (CEEF) for industrial and commercial energy users, excluding new construction related incentives. CEEF is a rate payer fund established in 1998, and is monitored by the Connecticut Energy Efficiency Board and the Connecticut Department of Public Utility Control. The Energy Efficiency Board works with utility providers to meet energy efficiency goals mandated by the Public Utility Board, including kilowatt demand and cost reduction.

The utility providers of Connecticut, both natural gas and electric, facilitate the energy efficiency programs created in cooperation with the Energy Efficiency Board and their expert consultants, the Strategic Energy Group. The utilities administering these programs in Hartford are the Connecticut Natural Gas Company and Connecticut Light and Power (electricity utility).

The 2010 Annual Legislative report claims that in 2010 these programs served nearly 6,000 commercial and industrial customers, saving an estimated 162 million kWh annually, amounting to 25.4 million dollars. The estimated lifetime savings of this is 2.1 billion kWh and 326.2 million dollars.¹

While CEEF administers a range of programs, below are details of those most relevant to CRF's interests:

Small Business Energy Advantage Program (SBEA) and SBEA Loans for Small Businesses and Municipalities²

Target Market

Small businesses using an average 12 month peak demand of 10 kW and up to 200 kW can qualify for this program. Uses are limited to non-new construction.

Program Features

- Businesses first work with contractors registered and trained by SBEA to do an energy assessment.
- The contractor then files this assessment, which includes an array of possible efficiency upgrades, with the utility provider: energy efficient lighting, HVAC systems, refrigeration, water heating, and process related equipment.
- Once the utility provider approves the assessment the business owner will receive the assessment, including all possible financial incentives, financing, rebates, and deductions.
- The usual package includes 1/3 cash incentives and 2/3 financing. Financing offers:
 - Amounts of \$500 to \$100,000
 - Zero percent interest
 - On-bill repayment
 - 36 month terms

Marketing

As with other CEEF programs utilities advertising SBEA. While information about the program is on utility websites and on the CEEF site, there is also direct outreach to customers. Rather, SBEA program approved and trained contractors offer free energy assessments to entice businesses to participate. Businesses may also call the utility and request a contractor visit their site.

Connecticut Light and Power has taken promotion of the SBEA program even further. They reach out to businesses that would not normally participate by working with business associations. For instance, to gain the trust of Latino businesses owners, Connecticut Light and Power reached out to Latino business association. Another strategy is to involve municipalities and target neighborhoods, going to door-to-door, identifying businesses that would benefit greatly.³

Measurements of Success

As of April 2011 the SBEA program was oversubscribed for the year. For example, Connecticut Light and Power was budgeted to serve 1107 SBEA customers for the year 2011, but already has over 2000 customers with projects in various stages of completion.⁴ The utilities must adjust the amount of money they can provide each project to meet customer demand as the year goes on. This oversubscription requires that Connecticut Light and Power fund projects to a lesser extent with cash incentives. However, they still provide financing for the remaining project costs. In particular, the SBEA program has had great success with small chains and franchised establishments. Success stories are published on the Connecticut Light and Power website.⁵

Energy Opportunities⁶

Target Market

This program serves all commercial, industrial, or municipal customers who are currently undergoing a building or equipment retrofit. Electrical users paying commercial or industrial electricity rates and natural gas users paying firm or industrial rates qualify.

Program Features

- Utility experts work with customers to identify available energy efficient technologies and financial incentives, which may include cash rebates, zero percent financing, or subsidized interest rate financing.
- The customer and utility agree on a specific slate of technologies, and a contract is signed before any retrofits are ordered.
- The customer will not receive incentive payments until the retrofit is completed and the utility company has inspected the work.

Express Rebates

Target Market

Rebates allow customers to implement small scale improvements without the hassle of going through rigorous inspections, applications, or approvals.

Program Features:

The rebates are fixed amounts, provided on a per-unit basis. They are paid directly to customers after they install pre-designated measures using qualified, licensed contractors.

Rebates include:

- the Cool Choice Rebate for HVAC improvements;
- the Vending Machine Rebate Program for vending machines;
- the Lighting Rebate for energy efficiency lighting improvements;
- and the Midnight Turn-off Option Street Lighting rebate for programmable photocells in outdoor lighting fixtures.

FIRM Commercial Natural Gas Users Rebates⁷

Target Market

This program offers rebates for firm-rate natural gas users. Rebates can be used for new natural gas food service equipment including deep-fryers, steamers, convection ovens, and other ENERGY STAR qualified equipment.

Program Features

- Rebates are available for natural gas deep-fryers, natural gas steamers, and natural gas convection ovens in the amounts of \$750, \$750, and \$500 respectively.
- Customers are responsible for purchasing and installing the equipment, and must submit receipts and fill out a utility company questionnaire before getting the rebate.

PRIME⁸

Target Market

PRIME is for industrial and manufacturing customers.

Program Features

- To apply for the program, companies must be preapproved by a PRIME program administrator
- The amount and type of financing available depends on the cost of the upgrades and the amount of energy saved by the upgrades.

Retro Commissioning⁹

Target Market

This program is for customers on commercial or industrial electrical rates, and/or firm or industrial natural gas rates. Customers must own a building greater than 100,000 square feet, have a building energy management system with trending capabilities, and have an ENERGY STAR benchmark.

Program Features

- A registered retro-commissioning engineer will work with the utility and the customer to identify energy saving measures.
- A contractual agreement will be signed by the utility and customer before the commissioning begins.
- After the commissioning is completed, building operations staff is trained to maintain the building, and the incentive payment is made to the building owner.

Small Commercial and Industrial Loans¹⁰

Target Market

This loan program is for those businesses that do not qualify for the Small Business Energy Advantage program such as larger commercial and industrial firms.

Program Features

- Loans are available for improvements costing between \$2,000 and \$250,000. Interest rates are subsidized for the first 100,000 dollars of financing, and must be paid-off within 60 months.
- Loans are financed by utility companies and facilitated by a third party lender. In some cases the Energy Efficiency Fund subsidizes these loans by buying down interest rates. Starting in 2011, customers will be able to receive both subsidized financing and rebates.¹¹

Energy-Efficient Commercial Building Tax Deductions¹²

Target Market

This tax deduction is available to new buildings that do not rely on renewable energy, multi-family residential buildings with more than three stories above grade, building additions, and new systems and equipment in existing buildings.

Program Features

This program offers a tax deduction of \$1.80 per square foot for whole building improvements and new buildings that reduce their energy use by 50 percent compared to similar buildings. A \$.60 per square foot deduction is available for those that make improvements in lighting, HVAC, or building envelope.

2011 Comprehensive Initiative

This program is sponsored by Connecticut Light and Power and United Illuminating Company, and encourages businesses to conduct more comprehensive energy efficiency improvements.

This new initiative offers a financial incentive for the lesser of:

- 50 percent of installed cost;
- buy-down of the project to a 2-year payback (based on savings at the customer's meter);
- or avoided energy cost (1 year) – up to \$0.50 per annual kWh and \$700.00 per summer peak kW combined.

The initiative includes some stipulations. For instance, no single measure can account for over 85 percent of the projects energy savings and the summer peak demand savings.¹³

Future possibilities of the Energy Efficiency Fund

The Energy Efficiency Fund and participating utilities are constantly creating new financing programs to better serve their customers. Of note is a 2010 energy efficiency financing program for home owners that tapped third-parties to originate and service loans. This program used Energy Efficiency Fund capital, but the loans were originated and serviced by third parties. The

utilities are now seeking to continue this loan program and use a third party to supply the capital in addition to originating and servicing loans; utilities cite the cost savings as the desire to outsource loan administration.

This program would use some form of a partnership of equity investors - likely an LLP - with the Pennsylvania Treasury as the majority investor because of its experience doing the same in Pennsylvania. The loans would then be bundled, securitized, and sold on secondary markets by the treasury.¹⁴

Utilities have been asked if they would be willing to create a similar arrangement for small business lending. One utility, the United Illuminating Company has said they would like to, but they are not sure that they could achieve the same cost savings because the Small Business Energy Advantage Loan uses on bill repayment.¹⁵ On-bill repayment is a key perk in Connecticut's energy efficiency financing programs. This suggests that the Energy Efficiency Board and utilities may be open to the possibility of arranging a third party lender for future loan programs.

Existing Small Business Lenders

Hartford Community Loan Fund¹⁶

Since 1997, the Hartford Community Loan Fund (HCLF) has been helping Hartford-area businesses improve their operations. Currently, the organization is turning its focus to residential clients because many of its lending partners, which traditionally have been banks, are no longer interested in providing loans to small businesses. Furthermore, HCLF has become squeezed out of the small business lending market by the Economic and Community Development Fund (below).

Still, the organization continues to provide commercial lending, typically construction loans, for businesses that approach them. And with the organization's long-standing ties to the community, considerable client base and extensive lending experience, it may be an ideal resource for CRF as it launches its new loan program in Hartford, as it has considerable

experience lending and partnering with other lending institutions, has a wide network of clients, and is well-known in the community. HCLF have originated \$14 million in loans, and leveraged \$20 million in lending through partner lending institutions.

HCLF has previously considered creating a small business lending program for energy efficiency improvements. But as Stephen Borla, loan administrator at Community Loan Fund said, "it is hard, at this point to get a clear enough sense of what the payback [on energy efficiency improvements] is going to be." They are fearful of originating loans based on the recommendations and projected savings of improvements.

Community and Economic Development Fund

The Community and Economic Development Fund (CEDF), which has been in operation since 1994 and manages a \$22 million loan pool, currently provides SBA loans with terms similar to the proposed CRF green loan. It has an impressive list of lending partners, including Connecticut Housing Finance Authority, The Bank of America, and J.P. Morgan Chase Bank, and a similar mission to CRF's: to service low-and-moderate income clients.¹⁷

An example of an SBA 7(a) loan they provide is the *Grow Your Business Loan*. It provides the following.¹⁸

- A term loan or line of credit
- Payment tied to cash flow
- Repayment terms of up to 10 years
- Business development support
- At a rate of prime plus four percent
- Requires an annual 100 dollar contribution to business development support services
- To qualify must be in a target community (which Hartford is) or must have less than 87,500 dollars in personal household income

The CEDF would appear to be a good partner for CRF because of their large capacity, their existing partnerships, their experience, the business development support services they

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provide, and their mission driven focus. However, the organization's similar loan product may pose a challenge to partnering.

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⁷ "Food Service Rebate Program." *Connecticut Natural Gas*. Connecticut Natural Gas, 2011. Web. 11 Apr. 2011. <<http://www.cngcorp.com/YourBusiness/EnergyConservation/FoodServiceRebate.html>>.

⁸ "Connecticut Light & Power : PRIME." *Connecticut Light & Power : For My Business*. North East Utilities Service Company, 2011. Web. 11 Apr. 2011. <<http://www.cl-p.com/business/saveenergy/services/prime.aspx>>.

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¹⁰ "Connecticut Light & Power : C&I Energy Efficiency Loans." *Connecticut Light & Power : For My Business*. North East Utilities Service Company, 2011. Web. 11 Apr. 2011. <<http://www.cl-p.com/business/saveenergy/financing/smallloans.aspx>>.

¹¹ The Connecticut Light and Power Company, The United Illuminating Company, Yankee Gas Services Company, Connecticut Natural Gas Corporation, and The Souther Connecticut Gas Company. *2011 Electric and Natural Gas Conservation and Load Management Plan*. Rep. 1 Oct. 2010. Web. 20 Mar. 2011.

¹² Connecticut Light and Power. "Connecticut Light & Power : Financing & Tax Incentives." *Connecticut Light & Power : For My Business*. Web. 30 Mar. 2011. <<http://www.cl-p.com/business/saveenergy/financing.aspx>>.

¹³ Connecticut Energy Efficiency Board. *Comprehensive Project: Q&A*. 2009. Print.

¹⁴ Connecticut Light and Power. "Late Filed Exhibit HD-01, Docket No. 10-10-03RE01." Letter to Department of Public Utility Control. 27 Mar. 2011. MS.

¹⁵ Connecticut Energy Efficiency Board. "Interrogatory EL-*." Letter to United Illuminating Company. 2011. *Department of Public Utility Control Docket 10-10-03*. Department of Public Utility Control, 3 Mar. 2011. Web. 30 Mar. 2011.

<<http://www.dpuc.state.ct.us/dockcurr.nsf/%28Web+Main+View/All+Dockets%29?OpenView&StartKey=10-10-03>>.

¹⁶ Borla, Stephen. "Telephone Interview with Steven Borla." Telephone interview. 6 Apr. 2011.

¹⁷ *Community Economic Development Fund — Small Business Loans in Connecticut*. Community Economic Development Fund, 2011. Web. 11 Apr. 2011. <<http://www.cedf.com/>>.

¹⁸ *Ibid*

Appendix IV: Newark, NJ – Program Details

New Jersey Board of Public Utilities: The New Jersey Clean Energy Program

The New Jersey Board of Public Utilities (NJBPUB) offers a wide range of incentives for businesses seeking to make energy-efficient improvements. Depending on the size of the business and the types of improvements made, businesses choose from three sub-programs.

New Jersey SmartStart Buildings Program¹

Target Market

This program is directed at any New Jersey commercial or industrial business, school or municipal building seeking to make energy-efficient improvements.

Program Features

The SmartStart program provides financial incentives for energy efficient measures including high-efficiency lighting and lighting controls, heating and cooling equipment, water heating, motors and variable frequency drives. Incentives are calculated based on the type of improvements made. They can be meted out based on the size of the equipment and as per-unit incentives for the various types of qualified equipment, or as a per-watt incentive for the reduction of total energy usage. Incentives are capped at \$500,000 per business per year. Incentives for new construction are only available in areas designated by the state for smart growth, and all of Newark is designated as such.

Direct Install Program²

Target Market

This program is directed at small to mid-sized businesses in New Jersey that have peak demand less than 100 kW in any given month.

Program Features

Direct Install offers similar incentives to those provided by the SmartStart program, but incentives are limited in scope for lighting, heating, cooling and ventilation (HVAC), refrigeration, motors, natural gas, and variable frequency drives upgrades. The program is designed to be relatively simple for businesses to use, and includes perks such as a walk-through energy assessment. The program will pay up to 60 percent of the installed cost (parts and labor) for qualified measures; the maximum incentive per project is \$50,000.

Pay for Performance Program³

Target Market

Commercial, industrial, institutional and multi-family buildings in New Jersey with peak demand over 200 kW in any of the twelve preceding months, and with 50,000 gross square feet of heated space are eligible for this program.

Program Features

This program is designed for “whole-building” energy improvements. Three incentives are offered at each stage of the retrofit process:

1. Participants are eligible for incentives ranging from \$5,000 to \$50,000 meant to offset the cost of putting together an energy efficiency plan.
2. Once improvements are installed, participants are eligible for a second round of incentives, which are based on projected energy savings.
3. Participants must submit a Post-Construction Benchmarking report to get the third round of incentives. Incentives for electricity and natural gas savings are determined based on actual savings, provided that the minimum performance threshold of 15 percent savings has been achieved.

Equipment Incentives: SmartStart Buildings⁴

Electric Chillers

- Water-cooled chillers (\$12 - \$170 per ton)
- Air-cooled chillers (\$8 - \$52 per ton)

Gas Cooling

- Gas absorption chillers (\$185-\$450 per ton)
- Gas Engine-Driven Chillers (Calculated through Custom Measure Path)

Desiccant Systems (\$1.00 per cfm - gas or electric)

Electric Unitary HVAC

- Unitary AC and split systems (\$73 - \$92 per ton)
- Air-to-air heat pumps (\$73 - \$92 per ton)
- Water-source heat pumps (\$81 per ton)
- Packaged terminal AC & HP (\$65 per ton)
- Central DX AC Systems (\$40 - \$72 per ton)
- Dual Enthalpy Economizer Controls (\$250)
- Occupancy Controlled Thermostats (\$75 each)

Ground Source Heat Pumps

- Closed Loop (\$450-750 per ton)

Gas Heating

- Gas-fired boilers < 300 MBH (\$300 per unit)
- Gas-fired boilers ≥ 300 MBH - 1500 MBH (\$1.75 per MBH)
- Gas-fired boilers ≥ 1500 MBH - ≤ 4000 MBH (\$1.00 per MBH)
- Gas-fired boilers > 4000 MBH (Calculated through Custom Measure Path)
- Gas furnaces (\$300-\$400 per unit)

Variable Frequency Drives

- Variable air volume (\$65 - \$155 per hp)
- Chilled-water pumps (\$60 per hp)
- Compressors (\$5,250 to \$12,500 per drive)

Natural Gas Water Heating

- Gas water heaters ≤ 50 gallons (\$50 per unit)
- Gas-fired water heaters > 50 gallons (\$1.00 - \$2.00 per MBH)

- Tankless water heaters replacing a free standing water heater > 82% energy factor (\$300 per heater)
- Gas-fired booster water heaters (\$17 - \$35 per MBH)

Premium Motors

- Fractional (< 1 HP) Electronic Commutated Motors (ECM) (\$40 per ECM for replacement of existing shaded-pole motor in refrigerated/freezer cases)
- Three-phase motors (\$45 - \$700 per motor)

Prescriptive Lighting

- T-5 and T-8 lamps with electronic ballast in existing facilities (\$10 per fixture, 1-4 lamps)
- T-8 to reduced wattage T-8 (28W/25W 4') retrofit with ballast replacement (\$10 per fixture, 1-4 lamps)
- Hard-wired compact fluorescent (\$25 - \$30 per fixture)
- Metal halide w/pulse start (\$25 per fixture)
- LED Exit signs (\$10/\$20 per fixture)
- T-5 and T-8 High Bay Fixtures (\$16 - \$200 per fixture)

Lighting Controls

- Occupancy Sensors
 - Wall mounted (\$20 per control)
 - Remote mounted (\$35 per control)
 - Daylight dimmers (\$25 per fixture controlled, \$50 per fixture for office applications only)
 - Occupancy controlled hi-low fluorescent controls (\$25 per fixture controlled)
- HID or Fluorescent Hi-Bay Controls
 - Occupancy hi-low (\$75 per fixture controlled)
 - Daylight dimming (\$75 per fixture controlled)

Other Equipment Incentives*

- Performance Lighting (\$1.00 per watt per square foot below program incentive threshold, currently 5% more energy efficient than ASHRAE 90.1-2004 for New Construction only.)
- Custom electric and gas equipment incentives (not prescriptive)

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⁴ New Jersey Clean Energy Program. "Equipment Incentives | NJ OCE Web Site." *Home | NJ OCE Web Site*. New Jersey Clean Energy Program, 2010. Web. 05 Mar. 2011. <<http://www.njcleanenergy.com/commercial-industrial/programs/nj-smartstart-buildings/tools-and-resources/equipment-incentives/equi>>.