



## Introduction to On-Bill Financing for Electric Cooperatives

BY PATRICK KEEGAN AND LAURA MOOREFIELD

**O**n-bill financing (OBF) is a mechanism whereby cooperatives and utilities offer members and customers low-interest loans for efficiency upgrades that the borrower repays as part of his or her monthly electricity bill. This practice is catching on with utilities around the country and is particularly well-suited to co-ops for two reasons: it facilitates energy efficiency and enhances service to co-op members. Currently, 17 co-ops run OBF programs (DSIRE Database, 2012).

### **OVERVIEW OF ON-BILL FINANCING**

There are two types of OBF programs: one in which the utility provides the financing with its own or borrowed funds, and another in which the loans are provided by a third party and repaid through the utility bill. This second type is sometimes referred to as on-bill repayment (OBR).

Financing is an important tool for efficiency upgrades because it overcomes the first-cost barrier. Many utilities around the country offer rebate programs, but these programs require the homeowner to come up with half or more of the cost of the energy efficiency investment. This can be a large and often insurmountable barrier. OBF programs are attractive because homeowners



use borrowed funds to cover the initial investments, and the monthly repayments are conveniently included in their utility bills. They receive no separate bill from a bank or other lender. When they see the payment and reduced energy use shown together on the bill each month, homeowners receive a powerful message about the impact of their investments in efficiency.

OBF programs are attractive to utilities and cooperatives for a number of reasons. Such programs can reach those who do not have the cash to participate in rebate programs. Some utilities also have found that providing energy efficiency services can increase customer satisfaction. Furthermore, the financial risk is low—a recent study by the American Council for an Energy-Efficient Economy (ACEEE) found that nearly all of these programs reported default rates of less than 2% (Bell, 2011).

OBF programs have the potential to become self-funded, meaning that all program administration and management costs are covered by project fees or interest rate surcharges. Reaching this break-even point requires substantial program volume and an efficient program support structure.

Co-ops typically offer attractive interest rates in their OBF programs because there is little risk of non-payment. If the co-op has the power to disconnect for non-payment, the risk is reduced further (Brown, 2011). When the risk is extremely low, co-ops can offer OBF to members who do not have good credit, expanding the pool of eligible participants. Members with extremely high energy bills and poor credit can sometimes achieve big reductions in their bills, providing dramatic evidence of the value of OBF.

OBF programs are likely to become more common among co-ops. At least 20 states have implemented or are about to implement OBF programs (Bell, 2011), and many of these states have a strong co-op presence. Several states have adopted rules or policies that support utility financing programs. Another reason co-ops are expected to do more OBF is that financing is becoming more available for these programs through the following:

- **US Department of Agriculture (USDA) Rural Economic Development Loan and Grant (REDLG) program.**
- **USDA Rural Utility Service (RUS)** (The USDA recently released draft rules for the RUS that, when finalized, will enable RUS loans to be used for OBF programs at electric cooperatives.)

### HOW DOES AN OBF PROGRAM WORK?

OBF programs can be run smoothly and efficiently, but they are more complex than the more prevalent rebate program model. They have several components:

- **Promotion and marketing.** There are two key elements of a successful OBF marketing program. These are:
  - **Marketing message**—OBF programs need clear marketing messages that are positive but do not over-promise energy savings. Sometimes great energy efficiency opportunities do not produce the reductions on the bill customers expect simply because they have changed their behavior. For example, once a home is insulated properly, its occupant may decide to use more electricity so as to enjoy a warmer home all winter long.
  - **Marketing plan**—A marketing plan that targets above-average energy users is the most effective because it reduces the costs associated with marketing to “dry hole” prospects—those whose homes are not able to support significant energy-efficient measures. Targeted homes must have the potential for larger-scale measures, such as attic insulation or a new heat pump.
- **Participant pre-screen.** This step helps to determine whether potential participants are credit worthy and willing to borrow money when offered cost-effective opportunities. For example, do they have a good record of paying their utility bills?
- **Audits to identify appropriate measures.** The audit is the most critical step in ensuring a cost-effective project. It is particularly



important when the member is borrowing money, because cost-effective measures can pay for themselves. There are two types of audits:

- Walk-through audits identify “deemed” measures—those pre-approved based on their ability to deliver cost-effective savings consistently.
- Comprehensive audits collect the data necessary to run building simulation software programs that can predict savings.
- **Contractor selection.** In most cases, a contractor must be selected to install the selected upgrade, such as insulation, windows, or a heat pump. Programs may require the use of a standardized bid form, with borrowers selecting the contractor from a pre-approved list.
- **Final participant screening.** This is a final review to determine whether the measure is likely to produce enough savings to justify the investment.
- **Participant signing of loan document.** This can be a lengthy document, and borrowers should be encouraged to read it carefully. Loan documents should be clear and simple, and include an explanation of:
  - Warranties
  - The loan process
  - What savings to expect
  - When savings may occur

- How behavior can affect savings
- Description of the oversight provided by the co-op
- Description of participant responsibilities
- **Measure installation.** The participant selects the contractor, and the contractor installs the measure.
- **Quality assurance.** This process includes:
  - Final inspection
  - Payment to the contractor
  - The co-op or its agent paying the contractor directly
- **Loan repayment.** Participant views the repayment amount on each bill, along with the energy savings achieved.

These steps are summarized in Figure 1.

#### CASE STUDY: OBF IN SOUTH CAROLINA

South Carolina’s co-ops, which serve more than 1.5 million consumers, conducted the Help My House Loan Pilot Program in 2011 to examine OBF. Central Electric Power Cooperative (Central), the wholesale power provider for the state’s 20 distribution co-ops, and the Electric Cooperatives of South Carolina (ECSC), the trade association for the state’s co-ops, ran the pilot. The pilot was launched soon after the South Carolina legislature passed a law enabling utilities to disconnect power if loan payments are not made.

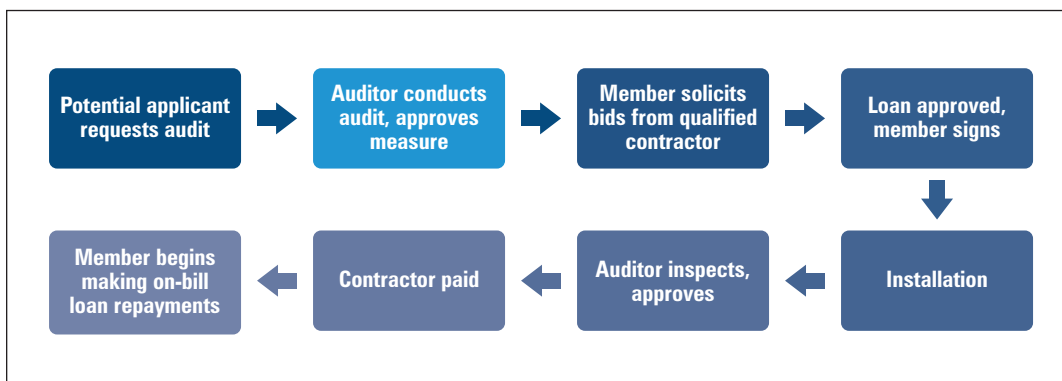


FIGURE 1: OBF Program Steps



The USDA-RUS provided a REDLG loan to Central so that the pilot could offer financing at 2.5% with terms for up to 10 years for energy efficiency measures. This marked the first time this type of loan had been used for energy efficiency.

Central and ECSC hired several organizations to assist with the program. Ecova, a firm that implements energy efficiency programs for utilities, supported program planning, management, and analysis. Ecova partnered with Integral Analytics, an analytical software and consulting firm, for energy efficiency and demand response cost-effectiveness analyses. Carton Donofrio Partners, a marketing and consumer research firm, created marketing materials and conducted member surveys. The 1st Cooperative Federal Credit Union prepared and processed loan documents. KW Savings, a new non-profit created by Central and ECSC, paid contractors and will manage loan repayments. The Environmental and Energy Study Institute (EESI) in Washington, DC assisted with program design and reporting to key stakeholders, including Congress and state and national opinion leaders.

Eight co-ops participated in the program (Aiken, Black River, Broad River, Horry, Palmetto, PeeDee, Santee, and Tri-County). Each completed an implementation plan, which explained roles, responsibilities, and the outreach approach. Each co-op took a slightly different approach, ranging from a co-op that hired a turn-key implementation contractor to another that performed all of the technical tasks in the program itself.

All participating co-ops used the same independent energy auditors, who had been selected with input from each co-op. Co-ops conducted outreach and screened potential participants, looking for homes with higher-than-average energy bills that would make them good prospects for a loan. A co-op energy adviser conducted a walk-through audit and reviewed the energy usage history with Central. If a project looked

feasible, the co-op then conducted a comprehensive energy audit to identify whether its predicted energy savings exceeded the estimated loan repayment (Ecova, 2012a).

A select group of contractors, all of whom received training and agreed to certain quality standards, competed to win bids. After the applying member selected a contractor, program staff reviewed the bid, the Credit Union prepared loan documents, and the energy adviser presented them to the applying member for signature. Auditors returned to the sites to ensure that the upgrades were installed correctly.

The pilot exceeded its goal, completing retrofits on 125 homes—more than half of which were manufactured homes. An interim analysis showed that homes selected for the pilot provided an ample supply of efficiency opportunities. More than 90% of the homes required attic insulation, air sealing, and duct sealing (Integral Analytics, 2012). Nearly half of the homes had inefficient forced-air electric furnaces. HVAC upgrades—usually new heat pumps—were the most costly and least cost-effective measure, but they still passed the positive cash flow cost-effectiveness threshold.

The average loan was more than \$7,000 (Ecova, 2012b). Energy savings are predicted to average above 11,000 kWh/year—more than 35% of the average total electric use, and worth more than \$1,000 per year. Actual energy savings will be monitored through the end of 2012.

The pilot program showed that there is an ample supply of cost-effective energy efficiency opportunities in the homes of South Carolina co-op members. The vast majority (96%) of participants were satisfied or very satisfied with the work performed. The most telling result may be the actions of the participating cooperatives. As the pilot began, none of the co-ops had expressed any intention to offer an ongoing OBF program after the pilot. At the end of the pilot, seven co-ops expressed interest in starting a program in 2012.



### SMART QUESTIONS TO ASK

For co-ops interested in offering OBF programs, here are the key questions to ask:

- What is the potential?
  - Energy efficiency
  - Demand reduction
  - Economic benefit
    - ◆ To the participating member
    - ◆ To the electric system
    - ◆ To the local economy
- Are other co-ops in your state or G&T also interested?
  - There are big advantages to collaboration
- Do you have the legal authority to issue loans? To disconnect for non-payment? To have loans attached to the meter and transferable to a new owner or renter?
- What is the delivery capacity in your area?
  - Which contractors and auditors could participate?
- How will the co-op provide the necessary training for evaluation and installation?
- How difficult will it be to offer loan repayment on the utility bill? Will the system handle partial payments? Are there other support entities available, such as statewide marketing associations or a G&T?
- What are the funding sources for member loans, program administration, and such start-up costs as marketing and outreach?
- How will you measure savings and evaluate program or pilot effectiveness and member satisfaction?

### CONCLUSION

OBF is a powerful tool for co-ops interested in helping their members save energy and money. These programs are not as simple as basic product rebate programs, but the savings can be significant. Furthermore, targeted members are likely to participate because the financing option removes the first-cost barrier, co-ops can offer loans at much lower rates than credit cards and banks, the member can borrow money from a trusted local source, and repayment is simple because it is included as part of the monthly electric bill. OBF programs also benefit communities as a whole. They create jobs because the local contractors and auditors who conduct site visits are key to their success. In addition, large home improvements, such as new windows, proper insulation, and upgraded HVAC systems, may increase home values and desirability.

OBF programs are most successful and cost-effective when several co-ops in the same region work together. Collaboration allows cost-sharing for contractor and auditor recruitment and training, marketing and outreach to members, securing loan funding, managing the data, and responding to questions from members. In the long run, successful OBF programs allow members to save money for years to come, help co-ops manage load, and have a positive impact on regional economic development. ■



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### About the Authors

**Patrick Keegan** is the Senior Account Executive at Ecos, an energy efficiency firm in Portland, Oregon. He began his career in the 1980s, managing pioneering energy conservation programs in the Pacific Northwest. He worked internationally on energy efficiency and renewable energy initiatives in developing countries, working for the International Institute for Energy Conservation in Washington D.C., and then the National Renewable Energy Laboratory in Colorado. He became Executive Director of the Colorado Energy Science Center in 2001, focusing on energy efficiency and solar programs. Hired by Ecova (then Ecos) in 2008, he provides senior level account management and helps develop markets with rural electric cooperatives.

**Laura Moorefield** joined Ecos Consulting, now Ecova, in 2006 and currently serves as a Senior Manager in the Research & Policy group. She oversees plug load field research and lighting policy development and analysis for multiple clients including the Cooperative Research Network of the National Rural Electric Cooperative Association, Edison Foundation's Institute for Electric Efficiency, California Energy Commission, Natural Resources Defense Council, Electric Power Research Institute, New Buildings Institute, and the U.S. EPA. She earned a B.A. from Lewis and Clark College in Portland, OR, and an M.A. in Industrial Technology, with a focus on landfill gas-to-energy development, from Appalachian State University in Boone, N.C.

### Questions or Comments

Brian Sloboda, [brian.sloboda@nreca.coop](mailto:brian.sloboda@nreca.coop), 703.907.5689



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