

OPPORTUNITIES THROUGH THE USDA ENERGY EFFICIENCY AND CONSERVATION LOAN PROGRAM

April 8, 2015

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EESI

Environmental and
Energy Study Institute



Environmental and Energy Study Institute

*Carol Werner,
Executive Director*

- Founded in 1984 by a bipartisan Congressional caucus as an independent non-profit organization (but receives no Congressional funding)
- Source of non-partisan information on energy and environment policy development for Congress and other policymakers

USDA ENERGY EFFICIENCY CONSERVATION **LOAN PROGRAM (EECLP)**

EECLP BASICS

- Operated by the USDA Rural Utilities Service (RUS)
- Program went into effect February 2014
- New opportunity RUS borrowers (rural utilities) to start up or expand EE activities, both up- and down-stream
- Rolling, non-competitive application process
- Interest rate is the direct Treasury rate plus 1/8

EECLP ELIGIBILITY

- Any electric utility is eligible for the EECLP provided that it serves a rural area
- “Rural area” is defined as a town of less than 20,000 people
- Wide range of eligible activities:
 - EE improvements along entire system
 - Distributed generation
 - Demand side management

LOAN PROVISIONS

- Loans \$ given on reimbursement basis
- Up to 5% of the total loan can be accessed upfront for start-up costs
- Consumer outreach programs may not exceed 5% of the total loan

APPLICATION PROCESS

- Similar to existing RUS loan programs
- Additional requirements:
 - Quality assurance plan
 - Business plan
- Utilities can contact their GFR to get started

EECLP RECIPIENTS

Roanoke Electric Cooperative (NC)

- 12,500 residential customers
- \$6 million borrowed from EECLP at 3.5%
- Relending program for home energy retrofits
- Goal: 1,000 whole house retrofits in 5 years

North Arkansas Electric Cooperative

- 33,500 residential customers
- \$4.5 million borrowed from EECLP at 3.5%
- Relending program for building retrofits across all sectors

USDA RESOURCES FOR EECLP

- [Main USDA EECLP web page](#)
- [EECLP Final Rule](#)
- [EECLP Background Presentation](#)
- [EECLP Toolkit](#)
- [Toolkit Summary Presentation](#)
- [List of RUS Electric Program General Field Representatives](#)

EECLP OPTION: ON-BILL FINANCING

- Loans that are repaid on the monthly utility bill
- Utilities can finance EE improvements to customers' homes
- EE alternative to homeowners that can't afford upfront costs
- Can be designed to be bill neutral (or better)
- Allows for alternative methods of underwriting (i.e. good bill payment history in lieu of credit check)

ON-BILL FINANCING BENEFITS EVERYONE

- Homeowner/Renter
 - Lower monthly energy bills
 - Increased comfort in the house
- Community
 - Increased local economic activity and job creation
 - Supply chain is developed
- Electric Utility
 - Lower demand costs
 - Increased member satisfaction
 - Increasing members' energy efficiency helps co-ops delay building expensive new power plants by helping decrease demand.

ON-BILL FINANCING IS NOT NEW

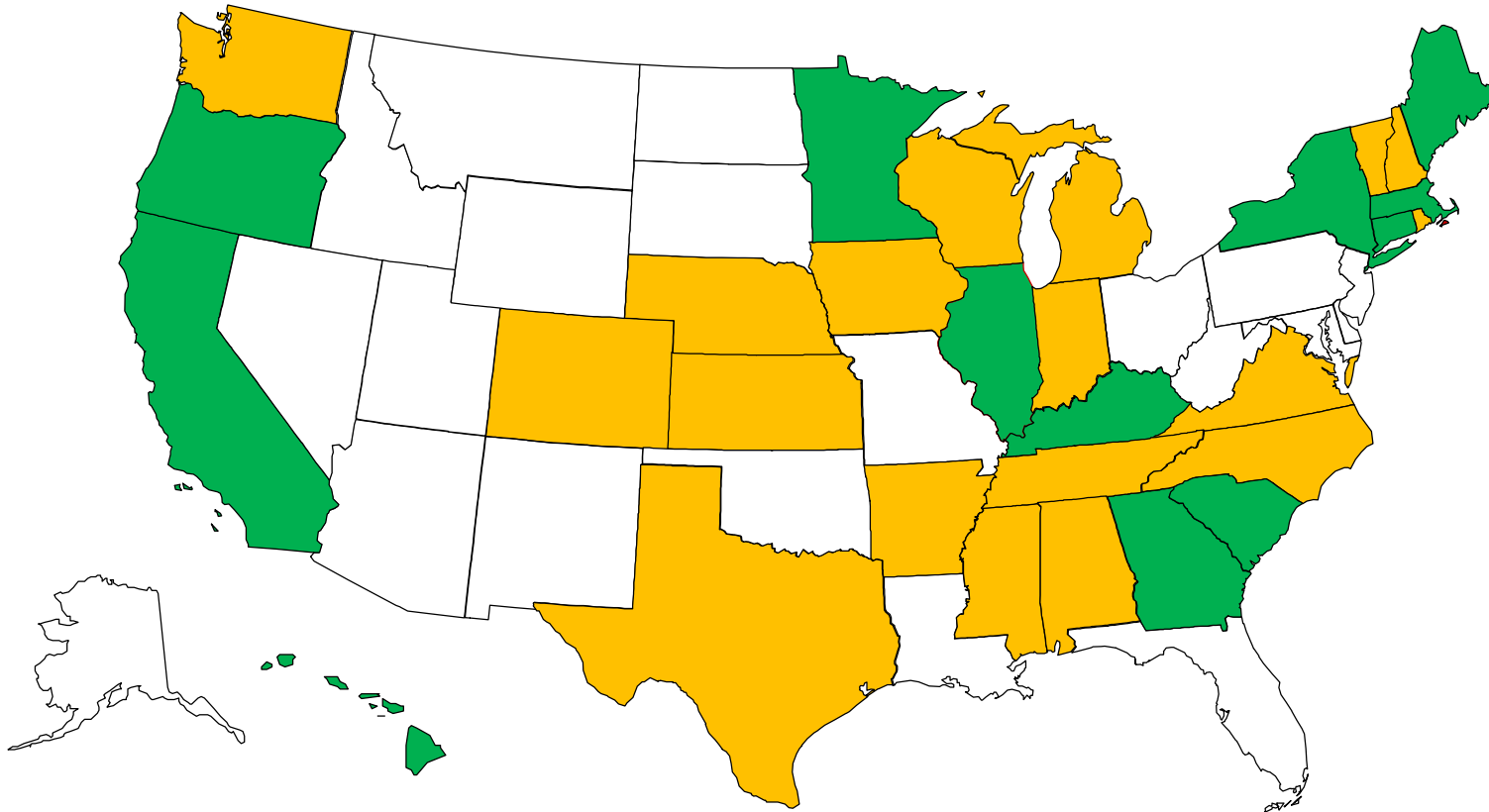
- 50 rural electric co-ops in 22 states offer on-bill financing to their members
- Typical interest rate is 5%
- Most programs target the efficiency upgrades for the residential sector
- As co-ops generally use their own funds for financing, these programs tend to be small in size

The Business Case for OBF


- Short Term
 - Participant and member satisfaction positive
 - Load factor impacts minimal
 - Lost revenue would be small, even for a long term aggressive program

- Long Term
 - EE targets in EPA's proposed Clean Power Plan
 - Energy efficiency is cheaper than new generation - likely less than 2 cents/kWh
 - Broader economic benefits for local businesses and supply chain

STATES WITH ON-BILL FINANCING LEGISLATION



 States with legislation related to On Bill Financing

 States where utilities have implemented or are developing On Bill Financing programs

CASE STUDY: SOUTH CAROLINA CO-OPS



Shape Up Your Home for Energy Savings

OBF Pilot

- 2011-2012
- 8 co-ops, 125 homes
- Main Purpose: test EE vs. building new generation
- RUS and G&T funding

Working OBF Programs

- 2012- Present
- 4 co-ops, 282 homes (so far)
- Purpose: Member service
- Mix of co-op and RUS dollars for lending capital

S.C. COOPERATIVE MEMBERS

- 24% live in manufactured housing (3X the national average)
- 50% more likely to live below the poverty line
- In some months, many may spend 60-80% of income on energy
- The state ranks 7th in cooling degree days per year
- 80% use electricity as primary form of heating

HMH PILOT PROGRAM FEATURES

- Co-ops provided low-interest loans to their members to finance 'whole house' energy retrofits
- Loans are repaid on monthly utility bills, typically over 10 years
- Tariff program: loan is tied to the meter, not the occupant
- When the person moves, the loan is transferred to the next occupant
- To qualify, households need to have good bill payment history (no credit checks)

KEY PARTNERS IN THE PILOT

1. 8 Participating Co-ops

2. Central Electric Power Cooperative

- Purchases wholesale power and distributes it to the state's co-ops



3. Electric Cooperatives of South Carolina

- Co-ops' state-wide trade association



4. Environmental and Energy Study Institute

- Assisted with program design, outreach, evaluation



EESI

5. Ecova

- Program planning, management

ecova™

THE HELP MY HOUSE PROCESS

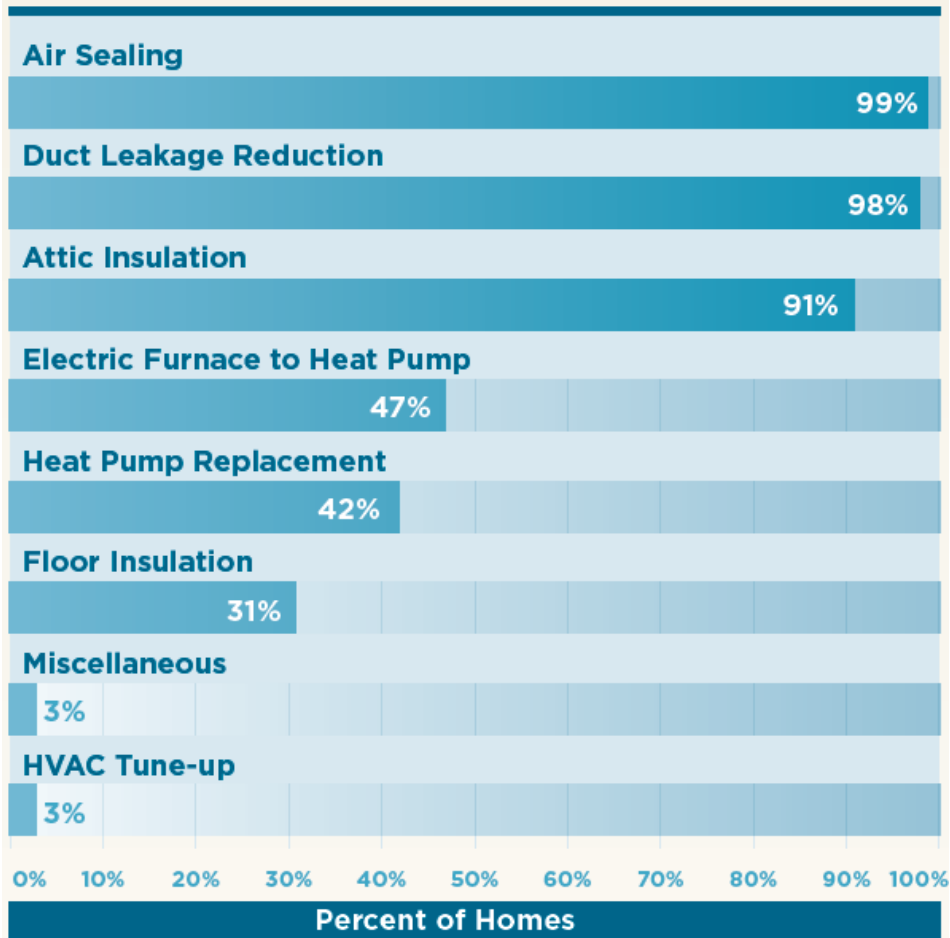
1.	Participant Selection
2.	Visual Audit
3.	Comprehensive BPI Audit
4.	Loan Approval & Contractor Selection
5.	Measure Installation
6.	Final Inspection & Project Approval

HMH PILOT RESULTS SUMMARY

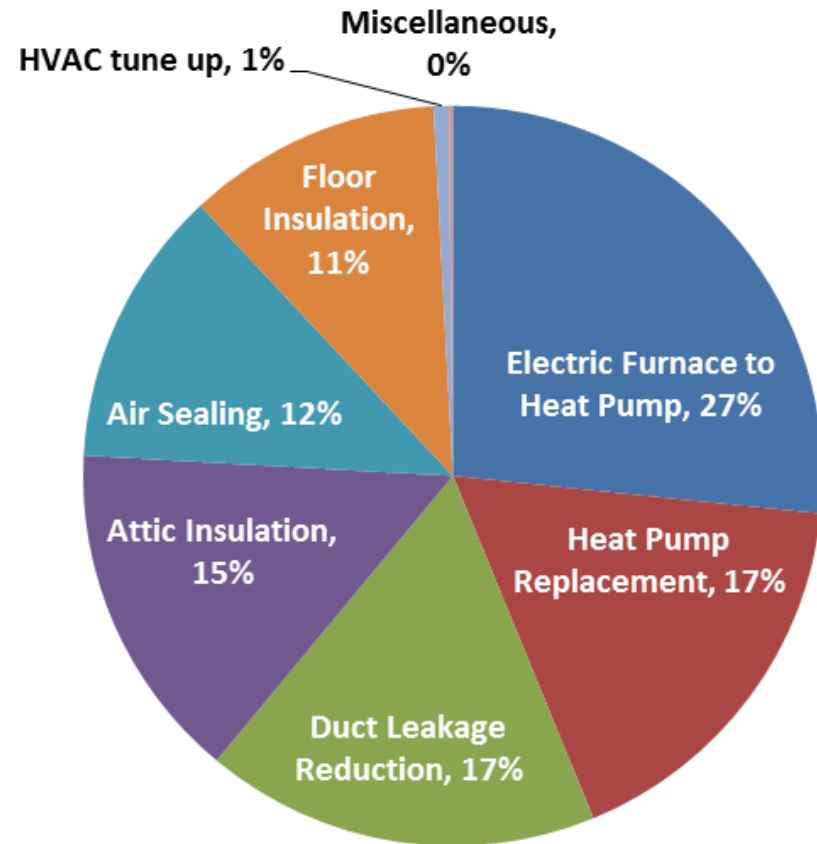
- 125 homes across 8 co-ops in South Carolina
- 34% energy savings through “whole house” measures (Avg. participant cut 11,000 kWh per year)
- Average loan was \$7,684 at 2.5% for 10 years
- Projected average total net savings is \$8,600 after 15 years
- High satisfaction rate among participants

MEASURES INSTALLED IN THE PILOT

Percent of homes with each measure



Percent of savings from each measure



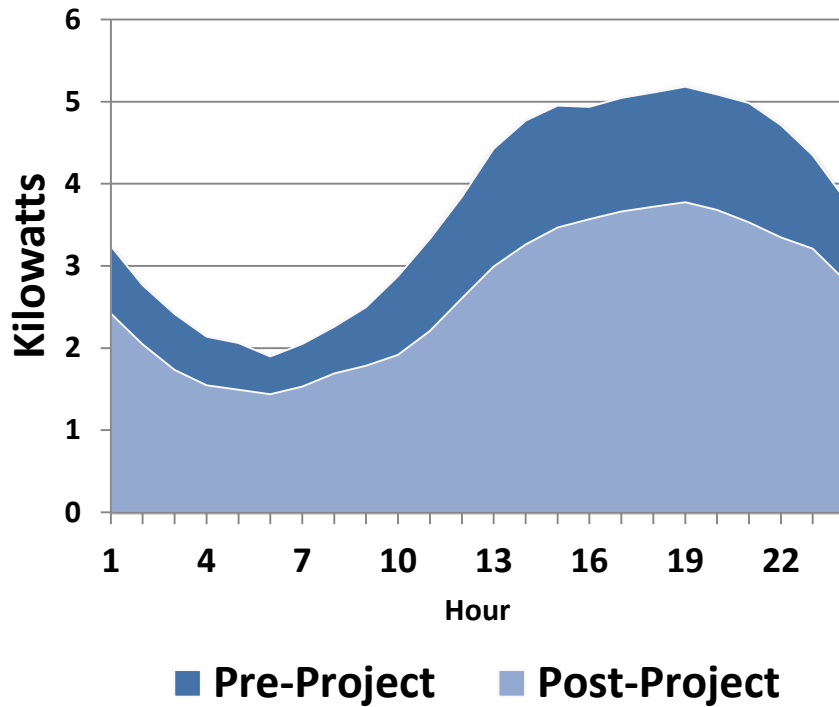
ANNUAL SAVINGS: AVERAGE HMM HOME

\$1,157		\$288	Annual Net Savings
	Annual Energy Savings	\$869	Annual Loan Repayment

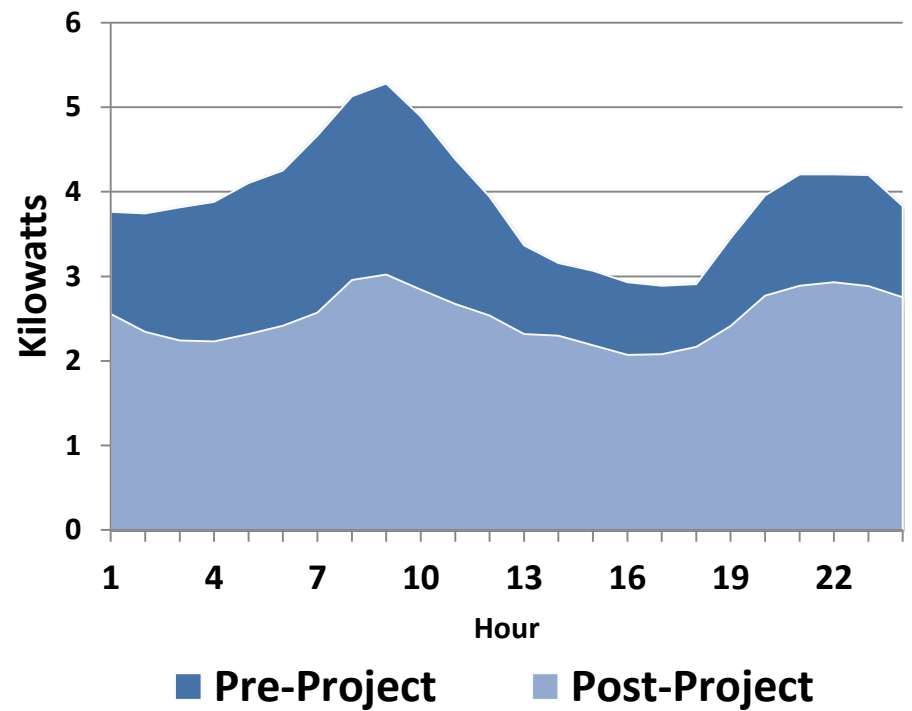
All values are per home averages for a typical meteorological year.

DEMAND SAVINGS

Average Summer Day Load Shape



Average Winter Day Load Shape



PARTICIPANT SURVEY RESULTS

Satisfaction with co-op, one year later:

96% same or higher

Satisfaction with electric bills:

89% same or higher

TERI AND JOHN NORSWORTHY'S HOME



**Monthly bills
\$150 to \$200
lower**

Summerton, S.C.

Santee Electric

Site built home, 1979

Size: 2013 sq. ft.

3 bedrooms

Energy efficiency measures:

New heat pump,
duct sealing, air sealing,
attic insulation

Loan amount: \$6,540

PILOT CONCLUSIONS

- The average home in the HMH Pilot
 - Electricity use dropped by 34% (about 11,000 kWh/yr)
 - Savings exceeded loan repayment by \$288/yr
- Coincident peak savings also dropped about one-third
- Load factor unchanged, would have improved with load control switches
- Homes became more comfortable
- Participants were extremely satisfied with the program and their co-ops
- HMH has spawned ongoing OBF (4 active programs)



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ON-BILL FINANCING PROJECT ASSISTANCE

EESI offers free assistance:

- Provide experience and lessons learned from South Carolina co-ops' OBF pilot
- Assess whether OBF is a good fit
- Identify resources, help overcome barriers to get projects off the ground
- Help design the OBF program
- Help utilities and others access funding
- Advise on program implementation

For more
information:

www.eesi.org/OBF

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