

Removing the Barrier of Up-Front Costs

The Help My House program provides low-cost loans for energy efficiency improvements that can reduce participants' utility bills by nearly 35 percent. The program eliminates up-front costs, one of the key barriers to improving energy efficiency in low-income households.

First piloted in 2011–2013 by a group of rural electric cooperatives in South Carolina, Help My House was designed to be a model that can be replicated by electric co-ops and other utilities throughout the nation. The program allows customers to save money through lower energy bills even while they repay their loans. Customers conveniently pay off the loans through their utility bills—a process known as on-bill financing. Financing is approved for households based on one year of good bill payment history rather than credit scores, addressing a common limiting factor for low-income households. These features offer a potential solution for co-ops and other utilities that want to reduce energy use in low-income rural areas, where households may lack access to conventional financing for energy efficiency improvements.

Participants in the pilot, which served 125 rural single-family homes throughout South Carolina, received "whole-building" energy efficiency upgrades financed by a 10-year loan at 2.5 percent interest. The whole-building approach to energy efficiency contributed to the pilot's success, as this approach typically results in more energy savings because the house is treated as a complete energy system with interdependent parts, each of which affects the system's performance. Based on the pilot's achievements in cost and energy savings, along with its

Fast Facts

Program scope: A model program for on-bill financing of "whole-building" energy efficiency upgrades, first piloted by eight electric co-ops in predominantly low-income rural areas of South Carolina.

Communities served: Lowincome communities, especially those in rural areas where more conventional energy assistance and financing opportunities may be limited.

Funding: Financing for loans under the pilot was provided by the U.S. Department of Agriculture (USDA) Rural Economic Development Loan and Grant Program; USDA's Energy Efficiency and Conservation Loan Program can be used for similar programs throughout the country.

Key partners: Power wholesalers, electric co-ops, nonprofit organizations, technical consultants.

95 percent participant satisfaction rate (due to improved comfort and lower bills), three of the eight co-ops involved in the pilot expanded their projects to permanent on-bill financing programs using USDA loans and/or co-op funds, and two other South Carolina co-ops followed suit.







By addressing important barriers to low-income energy efficiency, the Help My House model can help co-ops and other utilities reduce greenhouse gas emissions, better serve low-income communities, and strengthen rural economies by creating jobs for energy efficiency projects.

Making It Happen

The Help My House pilot program was led by Central Electric Power Cooperative (CEPC), which provides wholesale power to all 20 of South Carolina's co-ops, and The Electric Cooperatives of South Carolina (ECSC), a trade organization representing the co-ops. In response to growing energy demand and rising costs, CEPC set a target in 2010 to reduce residential energy use in the co-ops' territories by 10 percent within 10 years, a goal that could be especially challenging in lower-income areas where households lack cash or access to financing for efficiency improvements. On-bill financing seemed like a promising solution, as it had been used successfully by other electric co-ops in the country.

The program leaders assembled a team of partners (see the Key Partners section below) and formed a separate nonprofit organization to administer the loans. In this capacity, the nonprofit played a centralized role in managing funding, distributing loans, and controlling risks associated with loan repayment. Financing for loans came from USDA's Rural Economic Development Loan and Grant (REDLG) program.

The individual participating co-ops identified and screened participants, choosing single-family homes with high annual electricity use. The program included the following quality assurance and quality control (QA/QC) steps to ensure the effectiveness of the installed energy efficiency measures: 1) the co-ops trained energy auditors (a mix of independent certified auditors and qualified auditors on co-op staff) to perform consistent assessments of the homes and identify specific savings measures, such as adding insulation, sealing air leaks, and upgrading heating and cooling systems; 2) co-op auditors inspected and approved the project upon completion of the measures; 3) if the auditors were not satisfied with the quality of the energy efficiency measures, the auditors recalled the contractor to address any issues; and 4) the co-op paid the contractor only upon final approval by the auditors. The QA/QC process also helped improve the general health and safety of the homes, since the auditors checked that the contractors had conducted basic health and safety fixes before installing the energy efficiency measures.

Customers under the pilot are paying off the loans over a 10-year period through a monthly surcharge on their electric bills. However, because the energy efficiency measures resulted in reductions in electricity use almost immediately upon installation, customers have seen an



average net reduction in their electric bills of approximately \$25 per month or about \$300 per year, even while paying off the loan.²

Key Partners

The two lead organizations (CEPC and ECSC) worked with many other firms, agencies, and organizations to design, implement, and evaluate the pilot program. Key partners included the nonprofit Environmental and Energy Study Institute (EESI), which contributed to program design and outreach; Ecova, an energy efficiency consulting firm, which assisted with program planning; and Integral Analytics, which conducted cost-effectiveness analyses. Additional partners trained energy auditors, conducted program participant surveys, processed and managed the loan documents, and screened and advised participants.

Funding Sources

USDA's Rural Economic Development Loan and Grant (REDLG) Program provided a no-interest loan of \$750,000 to capitalize the pilot lending pool. EESI received funding from the Doris Duke Charitable Foundation, the Surdna Foundation, and the Merck Family Fund to assist with pilot design and outreach. Since completion of the initial pilot program, three of the participating co-ops and two other South Carolina co-ops that observed the pilot have used a combination of their own budget funds and additional no-interest loans from the REDLG program to launch their own on-bill financing programs.

In 2014, USDA established the <u>Energy Efficiency and Conservation Loan Program</u>, which provides a new way for co-ops to fund on-bill financing and other energy efficiency projects. <u>EESI</u> is working with co-ops nationwide to access these loans and use them to develop or expand on-bill financing programs.

Achievements

Participants benefited from lower energy bills and a more comfortable living environment; the participating co-ops benefited from improved customer satisfaction, reductions in demand during peak periods, and less risk of arrearages.

 The pilot will avoid an estimated 6.7 million metric tons of greenhouse gas emissions over 10 years,² equivalent to the annual energy-related emissions of more than 600,000 average American homes.¹



- The average home participating in the project has reduced its energy consumption by nearly 35 percent, or roughly 11,000 kWh annually.²
- Savings during peak demand periods (when co-ops pay the most for electricity) from the houses participating in the pilot were more than 25 percent during the summer cooling peak in June and over 45 percent during the winter heating peak in January.²
- Participants in the pilot are saving about \$25 per month on their electric bills even while they pay off the energy efficiency improvement loans.²
- Surveys conducted after the upgrades found that over 95 percent of participants were more satisfied with their co-op as a result of participating in the pilot.²

Replicability

Help My House was designed as a model to be replicated, and EESI is actively promoting it to co-ops nationwide. On-bill financing may be an especially effective way for co-ops and other utilities to achieve energy efficiency improvements in areas with large low-income populations. The pilot program's success has spurred more cooperatives in South Carolina to implement similar programs under the Help My House banner.

For More Information

- Help My House Website
- Program Brochure
- Final Summary Report

¹ Estimated using EPA's Greenhouse Gas Equivalencies Calculator.

² Keegan, Patrick. <u>Help My House Program Final Summary Report</u>. 2013. Prepared for Central Electric Power. Cooperative, Columbia, South Carolina, and The Electric Cooperatives of South Carolina, Cayce, South Carolina.