# LEARN

JOIN

# LEAD



OCTOBER 14–17, 2014 • THE SHERATON DOWNTOWN DENVER, COLORADO

#### **CDFIs and Utility Company Partnerships**

How\$martKY™ partners with rural electric co-ops for On-bill financing of residential retrofits

Presenter: Peter Hille Executive Vice President MACED Berea, KY

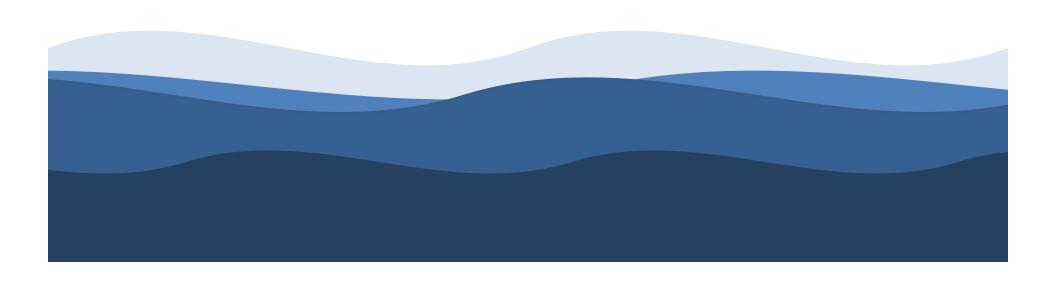






#### **Energy Efficiency for Everyone**

**On-Bill Financing** 







#### What is How\$martKY?

On-bill financing program

Energy savings pay for retrofits









### What is How\$martKY?

Investment in the electric meter

Not a personal loan

Does not affect the participating customer's credit









Usually starts with a high bill complaint

Co-op determines the customer is eligible

Audit is performed on the house







#### **Blower Door Test**











Determine if the house is suitable

Identify measures

Estimate costs

Create the Conservation Plan









#### **Conservation Plan**

The retrofit payment
cannot exceed
90% of the projected savings

Payback in 15 years or less





### **Example 1**



Single-story home with Improperly sized Heat Pump receiving additional insulation & air sealing

\$12,067 Cost of Improvements	\$10,067
-2,000 Rebates & Incentives	<u>+ 5%</u>
\$10,067	\$10,570 @3% over 15 yrs
· · · · · · · · · · · · · · · · · · ·	= \$73/mo
	\$103/mo Avg. reduction
	- \$73/mo Fixed charge
	\$30/mo Immediate savings





# Example 2



Double Wide Mobile Home with Electric Furnace Replaced with an Energy Efficient Heat Pump

\$7,350 Cost of Improvements	\$5,380	
-1,970 Rebates & Incentives	+ 5%	
\$5,380	\$5,649	@ 3% over 15 yrs
"	"	= \$39/mo

\$51/mo Avg. reduction

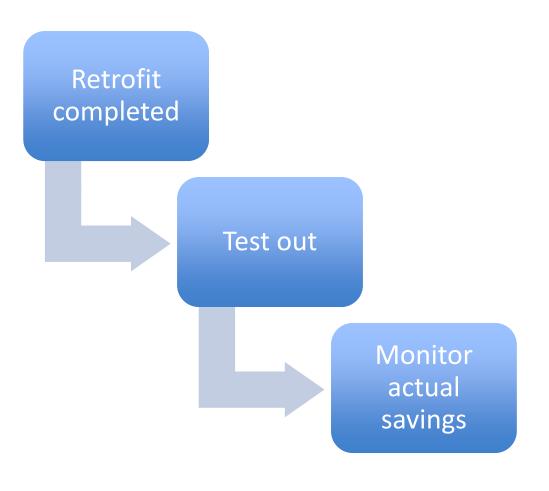
-\$39/mo Fixed charge

\$12/mo Immediate savings





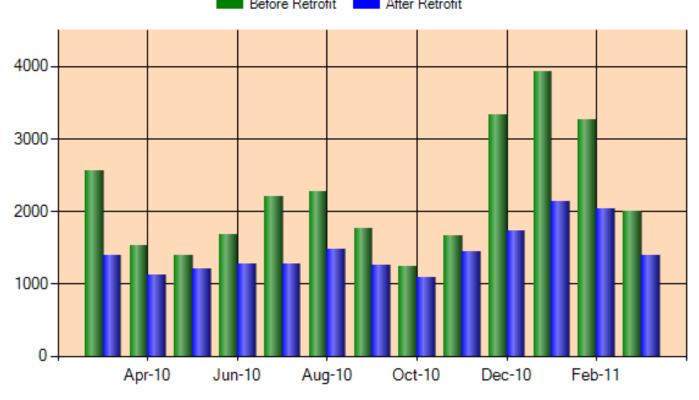








# Comparison Results - Single Family Home



Estimated Savings: \$44

Actual Average Monthly Savings: \$52

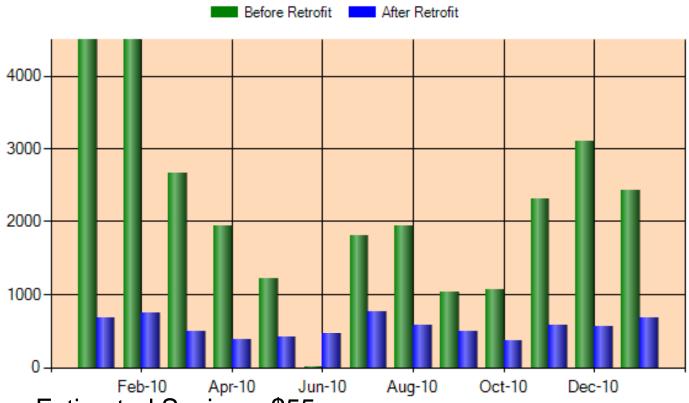
On-bill Financing Charge: \$22

Weather Normalized Savings of: 31%





# Comparison Results - Double Wide Home



Estimated Savings: \$55

Actual Average Monthly Savings: \$146

On-bill Financing Charge: \$30

Weather Normalized Savings: 69%

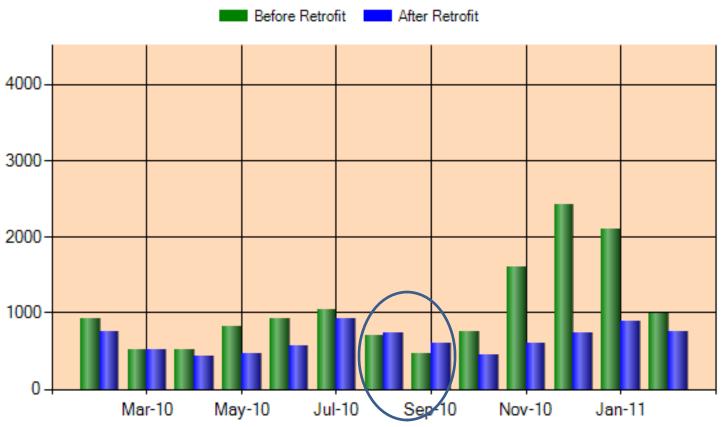








# kWh Savings & Behavioral Change



Estimated Savings: \$25

Actual Average Monthly Savings: \$35

On-bill Financing Charge: \$18

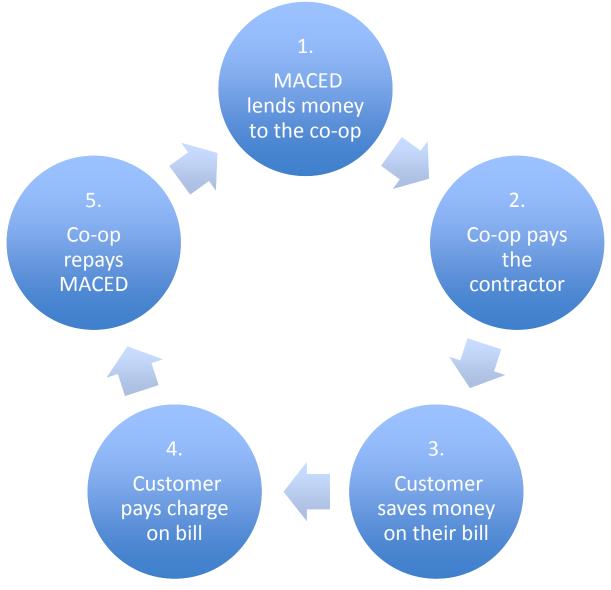
Weather Normalized Savings: 28%







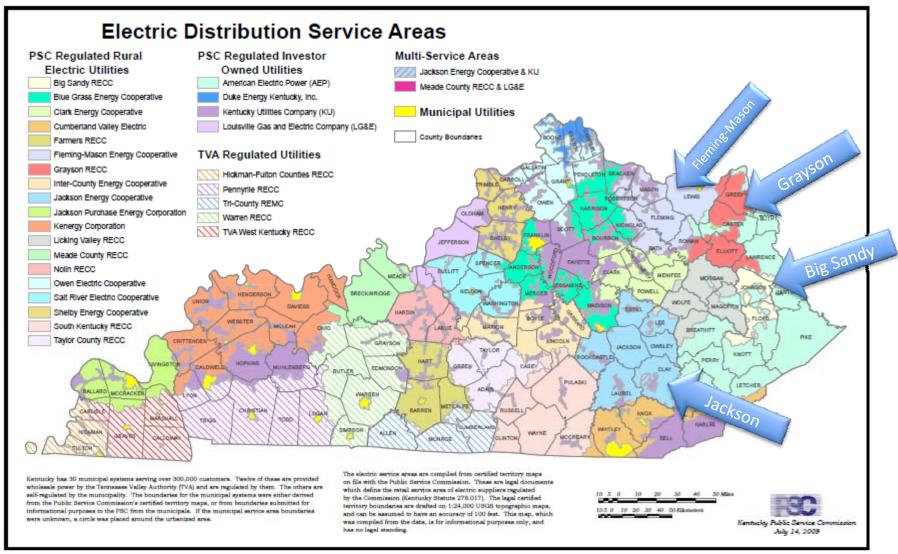








#### The Four Rural Electric Co-Ops Involved in the Pilot











# Challenges in the Pilot Program

- Developing partnerships with the Rural Electric Co-ops
- Public Service Commission approval for the Pilot took 18 months
- Co-ops were slow to start
- Concerns about risk and loss
- Establishing systems









# **Beyond the Pilot Program**

Problem solving for 2.0:

Risk mitigation (system improvements and RMF)

Program revenue
Ongoing co-op participation

- Permanent tariff approval by PSC took 10 months
- PSC application template for new co-ops to use

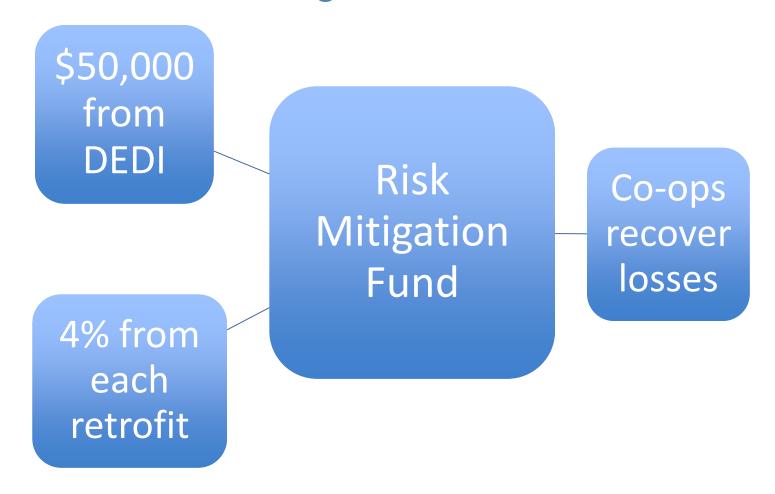








#### Risk Mitigation Fund











House becomes vacant,
Co-op pays
interest only

Customer moves in, resumes payments

Co-op recovers interest paid from RMF

House remains
vacant for
24 months

Co-op pays
balance due
to MACED,
recovers loss
from RMF

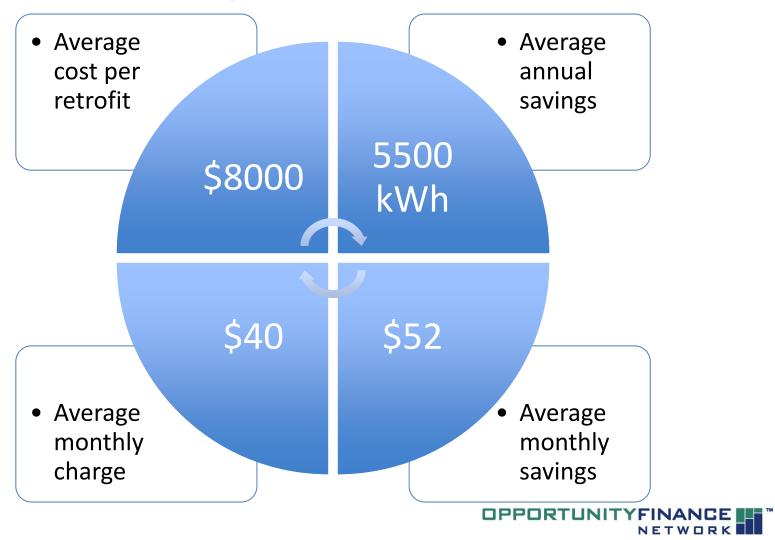








## **Program Stats**









#### Status Report: August 31, 2014

	Status To Date
In Process	21
Completed Retrofits	166

324 Energy Assessments have been completed.

More than \$1.2 million invested in retrofits.









#### The Next Phase of How\$martKY

Permanent tariff approved in August 2013

Recruiting additional co-ops

Expanding the program to scale









## **Challenges Going Forward**

- Expanding participation of the distribution coops and uptake by the members to get to scale
- Reducing transaction costs
- Developing the pool of contractors who can take on a bigger share of the work
- Establishing revenue structures to sustain the program as it grows (fixed and variable costs)

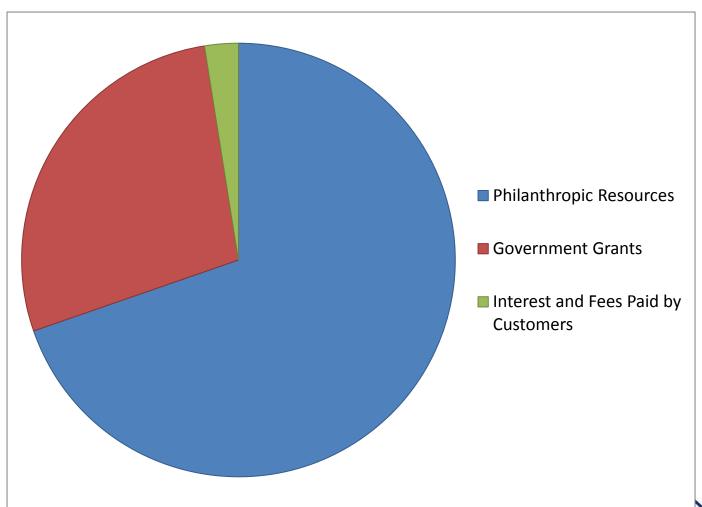








# Sources of Funding: Pilot



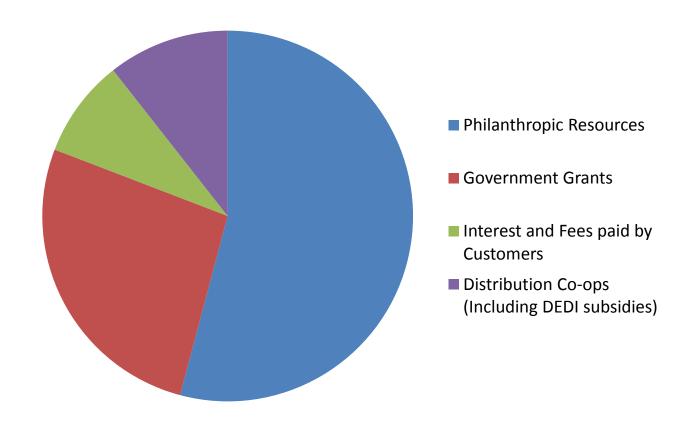








# Sources of Funding: Current Program











For more information contact: www.maced.org