

# **On-Bill Financing: Exploring the Energy Efficiency Opportunities and Diversity of Approaches**

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## **ABSTRACT**

Upfront costs continue to be a significant barrier to promoting energy-efficient investments. A number of innovative energy efficiency project financing mechanisms have emerged over the past three decades, all with the intent of reducing the upfront costs for energy efficiency improvements to the consumer. The “on-bill” financing approach represents a range of program designs that use the energy bill as a financial collection mechanism. This approach is uniquely positioned to reduce first-cost barriers in several markets, some of which have traditionally been underserved by energy efficiency finance, such as some classes of buildings and small businesses.

While on-bill mechanisms show promise, no single program design is appropriate to all circumstances, and no two existing programs are (or should be) exactly alike. Differences across markets and the regulatory landscape can inhibit differing on-bill approaches from achieving their full potential. Creativity and innovation on the part of program administrators are essential to empowering on-bill programs to penetrate these underserved markets.

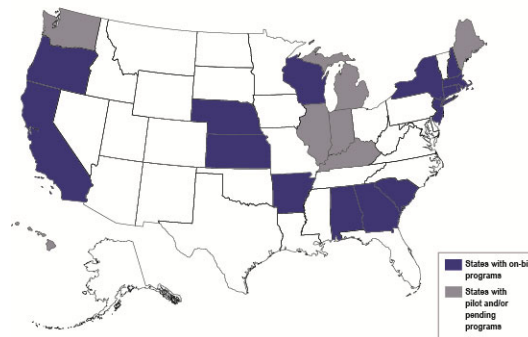
This paper, which is based on 19 on-bill financing case studies developed through data collection and discussions with program staff, explores various approaches to on-bill financing and highlights key considerations for program designers. The diversity of current program designs suggests that the “best” approach is one that addresses the diversity of utility and regulatory structures, the specific needs of different communities, and the differing state and regional legal and regulatory landscapes. Therefore, this paper provides an overview of diverse current practices across several states with adaptable components, which can aid future programs in identifying opportunities for the innovative design that best suits their individual needs.

## **Current On-Bill Landscape**

Upfront costs continue to be a significant barrier to promoting energy-efficient investments (Kapur et al. 2011). A number of innovative energy efficiency project financing mechanisms have emerged over the past three decades, all with the intent of reducing the upfront costs for energy efficiency improvements to the consumer. The “on-bill” financing approach represents a range of program designs that use the energy bill as a financial collection mechanism. On-bill programs are quickly becoming popular across the United States. These programs are in a position to leverage a utility’s unique relationship with energy customers to provide convenient access to funding for energy efficiency investments. On-bill financing allows utility customers to invest in energy efficiency improvements and repay the funds through an additional charge on their utility bill. If structured properly, an on-bill program can substantially reduce the cost of and improve access to financing. In many cases, energy savings are sufficient to cover the monthly payments for the financing so that the total monthly charge on utility bills is less than or equal to the pre-investment amount.

On-bill financing has a high potential for scalability and has garnered interest from third-party lenders, particularly in light of the fact that credit losses on both consumer and commercial utility bills tend to be far lower than for other obligations. Typically, on-bill programs have default rates of less than 2 percent (Byrd & Cohen 2011; Bell et al. 2011).

**Figure 1. States with On-Bill Programs**



Sources: Brown 2009; DSIRE 2011; Fuller 2009; Hayes et al. 2011; LCEA 2011

Notes: States with on-bill programs: AL, AR, CA, CT, GA, KS, MA, NE, NH, NJ, NY, OR, RI, SC, and WI.  
States with pilot and/or pending programs: HI, IL, IN, KY, ME, MI, and WA.

Currently, at least 22 states are home to utilities that have implemented or are about to implement on-bill financing programs, many of which (Illinois, Hawaii, Oregon, California, Kentucky, Georgia, South Carolina, Michigan, and New York) have legislation in place that supports adoption in various ways. Some states, such as Illinois and California, require utilities to implement on-bill programs. Other states remove barriers to implementation by allowing for a tariff for energy efficiency services or for financing to be collected through utility billing. In New York, legislation has provided for utilities to receive funding to update their billing systems. Additionally, a number of state utility regulators have taken action to explore the feasibility of on-bill programs.

Many of these programs are still very new and have not yet attempted to scale up. This novelty makes it difficult to scientifically discern true “best practices.” Yet, the growing interest and number of programs implies that states and proponents believe there is a value to the approach (Bell et al. 2011).

Utilities and other program administrators can implement on-bill in a variety of ways. It is most commonly structured as a loan or tariff, but could also be structured as an energy service agreement or lease. No two on-bill programs are exactly alike, which reflects the diversity of utility regulatory structure, state consumer lending laws, housing stock characteristics, and consumer demographics. Beyond the shared characteristic of on-bill repayment, these programs vary in their sources of capital, financing product design, target market, and overall implementation strategy. This paper identifies eleven major areas of consideration for program administrators and discusses how different approaches can be adapted to meet the economic interests of stakeholders and the unique needs of target markets.

## **Program Design Considerations**

The development of a successful on-bill program is contingent upon several key program design considerations. Many existing on-bill programs leverage lessons learned from earlier

programs, but must adapt certain elements of program design to meet the specific needs of their regional stakeholders. Optimizing the potential of on-bill programs requires program administrators to think carefully about eleven critical elements of program design. Fundamental considerations for program designers include:

- Program objectives
- Target market
- Selection of program administrator
- Financial product structuring
- Capital source

After the fundamental considerations are set, secondary considerations should be examined and designed with the goal of achieving the defined objectives. These secondary considerations include:

- Credit enhancements
- Customer eligibility requirements
- Project eligibility requirements
- Installation
- Marketing
- Additional incentives

While the descriptions of these elements may seem general, it is important to delve into the fundamental motives for program designers. It is useful to deconstruct programs into basic elements in an effort to demonstrate the versatility of the on-bill mechanism.

### **Program Objectives**

Utility motivation for the adoption of on-bill repayment can be catalyzed by a number of factors including state legislative or regulator energy savings targets, management of peak loads, enhancement of customer satisfaction, avoiding the need for new power plants, and extending state energy efficiency funds to a broader audience (due to enhanced underwriting including utility bill repayment history).

In many ways, the program objectives will play a critical role in structuring the financial product and identifying which class of customers the program should target. Program administrators should carefully consider the markets they serve, taking into account building stock characteristics, owner-occupancy rates, and customer access to affordable credit; and develop a product that is best suited to the unique needs. For example, a utility serving a market with multifamily housing units that are individually metered may want to consider offering a tariff, or an individual service charge (e.g., HowSmart Kansas), whereas a utility serving a market with centrally metered multifamily housing might want to consider offering landlords energy efficiency service agreements (e.g., Oregon's MPower program) (Volker 2011; Blue Tree Strategies 2011).

Bear in mind that the goals of partners in the financial services industry may differ from utility goals. Thus, it is important to identify and tailor program design elements to work toward the mutual goals of all parties.

## **Target Market**

Determination of a target market should rely heavily on program objectives and demographic factors such as regional building stock and the energy usage patterns of different classes of customers. In the United States, on-bill programs have been designed for residential, commercial, and industrial markets. Many are specifically targeted to specific markets such as owner-occupied residential, rental, large multifamily buildings, small business, public buildings, and a few large commercial and industrial customers.

The target market will also substantially impact subsequent program design decision-making because the needs and interests of diverse markets within the building sector vary considerably.

## **Selection of Program Administrator**

Program objectives also play a critical role in determining which party will administer the program. Current on-bill programs are administered by utilities, energy service companies (ESCO), nonprofit organizations, and in some cases, Community Development Financial Institutions (CDFI) or financial services providers. As with all financial products, on-bill financing is not without risks, albeit relatively low ones (Hayes et al. 2011). Identification of these risks during program design can optimize mitigation measures and ensure that the product is desirable to stakeholders. Different administrators may have different levels of experience with financial products and energy efficiency programs of various scale, and programs should be administered by the interested stakeholders in the best position to cost-effectively manage risk.

From the utility perspective, repayment risk can be a concern depending on how the on-bill product is structured. This may also be the primary concern of financial partners. Many on-bill programs have developed alternative underwriting standards that often include utility bill repayment history. Given low default rates on utility bills and the fact that non-payment could result in shut-off in some cases, these standards show some promise. Yet, they pose substantial barriers to marketing products to a secondary market because of their novelty. Data collection on loan performance should be carefully documented if at all possible to ensure future scalability. Partnering with other program administrators to develop systems for capturing and reporting data could also further the potential for these types of programs (Bell et al. 2011; Byrd & Cohen 2011).

Utilities may also face legal risks such as complying with consumer lending laws, particularly varying state consumer lending laws, and should consult with subject matter experts on that particular topic. In recent years, consumers and businesses appear uneasy about taking on new debt. One positive aspect of on-bill financing is that it can be structured so that the repayment value never exceeds the projected energy savings – though this tactic might discourage deep retrofits in some markets. Still, there is some risk that customers might fall upon hard times and be subject to disconnection or default.

In rental markets, it is important to define whether landlords or tenants are responsible for repayment. The appropriate party will vary market to market depending on how utilities are distributed at the majority of rental properties, and how billing is handled. It is also important to ensure that tenants who are responsible for repayment are notified and accept the responsibility prior to signing a new lease (Mitchell & Nissen 2011).

## **Financial Product Structuring**

When it comes to structuring the on-bill financial products, different approaches have worked well for different programs. Existing on-bill programs have been structured as loans, tariffs, or service agreements. Loans often work well in programs where repayment periods do not exceed the amount of time a customer is expected to occupy the property. Tariffs can transfer with the meter when occupants change. Service agreements are a promising approach for multifamily buildings in which landlords are ultimately responsible for paying utility bills.

Some interdependency exists between the structure of the financial product and eligible energy efficiency measures for the program. The life and repayment period for eligible measures can significantly shape loan terms and subsequently might influence underwriting standards. Many on-bill programs require their product to be bill-neutral, meaning that energy savings must equal or exceed the repayment charge on the monthly bill. There is some debate in the field as to whether or not bill neutrality is a requirement for a successful program. Bill neutrality likely increases the likelihood that a customer will be able to meet the financial obligation, yet it may also inhibit the potential for deeper retrofits as well as the lender's financial gain from the financing (Freehling 2011).

## **Source of Capital**

Capital for existing on-bill programs comes from a variety of places. Many programs accessed revolving loan funds in their states that were created using federal dollars provided by the *American Recovery and Reinvestment Act of 2009* (ARRA). Some programs access ratepayer energy efficiency funds, and a few utilize third-party sources. The Electric Cooperatives of South Carolina program accesses funds through the USDA's Rural Economic Loans and Grants (REDLG) program (Couick 2011). These capital sources are often limited in size and availability, but many programs have set up revolving loan funds to sustain their programs in the future (ECSC 2010).

While the majority of current programs still rely on a federal funding source (grants or loans) and/or ratepayer funds for capital, the private sector is likely to be critical to the sustainability, growth, and scaling of these programs in the future. Four of the 19 programs examined in Bell et al. (2011) accessed funds through a partnership with a CDFI. Such partnerships often make a lot of sense because the objectives of on-bill programs can be synergistic with the CDFI's mission. CDFI experience with financial products can be leveraged to help programs to facilitate effective risk management. Furthermore, these institutions can leverage relationships with other financial institutions to expand access to capital (Fugate 2011). However, CDFIs by themselves are not sufficient for achieving full scale.

Currently, New York and more recently California have made the most significant strides in developing statewide on-bill programs that could extend the potential of third-party financing. In New York, loans are currently classified into two tiers, with one set of loans adhering to more traditional underwriting standards. These top tier loans will be marketed to secondary markets to test the performance of energy efficiency loan products (Pitkin 2011).

## **Credit Enhancements**

Utility, nonprofit, and ESCO-run programs can do more to attract third-party financiers by setting up loan loss reserves or loan guarantees. Programs that are confident about customer

repayment can signal the value and security of the investment opportunity to financial stakeholders by making use of these tools.

Loan-loss reserve funds provide partial risk coverage and can be set up using public funds without a guarantor. Reserve funds can be used to smooth payments to investors in the event of delinquency. A loan guarantee is a promise that a guarantor will cover an investor's losses in the event of a borrower's default (Frusha & Karger 2011). Seven of the 19 programs examined in Bell et al. (2011) utilized loan-loss reserves.

Some also consider tying utility shutoff to repayment to be a form of credit enhancement. People tend to prioritize utility bills, and given that many on-bill programs are bill neutral, it is likely that on-bill financial products can be perceived as a safe investment (Copithorne 2011).

### **Customer Eligibility Requirements**

On-bill programs that are positioned to extend products to underserved markets should carefully consider alternative underwriting standards. While many programs have used bill payment history as an alternative underwriting standard, it is very difficult to engage private sector financiers without requiring some traditional standards such as a minimum credit score.

New York's two-tiered loan system allows for the program to provide products to customers with different levels of creditworthiness. The more creditworthy customers' loans will be the first to be sold to the secondary market. Once it is better understood how those loans perform, the others might be sold as well (Pitkin 2011).

### **Project Eligibility Requirements**

Project eligibility requirements will vary greatly depending on the objectives of the programs, building stock, and target audiences. In cases where utilities are attempting to manage peak loads, it often makes sense to target projects that guarantee a certain level of energy savings. Furthermore, measures that result in bill neutrality make it even more likely that the customer will consistently repay.

Typical measures that have been targeted in existing programs include weatherization, appliances, and lighting. It has been difficult for programs to fund some popular enhancements such as replacement windows because of the difficulty of assuring bill neutrality or reasonable repayment periods.

### **Installation**

It is important for program administrators to consider logistics for energy audits and measure installation. Many on-bill programs partner with Building Performance Institute certified contractors to ensure quality for energy audits. In many cases, programs will use free audits to attract customers with some requiring reimbursement if the customer does not ultimately decide to go through with installation of the recommended measures.

Several on-bill programs, such as the South Carolina Rural Energy Savings Program, also require a back-end audit to ensure that all installed measures are operating properly. If energy usage patterns do not reflect the estimation provided in the initial audit, the auditors will provide customers with tips for maximizing their energy savings (Couick 2011).

For quality assurance purposes, many programs will seek to provide their customers with a list of approved contractors to perform measure installation. The contractors in turn can play a critical role in marketing the program.

## **Marketing**

Existing programs have used a number of tactics to market their efforts to prospective customers. Many have established websites and distribute materials to customers through a variety of mediums. Some will advertise on utility bills. Others rely on contractors to spread information about the program through word of mouth.

In a South Carolina program targeting manufactured houses, prospective customers are identified by mining complaint calls. Participating cooperatives will contact dissatisfied customers and offer the program as a means of improving home comfort and achieving energy savings (Couick 2011).

Consumer advocates such as the Center for Working Families in New York can also play an important role in marketing to residential customers. These trusted entities can leverage their relationships in a variety of networks to spread information about the benefits of on-bill (Gelman 2011).

## **Additional Incentives**

In an effort to attract customers, many programs go a step further by offering additional incentives. Many have found bundling financing with rebates, offering low interest rates, and/or not requiring any money down can draw customers.

## **Sample Program Models**

By dissecting existing programs into these eleven critical elements, it is possible to observe how stakeholder interests as well as economic and environmental considerations influence program design. Furthermore, there are observable interdependencies between the elements. Below are five sample programs from the Bell et al. (2011) study, which are dissected illustratively into their eleven critical program elements.

These programs vary greatly in size and objective. The Connecticut Small Business Energy Advantage (Table 2) and Kansas How\$mart (Table 5) programs each have participation rates over one percent, which is relatively high for existing energy efficiency financing programs (Hayes et al. 2011). Connecticut Small Business Energy Advantage (SBEA), the largest full scale program, has a loan portfolio of \$21.4 million. The largest residential program, Clean Energy Works Oregon (Table 1), has a loan portfolio of \$7.8 million.

The South Carolina Pilot Program (Table 4) is still a pilot program and has not yet reached its scaling phase, but is notable in that it achieved its goal of 100 retrofits in a short amount of time. It is an interesting program, especially given its marketing practice of mining complaint lines for potential projects.

The New York On-Bill Recovery Loan Program (Table 3) is just ramping up, but represents the largest effort to date to begin to build an on-bill program to scale. The program will be supported by Regional Greenhouse Gas Initiative (RGGI) funds to start, but has deployed

a large-scale effort to collect data on loan performance so that it can bundle loans for sale on the secondary market.

A side-by-side comparison of these programs is valuable because they represent a broad range of objectives, target markets, and program administration schemes. One could argue that each has achieved some level of success in its own right, despite vast differences in size and scope, and that future program administrators could see some value in the illustration of the versatility of the on-bill tool. By examining differing practices, during this experimental timeframe, there is an increased likelihood that future programs will see opportunities for the innovative design that best suits their individual needs.

## **Conclusions**

The programs dissected above illustrate a variety of combinations of program design elements. This variety makes on-bill an attractive product for targeting efficiency due to its versatility. On the other hand, this variety can also make it difficult to collect comparable data on program performance, which is likely required to scale programs effectively.

At this juncture, existing programs still appear to be in an experimental phase, and it is difficult to discern true best practices. In order to assess the effectiveness of individual program designs, they must be viewed in context, and more data are required on the cost-effectiveness of operating programs that are attractive to customers.

Thorough consideration of stakeholders' opportunities and risks is an important step toward choosing effective program design elements. Identifying programs with similar fundamental considerations can help new program designers select approaches that have worked well in the past and are likely to fit well in their programs. It is also important for program designers to look to the future and assess ways in which they can collect information that truly captures the financial performance of these products and can facilitate scaling. More work is needed to determine how this is best accomplished.



**Table 1. Clean Energy Works Oregon (IOU)**

<p><u>Available Capital:</u></p> <p>2011: \$12 million 2012: \$24 million 2013: \$36 million</p> <p><u>Goals:</u></p> <p>Remodel 6000 homes for energy efficiency by end of 2013</p> <p><u>Participants:</u></p> <p>599 loans as of mid-2011</p> <p><u>Value of Financing:</u></p> <p>\$7.8 million</p>	<b>Program Objectives</b>	Customer satisfaction; compliance with HB 2626, The Energy Efficiency and Sustainable Technology Act (EEAST).
	<b>Target Market</b>	Residential (owner-occupied and rental).
	<b>Program Administration</b>	Clean Energy Works Oregon (CEWO), Non-profit.
	<b>Financial Product Structuring</b>	Loan-based financing. Participants can transfer the loan for an \$850 fee if they sell their property. During the pilot phase, the median loan size was \$12,633 with a 5.99 percent interest rate and a 20 year repayment term.
	<b>Capital Source</b>	Craft3 (formerly Enterprise Cascadia) a local Community Development Financial Institution (“CDFI”). The program was started with ARRA funds.
	<b>Credit Enhancements</b>	No explicit credit enhancement.
	<b>Customer Eligibility Requirements</b>	Underwriting based on utility bill repayment history, and requires a minimum credit score of 590.
	<b>Project Eligibility Requirements</b>	Energy savings minimum thresholds were set to manage program costs requiring at least 10 percent savings for basic weatherization, 20 percent for extended weatherization including wall and floor insulation, and 30 percent for extended weatherization plus installation of a furnace or heat pump.
	<b>Installation</b>	BPI certified contractor performs a free Home Energy Assessment. Certified contractor works with CEWO Energy Advisor to plan the project the contractor will install.
	<b>Marketing</b>	<a href="http://www.cleanenergyworksoregon.org/">http://www.cleanenergyworksoregon.org/.</a>
<b>Additional Incentives</b>	Some customer rebates, no money down.	

Sources: Bell et al. 2011; Smith & Zimmerman 2011

**Table 2. Connecticut Small Business Energy Advantage (IOU)**

<p><u>Available Capital</u> CL&amp;P: \$30 million UI: \$7.5 million</p> <p><u>Goals</u> Comply with Energy Efficiency Resource Standards and provide service to all customer classes</p> <p><u>Participants</u> CL&amp;P: 6,685 loans since 2005 UI: 3,903 loans</p> <p><u>Value of Financing</u> CL&amp;P: \$17.3 million UI: \$4.1 million</p>	<b>Program Objectives</b>	Compliance with EERS, provide service to all customer classes, and usage of an established public benefit fund; customer satisfaction; management of peak loads.
	<b>Target Market</b>	Small business customers.
	<b>Program Administration</b>	The program is co-administered by Connecticut Light & Power and United Illuminating, both IOUs.
	<b>Financial Product Structuring</b>	These loans do not transfer with the property, and are expected to be paid in full by the borrower.
	<b>Capital Source</b>	Public benefits fund comprised of Class III Renewable Energy Credits, ISO-NE Forward Capacity Market Revenues, Regional Greenhouse Gas Initiatives (RGGI) and ARRA funds received when initiated in 2009. A revolving loan fund has been established.
	<b>Credit Enhancements</b>	Loan-loss reserve and disconnection for non-payment.
	<b>Customer Eligibility Requirements</b>	Loans between \$500 and \$100,000 extended to commercial and industrial customers with peak demands between 10 and 200 kW. Utility bill repayment history supplements underwriting.
	<b>Project Eligibility Requirements</b>	Targeted measures include energy-efficient lighting, HVAC, and refrigeration, among others. The typical project size ranges from \$8,000 to \$12,000 and are financed over an average term of 24 to 36 months.
	<b>Installation</b>	Conducted by approved contractors and vendors.
	<b>Marketing</b>	<a href="http://www.cl-p.com/business/saveenergy/services/energyadvantage.aspx">http://www.cl-p.com/business/saveenergy/services/energyadvantage.aspx</a>
<b>Additional Incentives</b>	Qualifying customers have access to a zero percent interest rate. The UI Small Business Energy Advantage program combines the loans with incentives that subsidize a portion (30-40 percent) of energy efficiency improvement projects. If the customer installs two or more measures, the incentives grow to 50 percent.	

Sources: Bell et al. 2011; Borelli 2011; Bruno & Del Rosso 2011

**Table 3. New York On-Bill Recovery Loan Program (IOU)**

<p><u>Available Capital</u></p> <p>\$112 million</p> <p><u>Goals</u></p> <p>Reach 0.5% of each participating utilities customers</p> <p><u>Participants and Value of Financing</u></p> <p>Data not yet available</p>	<b>Program Objectives</b>	Expand upon Green Jobs Green New York Program and provide a product attractive to customers, compliance with Power NY Act of 2011 (A.8510/S.5844), extend energy efficiency funds to individuals that may not traditionally qualify for lending products through modified underwriting.
	<b>Target Market</b>	Residential (owner-occupied).
	<b>Selection of Program Administrator</b>	New York State Energy Research and Development Authority (NYSERDA), public benefit corporation.
	<b>Financial Product Structuring</b>	Loan which is secured by mortgage upon real property. New legislation under consideration that would allow the owner to sign a declaration notifying future buyers of the charge which would be tied to the building meter. The mortgage is subordinate to current and future mortgage and not subject to foreclosure. Non-payment results in utility shut-off. The interest rate on the loan is 2.99% and there is a \$150 loan processing fee.
	<b>Capital Source</b>	State energy efficiency fund, revenue from Regional Greenhouse Gas Initiative (RGGI). Program administrators aspire to attract third-party capital in the near future. NYSERDA has established a revolving loan fund.
	<b>Credit Enhancements</b>	The utilities will utilize all standard collection procedures for unpaid loan balances. NYSERDA may utilize a loan-loss reserve or hold-back when they market a portfolio of loans.
	<b>Customer Eligibility Requirements</b>	Two-tiered underwriting standards. Tier 1 loans are subject to more traditional underwriting standards and will be the first that are bundled for the secondary market. Tier 2 loans have lower credit score requirements and rely more heavily on utility bill payment history.
	<b>Project Eligibility Requirements</b>	The project must be bill-neutral. The minimum loan amount is \$3,000 with a maximum of \$25,000. Eligible measures include insulation and air sealing, furnaces, boilers, water heaters, air conditioners, lighting fixtures and appliances.
	<b>Installation</b>	A BPI certified contractor provides a comprehensive energy audit and provides recommendations. The owner participates in the Home Performance with ENERGY STAR program. The loan is originated by Energy Finance Solutions and the owner signs the mortgage or declaration. When the project is complete the utility places a Loan Installment Charge on the bill.
	<b>Marketing</b>	Various channels, consumer advocates such as the Center for Working Families have also been promoting the program.
<b>Additional Incentives</b>	None specified.	

Sources: Bell et al. 2011; Pitkin 2011

**Table 4. Rural Energy Savings Program Pilot, Electric Cooperatives of South Carolina (Cooperative)**

<p><u>Available Capital</u> \$1.5 - 2 million</p> <p><u>Goals</u> Retrofit 100 homes</p> <p><u>Participants</u> 100 loans</p> <p><u>Value of Financing</u> \$1.5 million</p>	<b>Program Objectives</b>	Demand-side management and avoidance of costs to build a new nuclear power
	<b>Target Market</b>	Low and moderate income residential (owner-occupied and rental), that have above average energy use.
	<b>Program Administration</b>	Electric Cooperatives of South Carolina, trade association for state cooperatives. (Also administered by Central Electric Power Cooperative and Ecova as a third party implementer).
	<b>Financial Product Structuring</b>	Low-interest (2.5%) loan that follows the meter. Non-payment results in utility shut-off.
	<b>Capital Source</b>	USDA Rural Economic Loans and Grants (REDLG) program, credit union assists with processing.
	<b>Credit Enhancements</b>	Loan-loss reserve and disconnection for non-payment.
	<b>Customer Eligibility Requirements</b>	Utility bill repayment history.
	<b>Project Eligibility Requirements</b>	Focus on envelope measures, heat pump replacements, insulation and sealing of air leaks. Projects must be positive cash flow or bill-neutral.
	<b>Installation</b>	A BPI certified contractor provides a comprehensive energy audit accompanied by a representative from the cooperative and provides recommendations. After an approved contractor installs the measures, a back-end audit is conducted to assure that energy savings are being achieved. Data is being collected by cooperatives and the Environmental and Energy Study Institute (EESI) on the performance of the installed measures.
	<b>Marketing</b>	Cooperatives used various methods, including mining complaint calls for customers that could potentially lower their utility bills through energy efficiency upgrades.
<b>Additional Incentives</b>	No money down.	

Sources: Bell et al. 2011; Couick 2011, ECSC 2010

**Table 5. Kansas HowSmart® (Cooperative)**

<p><u>Available Capital</u> \$1-1.2 million a year</p> <p><u>Goals</u> 200 projects a year</p> <p><u>Participants</u> 627 projects</p> <p><u>Value of Financing</u> \$3.6 million</p>	<b>Program Objectives</b>	Extend a financial product to residential customers that transfers with the property, customer satisfaction.
	<b>Target Market</b>	Residential (owner-occupied and rental) and small commercial.
	<b>Selection of Program Administrator</b>	Midwest Energy (cooperative utility)
	<b>Financial Product Structuring</b>	Energy efficiency tariff, in the form of a monthly surcharge, which follows the meter. The average program investment by the company is about \$5,700. Interest rates have varied from 0 percent to 8 percent. Upon transfer of property for rentals, landlords must inform new tenants of the monthly charge prior to lease signing or may be ultimately responsible for paying down the balance.
	<b>Capital Source</b>	The program was established with ARRA funds. Capital for the program is first accessed through utility sources, and supplemented with low cost funding from sources such as the Efficiency Kansas energy efficiency fund when available.
	<b>Credit Enhancements</b>	Disconnection for non-payment.
	<b>Customer Eligibility Requirements</b>	Utility bill repayment history. The program is available to all Midwest customers in good standing.
	<b>Project Eligibility Requirements</b>	HowSmart® typically funds improvements such as insulation, air sealing and new heating and cooling systems. Charges on the customer's monthly bill must be less than 90 percent of estimated monthly savings.
	<b>Installation</b>	The HowSmart® program provides free audits to customers who complete suggested energy-efficient improvements. If the improvements are not pursued, the customer is charged \$200 for the audit. Audit and installation are conducted by qualified contractors and vendors.
	<b>Marketing</b>	The program is marketed to customers who contact the company with billing concerns or complaints, as well as through contractors and social service agencies.
<b>Additional Incentives</b>	Midwest Energy works to buy-down interest rates when funding is available. Customers do not have to put any money down but are allowed to buy down the principal to meet payback criteria. This enables the inclusion of window measures.	

Sources: Bell et al. 2011; Volker 2011

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