WEBINAR SERIES

UPDATE ON INCLUSIVE FINANCING PROGRAMS IN THE SOUTH

Part 2 of the SEEA Learning Circle Series

February 16, 2017
Growing interest in On-Bill has made these introductory sessions some of our best attended webinars.

Over 100 Registrants from Across the Country

- Utility managers
- Consumer advocates
- Utility commission staff
- State energy offices
- Community organizers
- Solution providers
Mission
The Southeast Energy Efficiency Alliance (SEEA) works to ensure people in the Southeast have the knowledge, resources, and opportunities to optimize energy use.

Vision
Energy efficiency is a primary driver of a prosperous, healthy and sustainable Southeast.

Work Areas:
- Built Environment
- State, Local & Utility Policy
- Energy Equity
- Energy Efficiency Finance
SEEA & Energy Efficiency Finance

Work Area Goal

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

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

EE Finance Activities

• 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
Why On-Bill Financing?
More than 90% of persistent poverty counties in the U.S. are served by electric cooperatives.
Cooperative Leadership Matters

Rural communities are leading the way on inclusive financing, and are offering assistance.
Chris Woolery  
Program Manager  
MACED

Marshall Cherry  
Chief Operating Officer  
Roanoke Electric

Tammy Agard  
President, EEtility
Introduction to Inclusive Financing for Energy Efficiency

- How$mart KY in Kentucky
- Upgrade to $ave in North Carolina
- HELP PAYS in Arkansas
- More opportunities to learn
Energy Efficiency for Everyone

Prepared for Southeast Energy Efficiency Alliance session:
Update on Inclusive Financing Programs in the South
February 16, 2017
MACED: Mountain Association for Community Economic Development

What is MACED? We’re a Community Development Financial Institution (CDFI)

What is a CDFI? Community development financial institutions (CDFIs) are private financial institutions that are 100% dedicated to delivering responsible, affordable financing to help low-income, low-wealth, and other disadvantaged people and communities join the economic mainstream.

What do we do? MACED partners with local people to support community economic development through non-traditional business lending, entrepreneurial support systems, policy work, and investment programs like How$martKY.

Why do we do this? MACED wants to build upon the strengths of Kentucky and Central Appalachia to serve as a catalyst for a Just Transition in the region as demand for coal declines. We create economic alternatives in clean energy and other key sectors and strive to make Appalachian communities better places to live.
To our knowledge, How$martKY is the first on-bill program ever offered by each of our co-op partners.
PAYS allows utilities to offer cost effective energy upgrades using an investment and cost recovery model that benefits both the member and utility.

*Based on the Pay As You Save® system developed by EEI.*
How$martKY’s Timeline:

December 2010:
Kentucky’s Public Service Commission (KY PSC) approved the tariff for our pilot program after an 18 month process.

August 2011:
The first H$KY retrofit is completed in partnership with Jackson Energy.

November 2012:
Three of the four cooperative partners filed with the PSC for a permanent tariff.

August 2013:
KY PSC approved the tariff for the permanent program in 9 months.

August 2014:
Farmers RECC filed tariff with the PSC.

January 2015:
KY PSC approves the tariff in 6 months.

January 2015:
Licking Valley Rural Electric filed tariff with the PSC.

April 2015:
KY PSC approves the tariff in 3 months.

February 2017:
How$martKY completes its 295th retrofit to date.
## How$martKY: Eligible Rate Classes

<table>
<thead>
<tr>
<th>Utility</th>
<th>Residential</th>
<th>Small Commercial</th>
<th>Large Commercial &amp; Industrial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fleming-Mason</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Jackson</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Farmers</td>
<td>✔</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grayson</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Big Sandy</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Licking Valley</td>
<td>✔</td>
<td>✔</td>
<td></td>
</tr>
</tbody>
</table>

**Renters:** All cooperative partners allow renters in each rate class to participate, providing they have permission from the property owner.
Typical Improvements:

- Duct sealing
- Air sealing
- Insulation
- Programmable thermostats
- HVAC system replacement
Key program stats:

<table>
<thead>
<tr>
<th>assessments to date:</th>
<th>offers given to date:</th>
<th>offers accepted to date:</th>
<th>low-moderate income households:</th>
<th>participants in manufactured homes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>547</td>
<td>371</td>
<td>293</td>
<td>52%</td>
<td>24%</td>
</tr>
</tbody>
</table>

The majority of our assessments result in an investment (nearly 80% accept the offer), and a majority of those investments are in low- and moderate-income households.
### Key program stats:

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Job Cost To Date</td>
<td>$7,377</td>
</tr>
<tr>
<td>Average Projected Annual Electric Savings</td>
<td>5,270 kWh</td>
</tr>
<tr>
<td>Average Projected Monthly Savings</td>
<td>$50.32</td>
</tr>
<tr>
<td>Average How$martKY Monthly Charge</td>
<td>$39.24</td>
</tr>
<tr>
<td>Average Monthly Net Cash Flow Per Job</td>
<td>$11.08</td>
</tr>
</tbody>
</table>

Utility cost recovery is above 99.9%. Zero disconnections for non-payment.
Key Lessons Learned:

- **Relationships are key:** Communication and trust are the most important ingredients in MACED’s recipe for success.

- **Partner with others:** Any person or organization that understands the need for these programs is a potential partner or advocate for our program. Think outside the utility/government/NGO box.

- **Find champions:** Identify (or try to develop) at least one champion for your program in every single partner organization.

- **Learn from others:** Don’t try to create every wheel from scratch. Find others that are doing similar work and identify best practices that have already been established.

- **Build the business case:** These investments generate benefits for partner utilities – and their wholesale supplier – and executives depend on us to help quantify that value.

- **Don’t make assumptions:** Confirm everything!
Want More Information?

Chris Woolery
How$martKY Program Coordinator
(859) 986-2373 or
(859) 621-4765
cwoolery@maced.org
Introduction to Inclusive Financing for Energy Efficiency

• How$mart KY in Kentucky

• Upgrade to $ave in North Carolina

• HELP PAYS in Arkansas

• More opportunities to learn
Upgrade to $ave
financed through
USDA’s Energy Efficiency & Conservation Loan Program

Marshall Cherry, Chief Operating Officer
Roanoke Electric Cooperative
Half of Roanoke’s member-owners have average monthly bills above $200.

Even though Roanoke’s rates are not out of line with the field, customer satisfaction is low among members with high bills.
Initial loan offer wasn’t enough get to “Yes”...

• Even though we offered:
  – Cost effective upgrades for high consumption member-owners
  – On-bill financing

• Major barriers remained:
  – Creditworthiness
  – Renter eligibility
  – Members declining additional debt

• So, we sought a solution that would be more inclusive and generate more value for more members
Opt-In Tariffed Approach

Based on the Pay As You Save® system developed by EEI.
Upgrade to $ave

ON-BILL COST RECOVERY TIED TO METER

USDA RUS EECLP

Roanoke Electric

Roanoke Electric

The Roanoke Center

Local Contractors

Metered Site

Roanoke EC Member-Owner

INVESTMENT IN UPGRADES

Based on the Pay As You Save® system developed by EEI.
## Summary of Investments for Initial Participants

**Sample of over 200 homes**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average cost of upgrades</td>
<td>$7,200</td>
</tr>
<tr>
<td>Average buy-down for EE Credits *</td>
<td>$325</td>
</tr>
<tr>
<td>Average monthly savings per site</td>
<td>$80+</td>
</tr>
<tr>
<td>Average monthly tariff</td>
<td>~$60</td>
</tr>
<tr>
<td>Average monthly savings for member</td>
<td>$20+</td>
</tr>
<tr>
<td>% of estimated savings kept by member during cost recovery</td>
<td>25%</td>
</tr>
</tbody>
</table>

* *Capped at the amount needed for investment to pencil out without a copayment*
We are financing our investments with financing from the Energy Efficiency & Conservation Loan Program

Up to $5 Billion available annually at Treasury rates

Roanoke Electric Cooperative

$6 Million Investment program

Upgrade to $ave Using PAYS®

~$7,000 in upgrades per participant

Pay As You Save® and PAYS® are trademarks of Energy Efficiency Institute, Inc.
Source of Capital: EECLP

- USDA RUS - EECLP is our primary source of capital
  - Other co-op capital providers are also options
- $6 million
  - Application and approval process: 90 days
  - Reimbursable basis: only owe what is used
  - Interest-only in first year
- Uses same processes as our other RUS loans
Results in first 18 months

• $1.5 million in new investment
• Better buildings
• Jobs and workforce development
• Lower wholesale demand costs for the utility
• Lower bills for the participants
• Higher customer satisfaction
With an open letter from our CEO, Roanoke offered assistance to cooperatives also interested in inclusive financing.

To date, we have fielded requests from more than two dozen utilities, including investor-owned utilities.
Decision Tool for Utility Managers:

*Key considerations before investing in resource efficiency and rooftop solar through a tariffed on-bill program*

January 2016

www.roanokeelectric.com/pays
Introduction to Inclusive Financing for Energy Efficiency

- How$mart KY in Kentucky
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- More opportunities to learn
Update on HELP PAYS®

Update on Inclusive Financing Programs in the South

A Series Hosted by Southeast Energy Efficiency Alliance

February 16, 2017

Tammy Agard
Co-Founder and CEO
EEtility
2009: EEtility co-founders operated the Home Energy Affordability Loan Program ("HEAL") incubated by the Clinton Foundation.

2014: We founded EEtility – Arkansas’ first “B” Corporation. (“B” Corps include societal and environmental “Benefit” in decision making.)

2015: EEtility developed the Home Energy Lending Program “H.E.L.P.” now offered by 4 electric cooperative utilities.

2016: We began operating HELP PAYS® for the first cooperative in Arkansas to offer inclusive financing.

2017: EEtility will be providing program operator support services for the Upgrade To $ave program alongside The Roanoke Center in North Carolina.
“93% of Persistent Poverty Counties in the U.S. overlap with Rural Electric Cooperative service territories.”

— National Rural Electric Cooperative Association

*If we can figure out how to make Energy Efficiency financing work for Rural Electric Cooperatives and their member-owners, many of whom live in persistent poverty, then we have figured out how Energy Efficiency financing can work for everyone, anywhere in the country.*
Ouachita Electric Cooperative

- Located in Southwest Arkansas Delta Region

- Average household median income of ~$29K in their service area. (National average is ~$52k and state average is ~$42k.)

- 8500 meters, mostly Residential

- Housing stock between 50 and 100 years old

- ALL THE ABOVE = PERFECT INCUBATOR!
### H.E.L.P. = On Bill LOAN Program

<table>
<thead>
<tr>
<th>What worked:</th>
<th>What didn’t:</th>
</tr>
</thead>
<tbody>
<tr>
<td>▶ Arkansas Energy Office set up a Loan Loss Reserve</td>
<td>▶ Single Family renters were left out</td>
</tr>
<tr>
<td>▶ Co-op utilities said “YES”</td>
<td>▶ Multi Family renters were left out</td>
</tr>
<tr>
<td>▶ <strong>Homeowners</strong> with good payment history could get basic weatherization upgrades with cash flow neutral payback terms</td>
<td>▶ Mobile homes were left out</td>
</tr>
<tr>
<td>▶ Conversion rates were 70-80% where we found bill neutral opportunities</td>
<td>▶ HVAC financing was not an option (Even with the LLR, risk perceived to be too high.)</td>
</tr>
<tr>
<td>▶ Loans averaged $3,100</td>
<td>▶ Peak Demand savings for the Coop (when HVAC included) were left on the table. (For Ouachita Electric, that generates $300 per year per participant in avoided costs.)</td>
</tr>
</tbody>
</table>
## Loans compared to Tariffed On-Bill

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Home Energy Lending Program (HELP)</th>
<th>HELP PAYS®</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Residential participants are eligible</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>• Renters are eligible</td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>• No credit score check – no debt to income ratios</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>• No upfront participant cost</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>• Estimated savings <strong>must exceed</strong> cost recovery charges by 20%</td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>• Participant signs a loan or promissory note for a debt obligation</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>• Participant accepts an opt-in utility tariff (NOT a debt) tied to meter</td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>• Cost recovery is through a fixed charge on the utility bill</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>• 100% on-site QC for payment authorization</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>• Participant accepts tariff with disconnection for non-payment</td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>• Payments end if upgrade fails and is not repaired</td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>• Tariff runs with the meter and remains in effect for subsequent customer at that location until cost recovery is complete</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>• Loss reserve provided by State Energy Office</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>
Loans compared to Tariffed On-Bill

- September 2015: Ouachita Electric hires Meister Consulting Group to analyze the business case.

- October 2015: Ouachita’s board chooses to switch from making loans to making investments through a tariffed on-bill program based on the PAYS® system.

- December 2015: Ouachita files a PAYS® tariff with the Arkansas Public Service Commission (APSC).

- February 2016: The APSC decision is unanimous -YES!

- In April of 2016, only 7 months after making the business case, HELP PAYS® is launched.
Result: Immediate Surge in Investment

Comparing best 4 months of HELP: (Loan)
with first 4 months of HELP PAYS®: (Tariff)

- **Doubled customers** seeking assessments, and *more than a third* were multi-family (compared to 0 previously).

- Among customers receiving assessments, **100% opt-in** for multi-family rental units, and >80% for single family.

- **Doubled the scale of capital improvements** from an average of $3000 to above $6000 to get deeper energy savings (~30%).

\[
\text{Double customers} \times \text{Double project size} = \text{Quadrupled investment from } \$225k \text{ to } \$1 \text{ million.}
\]

2016 Performance Summary for HELP PAYS®

✓ Explosive growth: ~$1.5 million investment in installed upgrades – more than triple the same period of prior year for the loan program.

✓ 100% of the multi-family housing tenants in the service area opted into the HELP PAYS tariff to accept the investment.

✓ 110 new HVAC units installed, upgrades that were not eligible to be financed with prior loan program.

✓ Nearly 2 KW of peak demand reduction for first 17 upgrades during summer peak (each worth ~$300/year to the utility).

✓ 254 Sign-ups => 244 Assessments => 221 cost effective offers => 197 investments, reaching >2% of the market.

✓ 20 jobs in the service area supported with new work.
Key lessons learned:

✓ Quality assurance is critical, which means work quality is essential, and therefore, supporting workforce development is vital.
  
  ✓ We found that engaging a handful of contractors that focused on performance was better than working with many contractors each with a handful of jobs.

✓ Re-test prior to authorizing payment (yes, this can be done cost effectively – a topic for a future session in the Learning Circle)

✓ Integrating EE education into the program helps participants achieve the energy savings.

✓ Never sacrifice real and lasting results for scale: DELIVER BOTH!!
  
  ✓ Nothing will scale the program better or faster than real quantifiable results (and nothing will kill it faster than inaccurate savings predictions, sloppy work, and missed cost effective installations)

✓ Even though field experience shows low risk exposure, reserve funds are an effective way mitigate the perception of risk that a utility won’t recover its costs.

✓ DON’T start with the loan and move to the tariff. Start with the tariff and stay with the tariff.
Thank you,
and we welcome inquiries

tagard@eetility.com  (501) 351-5212  www.eetility.com
Questions?
Introduction to Inclusive Financing for Energy Efficiency

- How$mart KY in Kentucky
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Learning Circle Series for Inclusive Financing

• Starts with introductory sessions open to all: Overview of the concept, and experience in the field

• Monthly installments thereafter cover a series of narrower topics in greater detail

• The Learning Circle is open to stakeholders who send SEEA a short description of their interest in applying what they learn about inclusive financing

• Access to technical assistance depends on having a project in mind and tuning in for one session each month.
Beyond the Basics:
Learning Circle on Inclusive Financing

1. Introduction to Inclusive Financing for Energy Efficiency (today)
2. Update on Existing Programs (Feb 16th)
4. Due diligence with the *Decision Tool for Utility Managers*
5. Exploring Program Operator models
6. Establishing a Reserve Fund for tariffed on-bill EE programs
7. Sourcing capital for a Tariffed On-Bill investment program
8. Jobs: Workforce development in rapidly expanding EE markets

Join the Learning Circle!
SEEA Learning Circle for Inclusive Financing

Eligibility:
• Participants in the introductory sessions
• Articulation of a project that furthers your interests

Benefits:
• Opportunity to participate in advanced sessions
• Access to other Learning Circle participants
• Assistance with advancing your project

To participate:
• Send a brief description of your applied interests to wholmes@seealliance.org
Next Session:
Consumer Protections in Inclusive Financing for Energy Efficiency
Thursday, March 23rd, 2:00 p.m. - 3:00 p.m. EST

- Terms for cost effectiveness that include net savings
- Quality assurance and Measurement & Verification
- Interests of successor customers (renters or owners)
- Disconnection for non-payment
- Handling charge-offs due to unpaid bills by program participants