

South Carolina EE Roadmap: Green Banks and On-Bill

March 12, 2020 Webinar



Agenda

- 3:00 pm Welcome and logistics
- 3:05 pm Green Bank 101
 - Jill Bunting, Coalition for Green Capital
- 3:35 pm On-Bill 101
 - Wesley Holmes, Southeast Energy Efficiency Alliance
- 3:55 pm SC co-op on-bill program
 - Mike Smith, Electric Cooperatives of South Carolina
- 4:15 pm Q&A (please send via "chat" function)
- 4:30 pm Webinar concludes

Green Banks 101

Jill Bunting

Deputy Director

Coalition for Green Capital



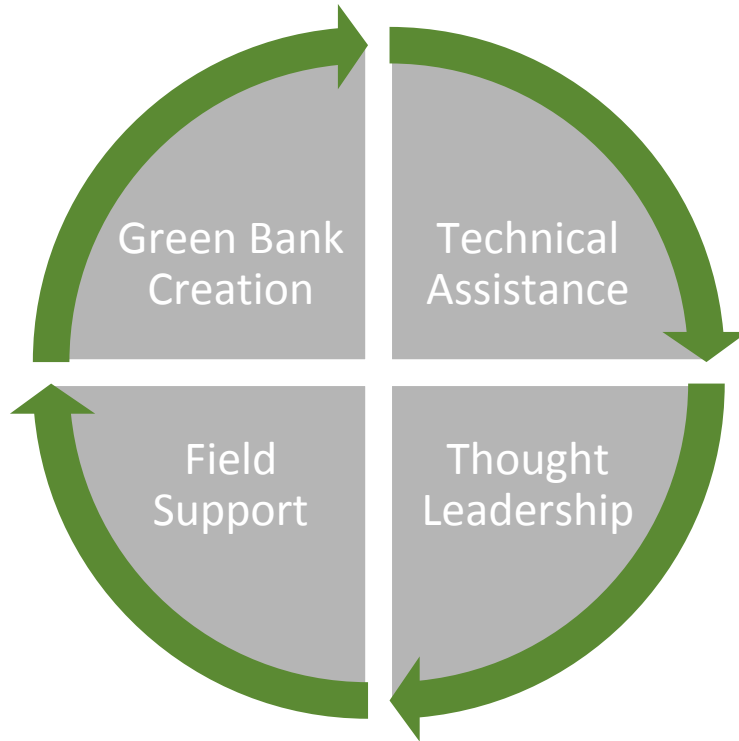
South Carolina Energy Efficiency Green Bank / On-Bill Webinar

March 12, 2020

CGC is a nonprofit focused on the development & growth of clean energy finance institution (aka Green Banks)



coalition for green capital



- CGC, a 501(c)3 non-profit, partners with governments, NGOs and market actors to create Green Banks that increase volume of clean energy investment
- CGC delivers on-the-ground technical expertise to design, start-up and help operate Green Banks
- Helped design & create multiple GBs, which have catalyzed over \$2 billion in clean energy investment
- Currently working in over a dozen states in the U.S.
- Founder and CEO Reed Hundt, former chairman of U.S. FCC
- Supported by major global foundations

What is a Green Bank?

Green Banks are mission-driven institutions that use innovative financing to accelerate the transition to clean energy and fight climate change.

What is a Green Bank?

Green Banks are **mission-driven** institutions that use innovative financing to address market gaps in clean energy and

Green Banks aren't traditional banks (i.e., they don't take deposits). "Green Banks" are known by a variety of names, such as "clean energy funds."

They work with stakeholders to 1) understand local market gaps 2) raise capital and deploy solutions to fill those gaps.

What is a Green Bank?

Green Banks are mission-driven **institutions** that use

Institutions are durable, have cultures, are flexible, and responsive to the real world. They can use a mix of tools to achieve their goals, and those tools may evolve over time.

accelerate the transition to

net climate change

What is a Green Bank?

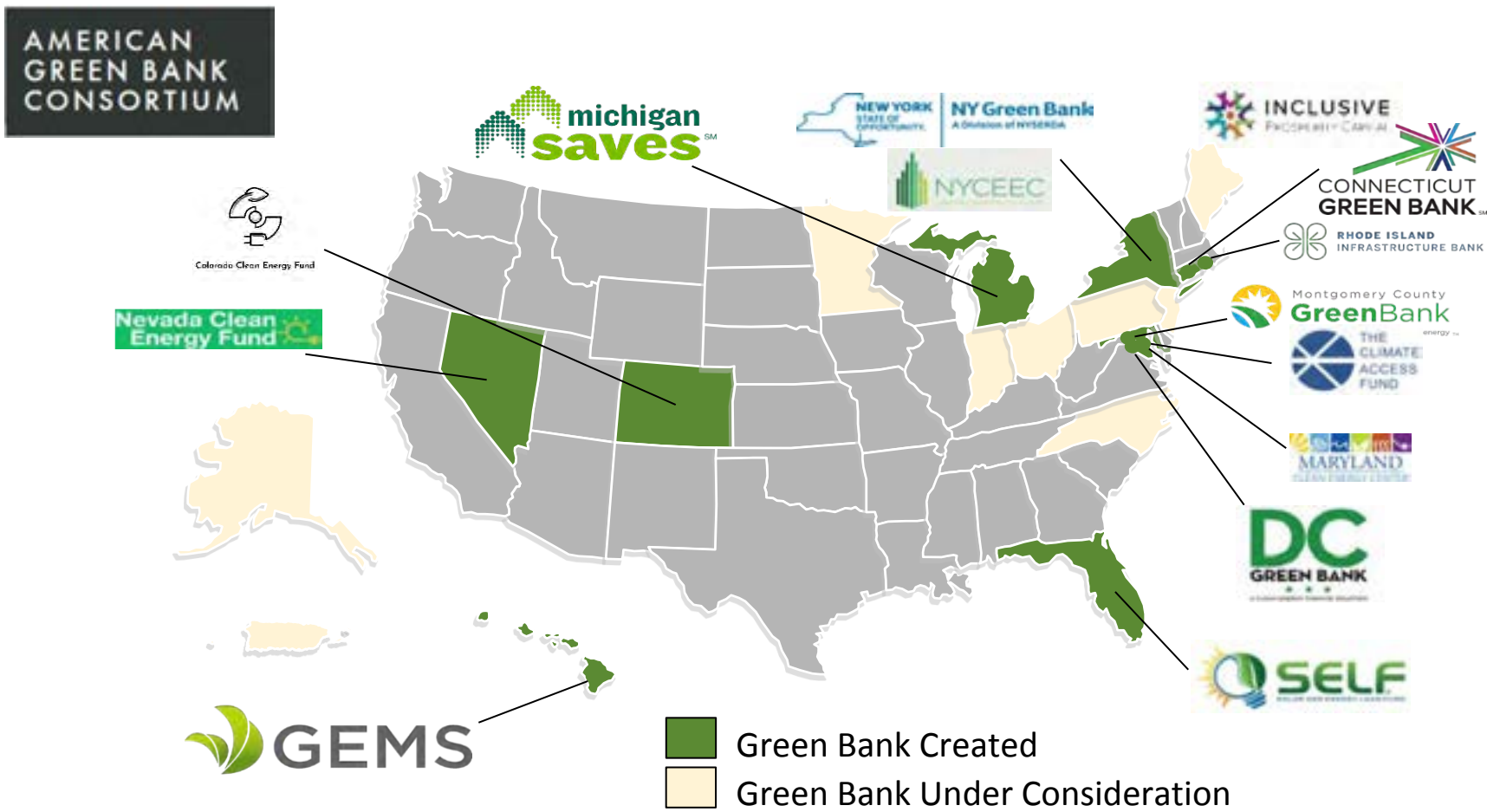
Green Banks are mission-driven

innovative financing to accelerate

clean energy and fight climate change

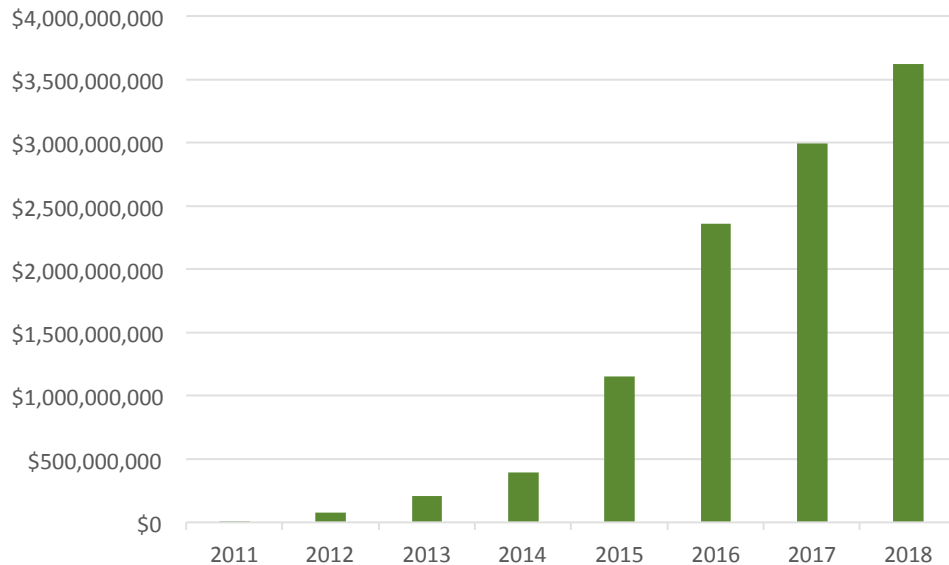
Green Banks use financing, not grants. Financing helps to maximize the impact of each dollar. The use of financing means the Green Banks will focus on markets where there is potential for payback. Financing can be done in tandem with other market development activities.

Today, Green Banks are diverse in geographic scope, organizational form, and market areas



Green Banks approaching \$4 billion of cumulative investment; now \$50 billion globally

Cumulative Investment Caused by Green Banks (\$)



Through the nation's largest green bank...New York will continue to lead the fight against climate change



The Connecticut Green Bank demonstrates how mobilizing private investment into our clean energy economy can reduce the energy burden on households and businesses while creating jobs in our communities



On average, Green Banks leverage approximately \$3 of private capital for every dollar of mission-driven capital

Lessons learned: project “investment” can and should take many forms

Barrier to Investment	Solution	Examples
Perceived project risk	Credit enhancement	Provide a loan loss reserve can mitigate risk and allow investment to flow at longer term of lower rate
Inefficiencies of scale	Aggregation & warehousing	Aggregate small projects to meet scale to attract private capital
Marginal economics	Investment	Lend to project, in senior or junior position, to improve overall economics for investors and customers
First-of-kind transaction	Technical assistance	Put in technical legwork that comes with closing more labor-intensive, innovative transactions

Coupling credit enhancements with market development activity yields results

- **Challenges:** Unsecured energy efficiency lending perceived as risky; transactions are small
- **Solution:**
 - Establish loan loss reserves to get local lenders comfortable with this market
 - Couple financing with market development activity including: customer marketing, contractor trainings, and lender education to spur demand
 - Assure quality through contractor trainings, list of approved measures, follow up verification
- **Results:** Hundreds of millions of improvements financed; high leverage ratio (up to \$10:\$1)

Example Green Banks Programs:



Green Banks in other markets target stubborn barriers to EE adoption

Low/no-interest pre-development loans unlock deeper energy efficiency savings



Debt for on-bill financing program supports energy efficiency and solar adoption by renters and low-income households



Technical assistance for municipal utilities enables them to source affordable, long-term capital for on-bill programs



National Climate Bank would create new source of capital for innovative financing programs

- **Receives \$35 billion in federal funds to invest in GHG reduction**
 - Will use funds to catalyze multiples of private co-investment
- **Creates up to \$1 trillion in investment impact**
- **Uses “Green Bank” model to crowd-in capital, not compete**
- **Bills in Senate & House, part of CLEAN Future Act in the House**
 - Senate bill from Sens. Markey, Van Hollen, Blumenthal & Schatz (S 2057)
 - House bill from Reps. Dingell, Tonko, Blunt Rochester & Axne (HR 5416)

116TH CONGRESS
1ST SESSION

S. 2057

To establish a National Climate Bank.

IN THE SENATE OF THE UNITED STATES

JULY 8, 2019

Mr. MARKEY (for himself, Mr. VAN HOLLEN, Mr. SCHATZ, and Mr. BLUMENTHAL) introduced the following bill, which was read twice and referred to the Committee on Environment and Public Works

A BILL

To establish a National Climate Bank.





Thank You

Jill Bunting, Deputy Director

Coalition for Green Capital

www.coalitionforgreencapital.com

On-Bill 101

Wesley Holmes

Director of Strategy and Development

Southeast Energy Efficiency Alliance



SEE EA
SOUTHEAST ENERGY EFFICIENCY ALLIANCE

Wesley Holmes

Director of Strategy and Development

SEEA Serves the Southeast

The **Southeast Energy Efficiency Alliance (SEEA)** promotes energy efficiency as a catalyst for economic growth, workforce development and energy security. We do this through collaborative public policy, thought leadership, outreach programs, and technical advisory activities.



**Regional Energy
Efficiency Organization**

**Eleven-state
footprint**

**Non-profit,
non-partisan**



SEEA & Energy Efficiency Finance

Energy Efficiency Finance Goal

Expand the availability and accessibility of capital to make energy efficiency investments

EE Finance Activities

- 2014-2018 Southeast Energy Efficiency Fund Investments
- 2014 Arkansas Energy Office Statewide Financing Options Study
- 2014 Southeast Energy Efficiency Fund
- 2014 North Carolina On-Bill Working Group
- 2015 SEEA webinar with CEO of Roanoke Electric
- 2015 SEEA conference highlight: The Roanoke Center
- 2016 SEEA conference highlight: Ouachita Electric
- 2017 SEEA Learning Circle for Inclusive Financing
- 2019 Southeast Tariffed On-Bill Cohort

Solutions that work for *anyone* – regardless of income, credit score, or renter status – are better for *everyone*.



Why On-Bill Financing?



- 864 distribution cooperatives nationally
- Over 40 Million members
- Over \$40 Billion in electricity sales annually
- More than 230 co-ops the southeast

Understanding the Terminology

- **On-Bill Financing (OBF)** is an energy efficiency retrofit finance mechanism whereby the upfront cost of energy saving improvements and equipment is funded by the electric utility, and ratepayers are able to pay down the cost through a monthly payment on their electric bill.
- **On-Bill Repayment (OBR)** provides the same service and, typically, follows the same process as On-Bill finance, but capital is provided, and loans are serviced, through a third party such as a bank or credit union.
- **On-Bill Tariff (OBT)** is a model of on-bill financing where investment in the energy performance of built infrastructure is recognized as a system reliability investment and the utility utilizes their established authority to add tariffs for system investments to consumer bills as the collection mechanism.

On-Bill Financing Program Differences

On-Bill Loan

(Utility or 3rd Party Sponsored)

Tied to the property owner

Traditional loan underwriting

Available only to property owners

No utility service disconnection

Generally not transferable

On-Bill Tariff

Tied to the meter

Bill payment history

Available to any utility customer

Disconnection for non-payment

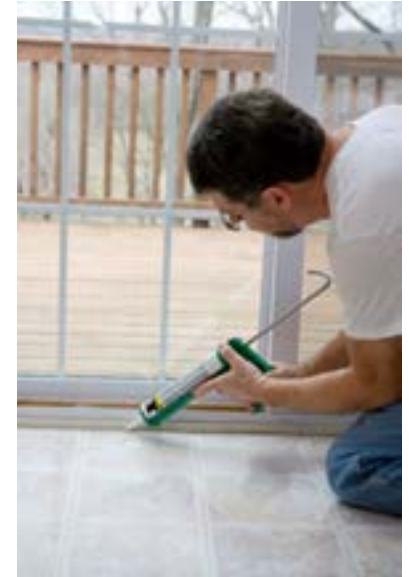
Transferable (with consent)

Southeast On-Bill Programs

- Arkansas
 - Home Energy Lending Program (HELP) (Utility Loan)
 - HELP PAYS (Tariff)
- Georgia
 - HomePlus Loan Program (3rd Party Loan)
- Kentucky
 - How\$martKY (Tariff)
- North Carolina
 - Upgrade to Save (Tariff)
- South Carolina
 - Help My House (Utility Loan)
- Tennessee
 - Appalachian Electric (Tariff)

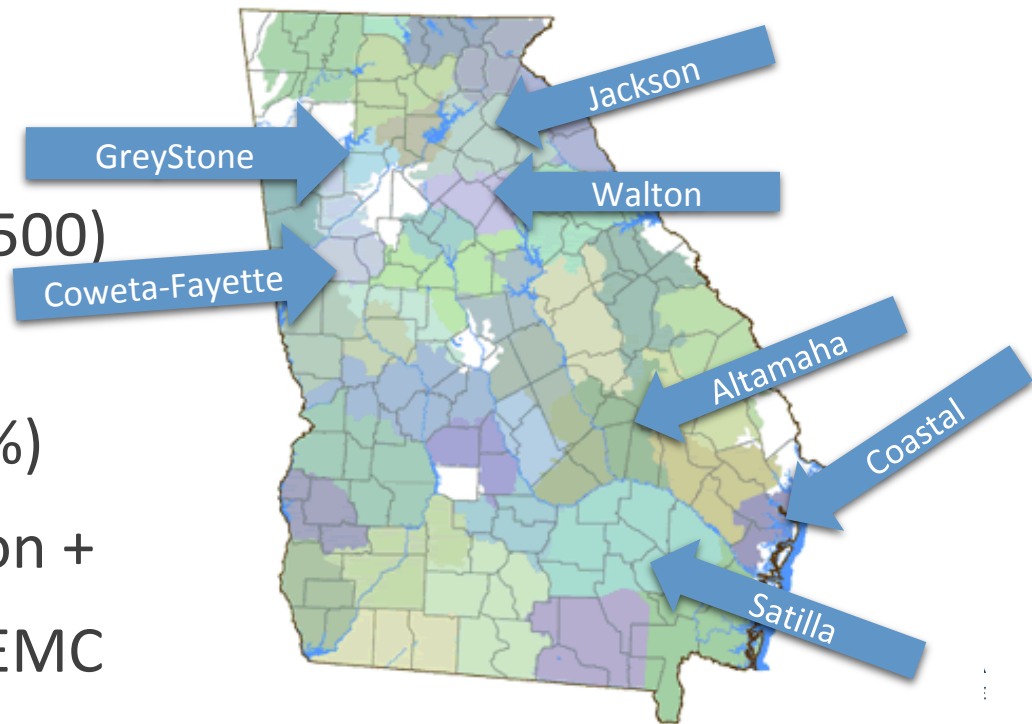
Typical Improvements

- Duct sealing
- Air sealing
- Insulation
- Programmable thermostats
- HVAC system replacement



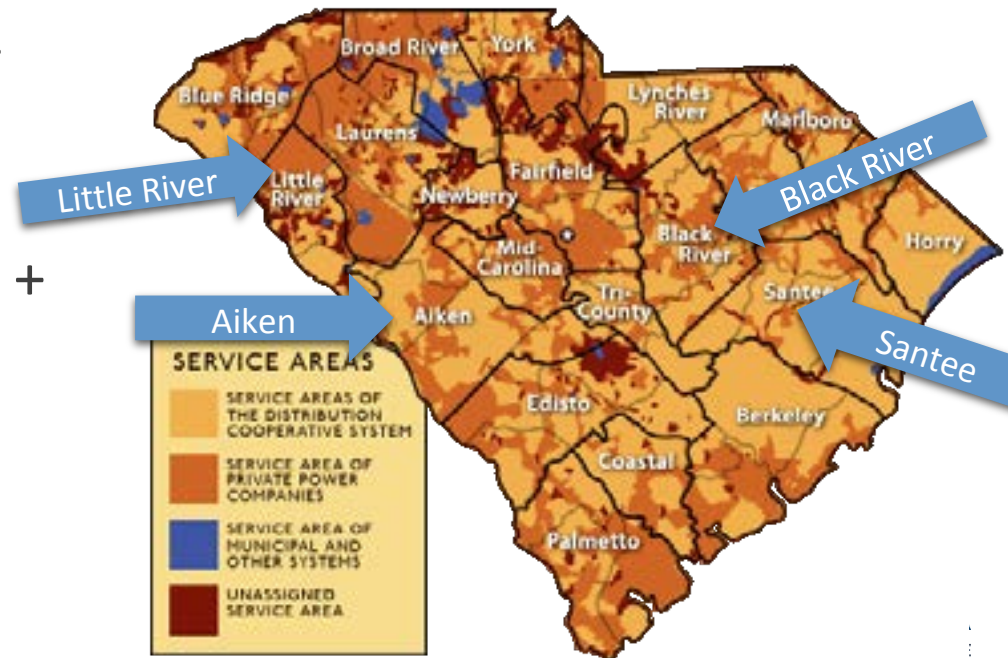
Georgia: HomePlus

- On-Bill Model: 3rd Party Loan Repayment
- Start Date:
 - 2014 (Pilot 2010-2013)
- Participating Utilities:
- Current – 8 (Pilot: 24)
- Number of Loans to Date:
 - Since 2014: ~270 (Pilot: 1500)
- Average Loan Size: ~\$7,000
- Interest Rate: 7.9% (Pilot: 0%)
- Total Investment: ~ \$5 Million +
- Implementation Support: GEMC Credit Union



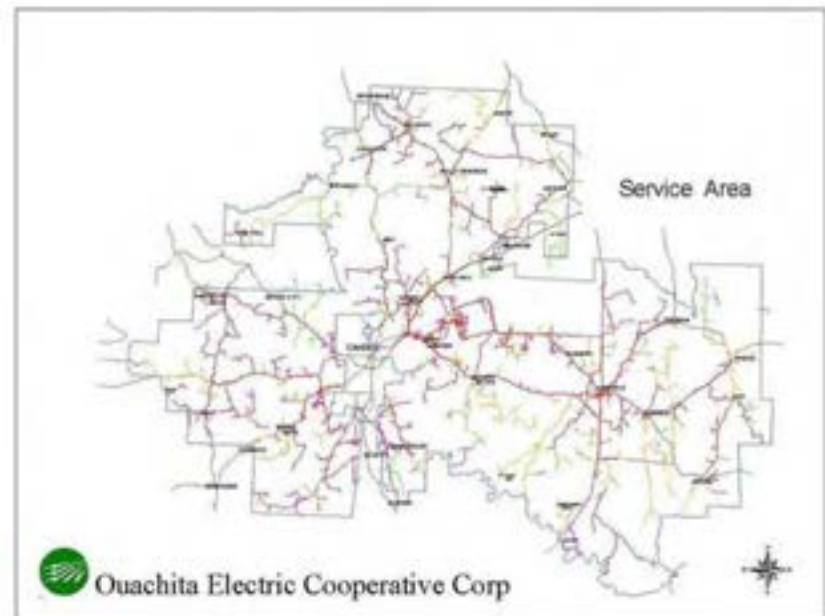
South Carolina: My House

- On-Bill Model: Utility Sponsored Loan
- Start Date: 2011
- Participating Utilities: 4
- Number of Loans to Date: 794
- Average Loan Size: \$10,000
- Total Investment: ~ \$7 Million +
- Implementation Support: KWSavings



Ouachita EMC: HELP PAYS

- On-Bill Model: Tariff
- Start Date: 2016
- Number of Participating Utilities: 1
- Financed Projects To Date:
 - 500+ Residential, Institutional
 - 30 Solar Projects
- Average Investment: \$5,600 (single-family)
- Total Investment: ~\$5M+
- Implementation Support: EEtility



Program Comparison

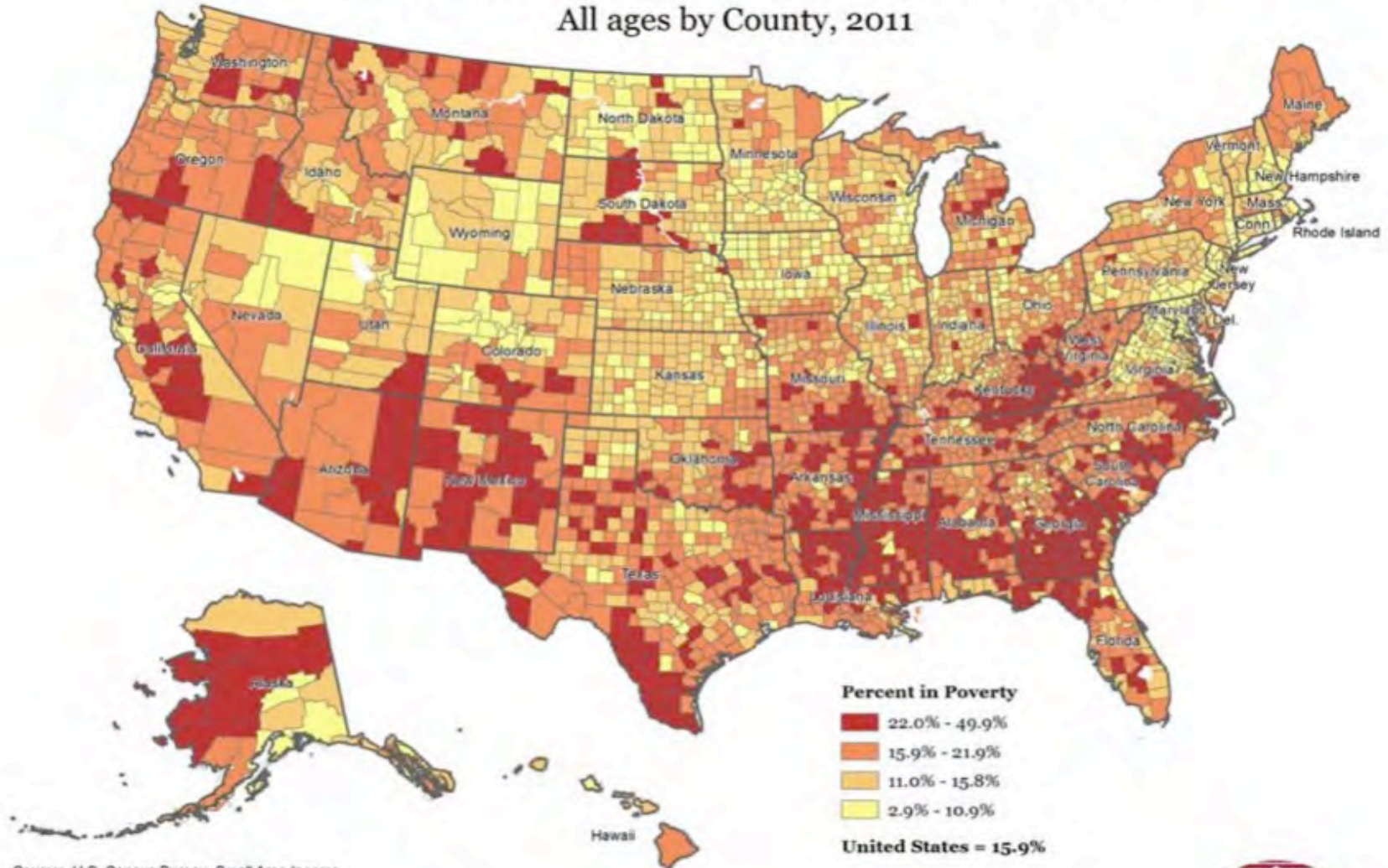
Metric	HomePlus	Help My House	HELP PAYS
Number of Participating Utilities	8	4	1
Financed Projects To Date	270	794	500+
Start Date	2010	2011	2016
Average Investment	\$5,000	\$10,000	\$5,600
Interest Rates	6.5-7.9%	3.75-5%	4.5%
Total Investment	\$1.35M*	\$5 Million+	\$5 Million +
Rate of Default	<1%	<1%	<1%
Program Attributes			
Credit Determination (Score vs Bill History)	Score	Score/Bill	Bill
Non-utility Implementer Support	X	X	X
Lien on Equipment		Over \$5k	
Accessible to renters		X	X



Demographic Snapshots

More than 90% of persistent poverty counties in the U.S. are served by electric cooperatives.

Estimated Percent of Population in Poverty All ages by County, 2011



Source: U.S. Census Bureau, Small Area Income & Poverty Estimates (SAIPE), 2011.

Note: Alaska and Hawaii not shown to scale.

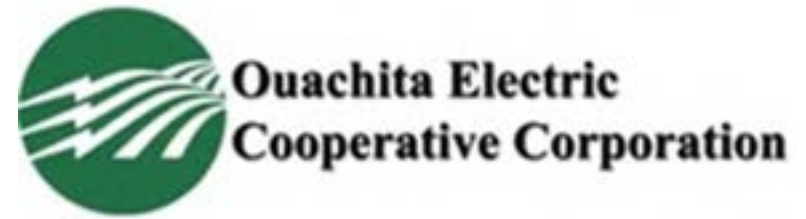
Demographic Snapshot



**Ouachita Electric
Cooperative Corporation**

- Located in Southwest Arkansas Delta Region
- 8500 meters, mostly Residential
- Housing stock between 50 and 100 years old
- Average household median income of ~\$29K (AR average is ~\$42k.)
- Provided Home Energy Loan Program (HELP) from April 1, 2015 - December 31, 2015
- Converted to tariff model HELP PAYS in April 2016

HELP vs HELP PAYS




- **Participation Tripled**
 - HELP (Loan) Enrollment Apr – Dec 2015
 - 70 Single Family Homes
 - HELP PAYS (Tariff) Enrollment Apr – Dec 2016
 - 118 Single Family Homes
 - 82 Multifamily Units
 - 2 Commercial
- **Average Investment Doubled**
 - HELP = \$2,280
 - HELP PAYS = \$5,600
- **Total Investment Tripled**
 - HELP = \$500,000
 - HELP PAYS = \$1.6 Million +
((\$500k to 2 Commercial, a college and municipality))



Demographic Snapshot:



Roanoke Electric Cooperative

Your Touchstone Energy® Partner 

- Located in Northeast North Carolina
- 14,500 meters, mostly Residential
- Average household median income of ~\$39K (NC average is ~\$47k.)
- 48% spend over \$200/month (30% is National Co-op average)
- Provided loan program in 2014
- Converted to tariff model (Upgrade to Save) in July 2015

Loan Model vs Tariff Model

- **Participation Increased**

- Loan Program Enrollment
 - 1000 targeted/15% Showed interest
 - “Handful” qualified/ < .1% participated
- Upgrade to Save Enrollment
 - 250 Single Family Homes

- **Average Investment Change?**


- Loan Program = \$0
- Upgrade to Save= \$7,200

- **Service Area Total Investment Change**

- Loan Model = \$0
- Upgrade to Save= \$1.5 Million +
(\$500k to 2 Commercial, a college and municipality)



Roanoke Electric Cooperative

Your Touchstone Energy® Partner 



Why does tariff increase participation?

Theories from Utilities, Implementers, Experts

Downside of Loans

- Difficulty qualifying (credit score/property ownership)
- General consumer aversion to loans for invisible EE upgrades
- Low income households often already burdened with debt and constrained finances
- Impact of loans on other credit needs (i.e. car loans)

Upside of Tariffs

- They're not loans
- Easier to qualify
- Transfer with property



Additional SEEA Resources

[Utility Guide to Tariffed On-Bill Programs](#)

This document guides the reader through resources about on-bill financing, tariffed on-bill programs, and the Pay As You Save® (PAYS) system.

[Webinar Series: Inclusive Financing for Energy Efficiency](#)

A comprehensive series on Inclusive Financing for Energy Efficiency (EE). This series provides 8 episodes featuring nationally recognized experts and on the ground program operators.





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Wesley Holmes
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SC On-Bill Programs

Mike Smith

Manager, Conservation and Energy Efficiency, Retail Operations

Electric Cooperatives of South Carolina



A Model for Weatherizing South Carolina Homes

Mike Smith

Electric Cooperatives of South Carolina
Cayce, SC

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ON-BILL FINANCING (OBF)

- 2010 South Carolina state law (Section 58-37-50) allowed co-ops to move forward
 - Loans are tied to the meter
 - Power can be shut off for lack of payment
 - Loan stays with home if home is sold
 - These provisions eliminate need for credit check

South Carolina Code of Laws Unannotated

Title 58 - Public Utilities, Services and Carriers

CHAPTER 37

Energy Supply and Efficiency

SECTION 58-37-10. Definitions.

As used in this chapter unless the context clearly indicates otherwise:

(1) "Demand-side activity" means a program of energy conservation, energy efficiency, or energy reduction or more efficient use of energy required by a utility, but not limited to, conservation and energy efficiency,

(2) "Integrated resource plan" means a plan which contains the supplier's or producer's program in a particular manner, including both demand-side and supply-side options, which was considered and concluded with respect to the effect of the plan on the environmental and economic consequences of the plan to the extent practicable. For electrical utilities subject to the jurisdiction of the South Carolina Public Service Commission, this definition must be interpreted in a manner consistent with the integrated resource planning process adopted by the commission. For electric cooperatives subject to the regulations of the Rural

SECTION 58-37-50. Agreements for energy efficiency and conservation measures; interest rate; recovery of costs; installation liability; energy audits; exemptions.

(A) As used in this section:

(1) "Electricity provider" means an electric cooperative, an investor-owned electric utility, the South Carolina Public Service Authority, or a municipality or municipal board or commission of public works that owns and operates an electric utility system.

(2) "Natural gas provider" means an investor-owned natural gas utility or publicly owned natural gas provider.

(3) "Meter conservation charge" means the charge placed on a customer's account by which electricity providers and natural gas providers recover the costs, including financing costs, of energy efficiency and conservation measures.

(4) "Notice of meter conservation charge" means the written notice by which subsequent purchasers or tenants will be given notice that they will be required to pay a meter conservation charge.

(5) "Customer" means a homeowner or tenant receiving electricity or natural gas as a retail customer.

(6) "Community action agency" means a nonprofit eleemosynary corporation created pursuant to Chapter 45, Title 43 providing, among other things, weatherization services to a homeowner or tenant.

(B) Electricity providers and natural gas providers may enter into written agreements with customers and landlords of customers for

the plan to the extent practicable. For electrical utilities subject to the jurisdiction of the South Carolina Public Service Commission, this definition must be interpreted in a manner consistent with the integrated resource planning process adopted by the commission. For electric cooperatives subject to the regulations of the Rural

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ON-BILL FINANCING (OBF)

- Allows co-op members to finance energy efficiency measures with low-interest loans
- Loans are repaid on monthly utility bills
- Enables those without cash to make prescribed and long-awaited efficiency upgrades



Shape Up Your Home for Energy Savings

**2011: Central Electric's HMMH
125 home pilot**

HELP MY HOUSE BASICS

1. Convenient

- On-bill repayment (2010 S.C. law)
- Improves comfort and energy savings

2. Consistent Quality

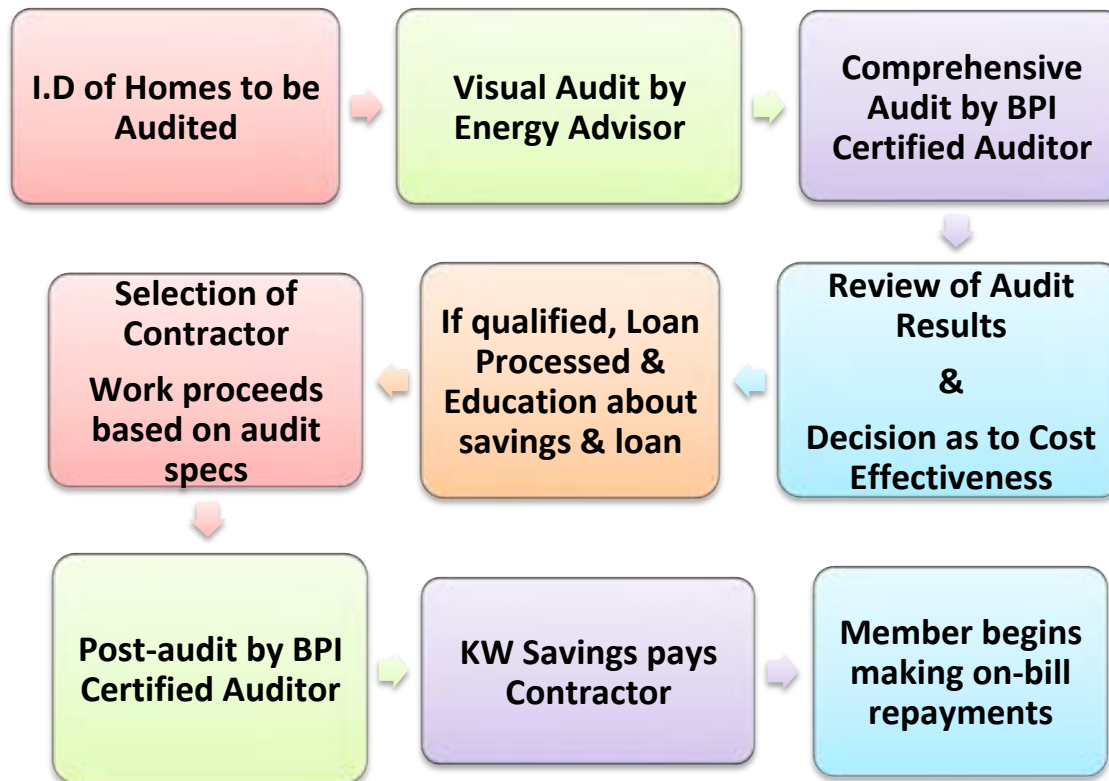
- Trained, qualified contractors
- Co-op manages QA, QC

3. Affordable Financing

- Low-interest loan tied to the meter;
Transfers if home sells
- No money down, no credit checks required



Help My House Core Process

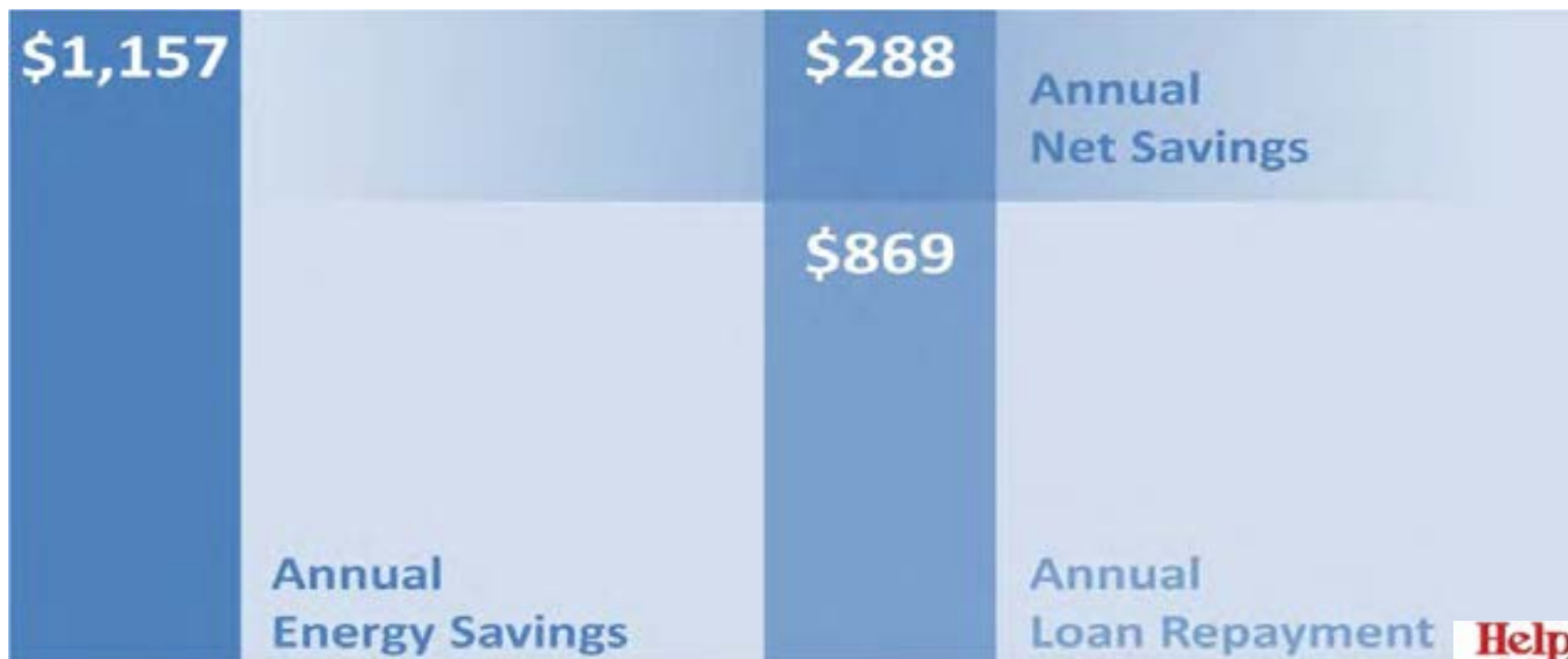


FAST-PAYBACK IMPROVEMENTS



- Seal and insulate home & duct work
- Install vapor barriers
- Replace electric furnaces w/heat pumps
- Repair or replace older heat pumps

Results: The HMMH Pilot (2011)



KEY FACTORS: RISK MANAGEMENT

1. Loans tied to power meter
 - Transferrable
 - No need for credit checks
2. Electric bill payment history
3. No pay, no power
 - 2010 S.C. law permits disconnects for non-payment of utility loans
 - National default rates on power bills are less than 1/10th of 1%





Improving Energy Efficiency in Existing Homes using On-bill Financing

Mike Smith

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Questions?

Please use “Chat” function

Thank you to our speakers!

Be safe and stay healthy!!