



“Upgrade to \$ave”

financed by
USDA’s Energy Efficiency &
Conservation Loan Program

Curtis Wynn
Roanoke Electric Cooperative

#thecall2018

@Roanoke_EC



Facebook



LinkedIn



Youtube

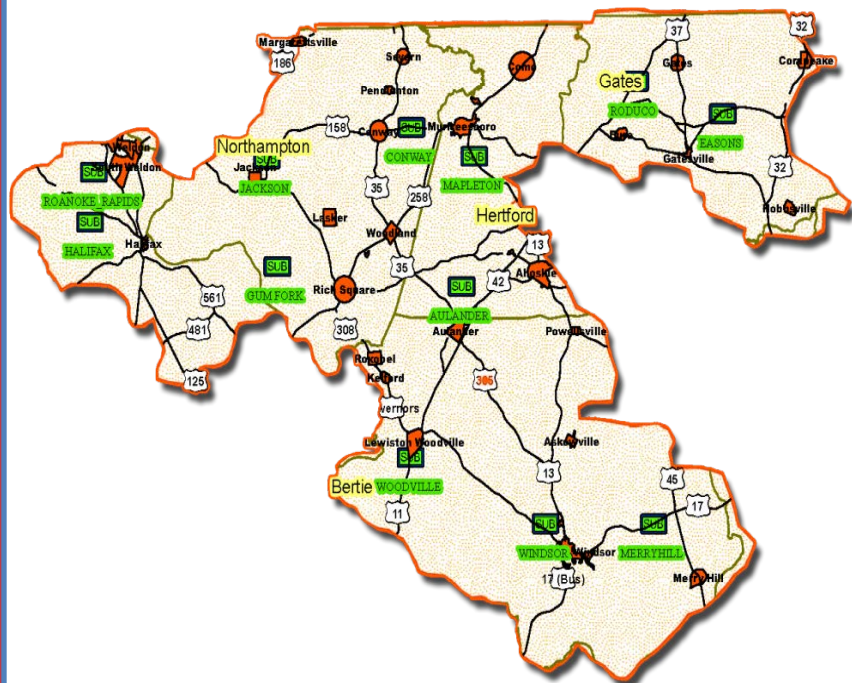


Roanoke Electric Cooperative
Your Touchstone Energy Partner



Roanoke Electric Cooperative

Your Touchstone Energy® Partner



- 1,500 square mile service area
- 2,210 miles of line
- \$39 million operating revenue
- \$84 million asset value
- 52 employees
- 14,700 meters
 - ✓ 95% residential
 - ✓ 5% commercial/industrial

#thecall2018

@Roanoke_EC



Facebook



LinkedIn



Youtube



Roanoke Electric Cooperative

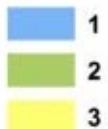
Your Touchstone Energy® Partner



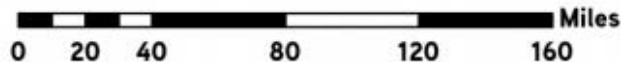
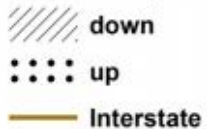
Demographics



2015 Tier Designations



Tier Change from 2014



Map Created November 2014

**NORTH
CAROLINA**
DEPARTMENT OF COMMERCE

#thecall2018

@Roanoke_EC



Facebook



LinkedIn



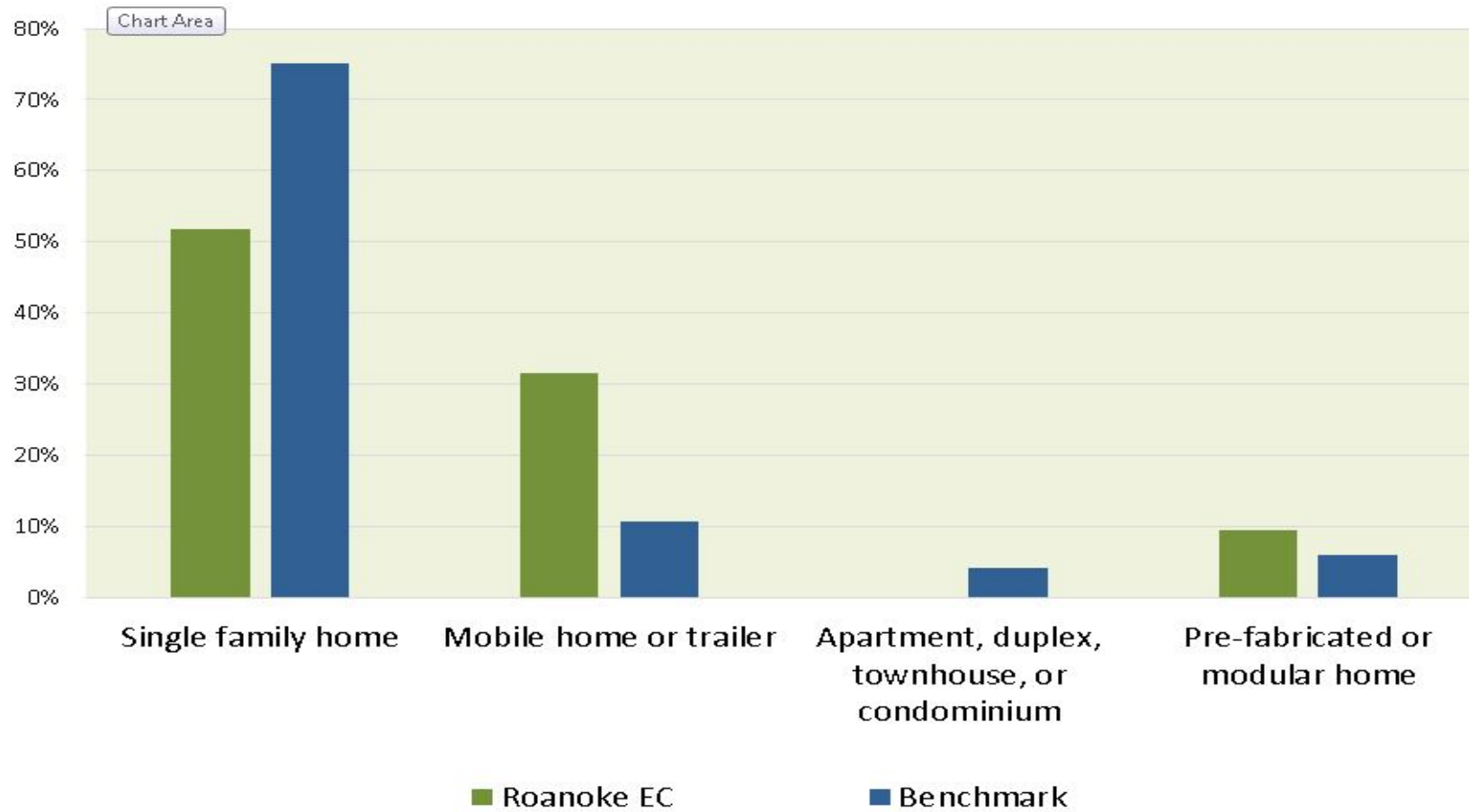
Youtube



Roanoke Electric Cooperative
Your Touchstone Energy Partner

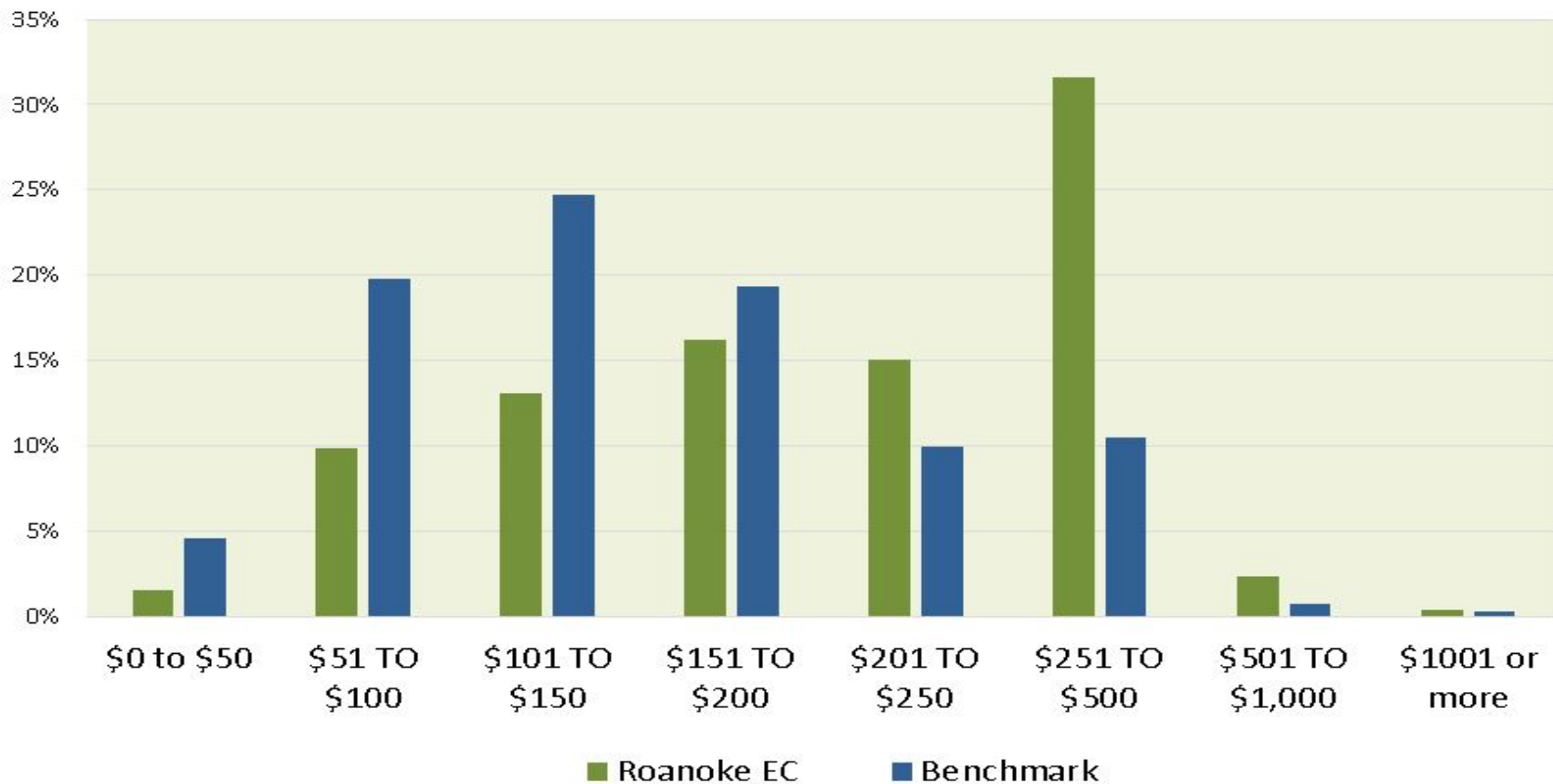
Demographics

Housing Type



Demographics

Average Monthly Bill



Bill Size & Member-Owner Satisfaction

Avg. Monthly Bill Amount	Roanoke EC		Quarterly Benchmark	
	Percent of Responses	Average Rating	Percent of Responses	Average Rating
TOTAL	100%	8.05	100%	8.72
\$100 or less	12%	9.21	25%	8.98
\$101 to \$200	28%	8.65	42%	8.80
\$201 or more	53%	7.37	22%	8.19
Don't Know	6%	8.87	9%	8.96

#thecall2018

@Roanoke_EC



Facebook



LinkedIn



Youtube

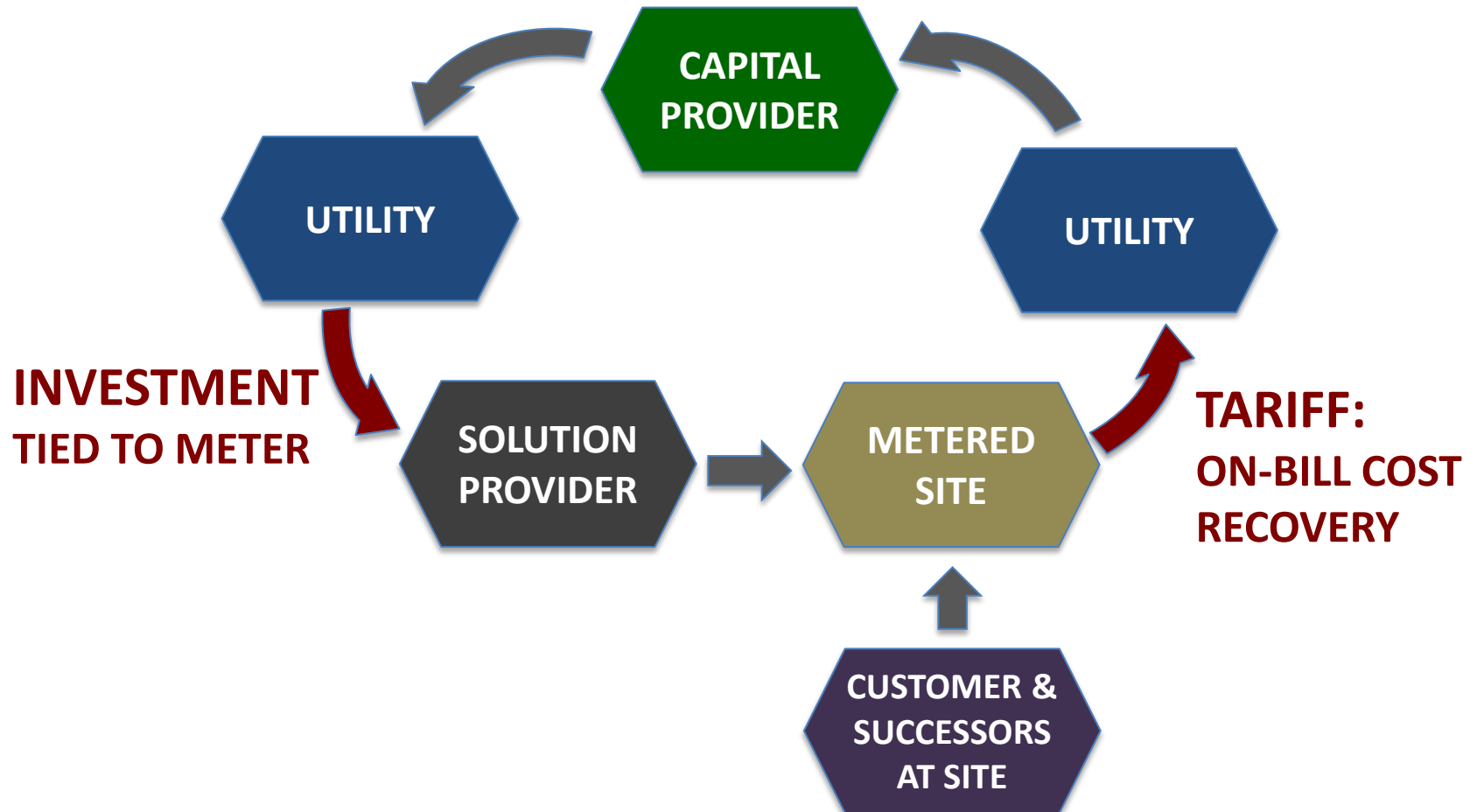


Roanoke Electric Cooperative
Your Touchstone Energy Partner

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 Tariff Approach



Based on the Pay As You Save[®] system developed by EEI.

#thecall2018

@Roanoke_EC

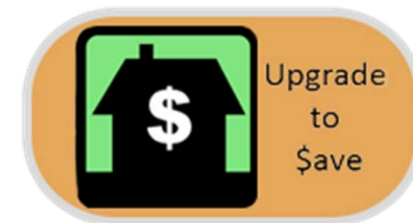
f Facebook

in LinkedIn

YouTube Youtube

 Roanoke Electric Cooperative
Your Touchstone Energy[®] Partner

Harnessing Our Business



Members contact us seeking assistance with cost savings.

Roanoke EC, through The Roanoke Center, identifies the best efficiency upgrades for investment.

Contractor installs upgrades at no upfront cost to member, with quality assurance oversight from The Roanoke Center.

Utility recovers its costs for the upgrades with a fixed charge on the bill that is less than the estimated savings.

#thecall2018

@Roanoke_EC



Facebook



LinkedIn

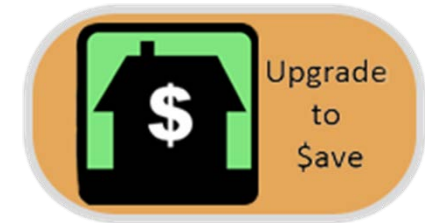


Youtube



Roanoke Electric Cooperative
Your Touchstone Energy Partner

The Offer & Investment



Allows more member-owners to access capital for energy efficiency improvements to their properties/dwellings on a debt-free basis

Helps local qualified contractors gain steady and consistent work

Lowers demand costs for the electricity Roanoke EC buys

Avoids purchasing solar, poultry, swine and wind renewable energy credits that are mandated by the State of NC

#thecall2018

@Roanoke_EC



Facebook



LinkedIn



Youtube

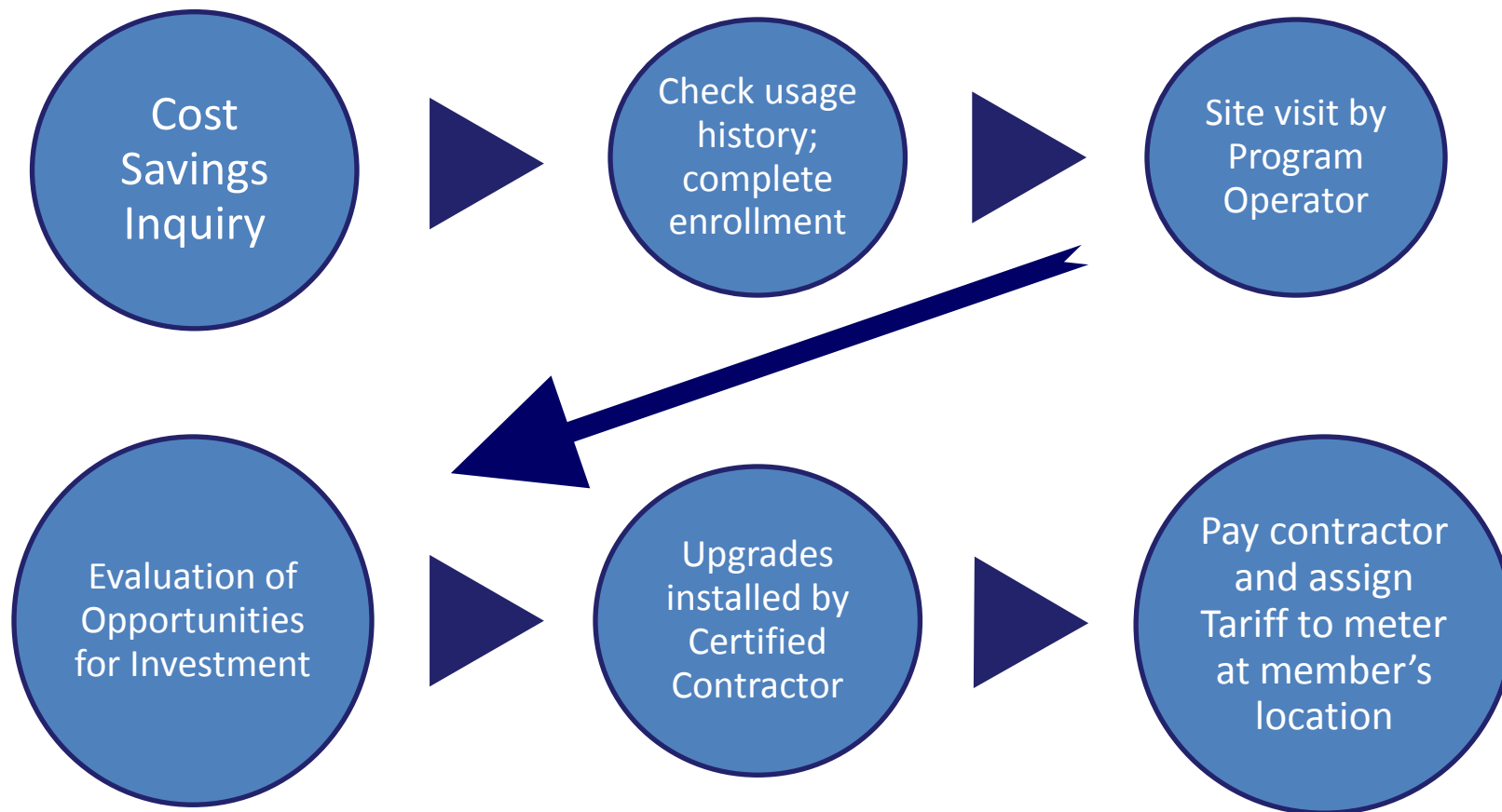


Roanoke Electric Cooperative
Your Touchstone Energy Partner

Path to Investment & Returns



Upgrade
to
\$ave



Typical Efficiency Upgrades



Insulation



Duct Sealing



Air Sealing



Heat Pump Upgrades



Water Heater Wraps



LED



#thecall2018

@Roanoke_EC

f Facebook

in LinkedIn

YouTube Youtube

 Roanoke Electric Cooperative
Your Touchstone Energy® Partner

Where We Invest

- **Pass**

- Savings are sufficient for the utility to recover its investment within 10 years through a tariff capped at 75% of estimated savings
- 25% of estimated savings stay with member
- Purchase of EE Credits capped at \$.02/kWh for total savings

- **Co-Pay**

- Amount needed from member (if any) in order to make the investment Pass

- **No Go**

- Assessment doesn't identify savings that are cost effective enough to warrant investment
- Assessment identifies major repairs needed first

Actual Results for Initial Participants

Sample of over 75 homes

Average cost of upgrades	\$6,900.00
Average buy-down for EE Credits	\$482.00
Average monthly savings per site	\$120.00
Average monthly tariff	\$62.00
Average monthly savings for member	\$58.00
% of savings kept by member during cost recovery (Target: 25%)	50%

#thecall2018

@Roanoke_EC



Facebook



LinkedIn



Youtube



Roanoke Electric Cooperative
Your Touchstone Energy Partner

Co-op's Business Case

- Wholesale power cost reduction
 - Rising future cost
 - Lower wholesale demand cost
- Offsets cost of EE Credits
- 6-10% NPV IRR
 - Savings benefit all REC members
 - IRR accounts for foregone kWh sales
- Distinct advantages over 3rd party providers
- Co-op's risk exposure is meter stops turning

Source of Capital: EECLP

- RUS 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

Future Efforts / Considerations

- Include demand response: ecobee3 wi-fi thermostats
- Addressing homes that don't qualify because they need major repairs
- Leveraging EE efforts to support potential broadband / fiber-to-the-home initiative

What have we learned...?

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/usda-eeclp

#thecall2018

@Roanoke_EC



Facebook



LinkedIn



Youtube

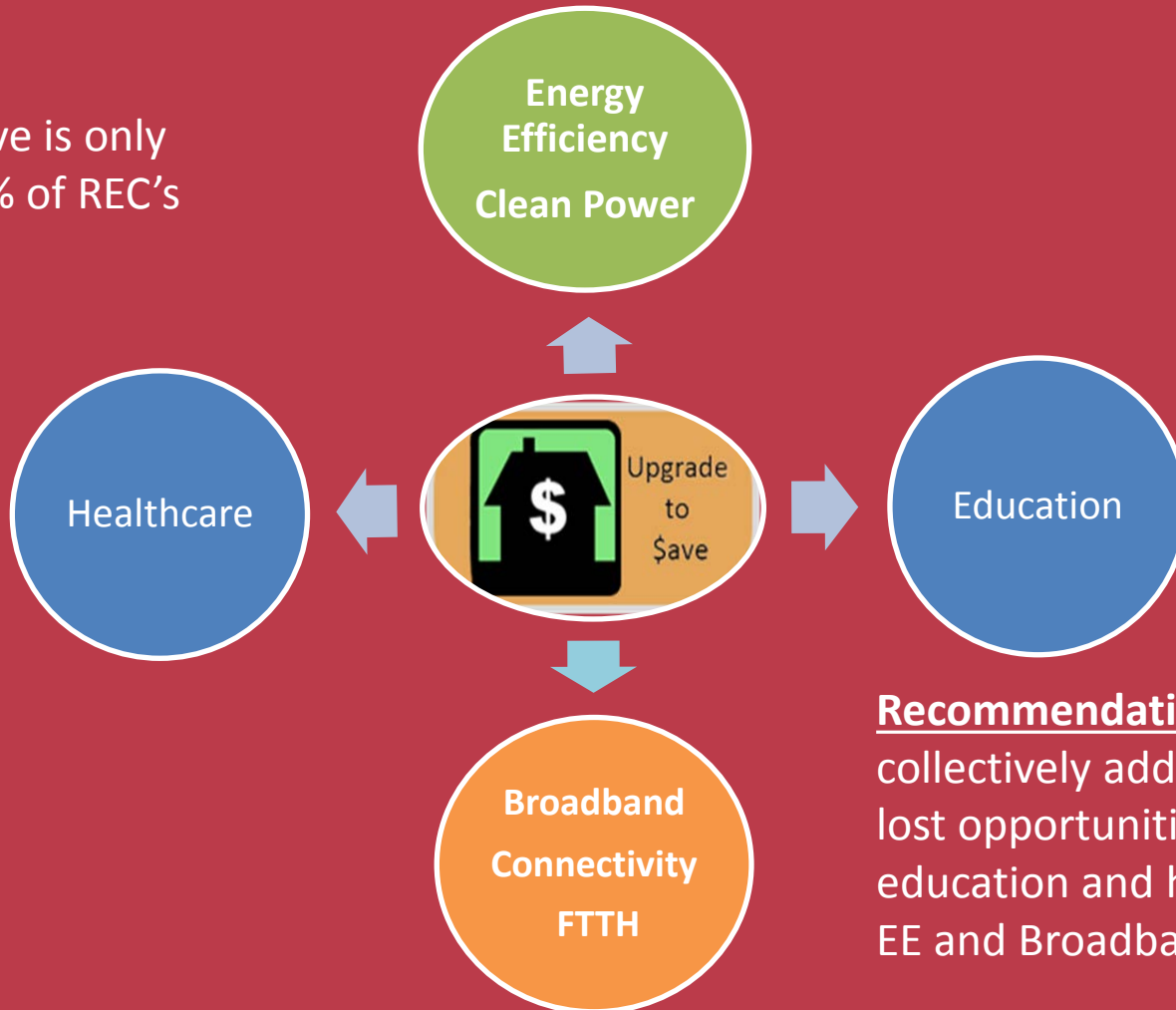


Roanoke Electric Cooperative
Your Touchstone Energy® Partner

What can the federal government / DOE do?

Situation:

Upgrade to \$ave is only addressing 50% of REC's inquirers...



Recommendation: Recognize and collectively address waste and lost opportunities related to education and healthcare; using EE and Broadband as enablers.

#thecall2018

@Roanoke_EC



Facebook



LinkedIn



Youtube



Roanoke Electric Cooperative
Your Touchstone Energy Partner



Roanoke Electric Cooperative

Your Touchstone Energy® Partner



Curtis Wynn

President & CEO

Office: 252-209-2236

Toll-Free: 1-800-433-2236

Post Office Drawer 1326 Ahoskie, NC 27910

518 NC 561 West Aulander, NC 27805

Website: www.roanokeelectric.com

www.roanokeelectric.com/usda-eeclp

#thecall2018

@Roanoke_EC



Facebook



LinkedIn



Youtube



Roanoke Electric Cooperative
Your Touchstone Energy® Partner