

South Carolina Electric Utility Energy Efficiency Programs

February 13, 2020 Webinar



Agenda

- 9:00 am Welcome and logistics
- 9:05 am South Carolina Utility Landscape
- 9:15 am Investor-owned utility (IOU) EE programs
- 9:45 am Santee Cooper EE programs
- 10:00 am Electric cooperative EE programs
- 10:15 am Municipal utility EE programs
- 10:30 am Q&A (please send via "chat" function)
- 11:00 am Webinar concludes

Speakers

- Jen Weiss, Nicholas Institute for Environmental Policy Solutions
- Catherine Reed and Stacey Washington, Energy Office, SC Office of Regulatory Staff
- Therese Griffin and Sheryl Shelton, Dominion Energy
- Tim Duff and Lynda Shafer, Duke Energy
- Jim Rabon, Santee Cooper
- Mike Smith, Electric Cooperatives of South Carolina
- Eric Budds, Municipal Association of South Carolina

South Carolina Utility Landscape

Catherine Reed

Deputy Director, Energy Office

South Carolina Office of Regulatory Staff

Stacey Washington

Energy Specialist

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ENERGY



OFFICE

South Carolina Utility Landscape

SC Energy Efficiency Roadmap
Utility Subject Matter Expert Webinar

Stacey Washington & Catherine Reed
Energy Office
SC Office of Regulatory Staff

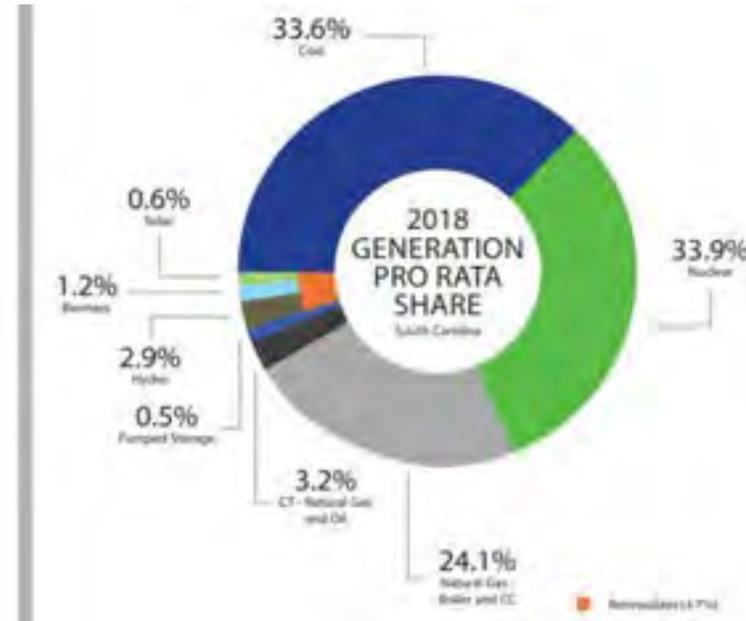
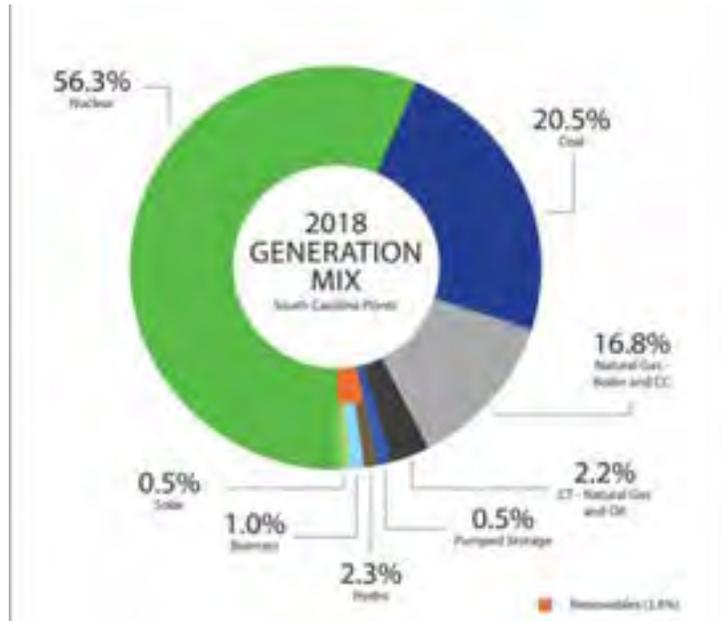


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Generation Mix

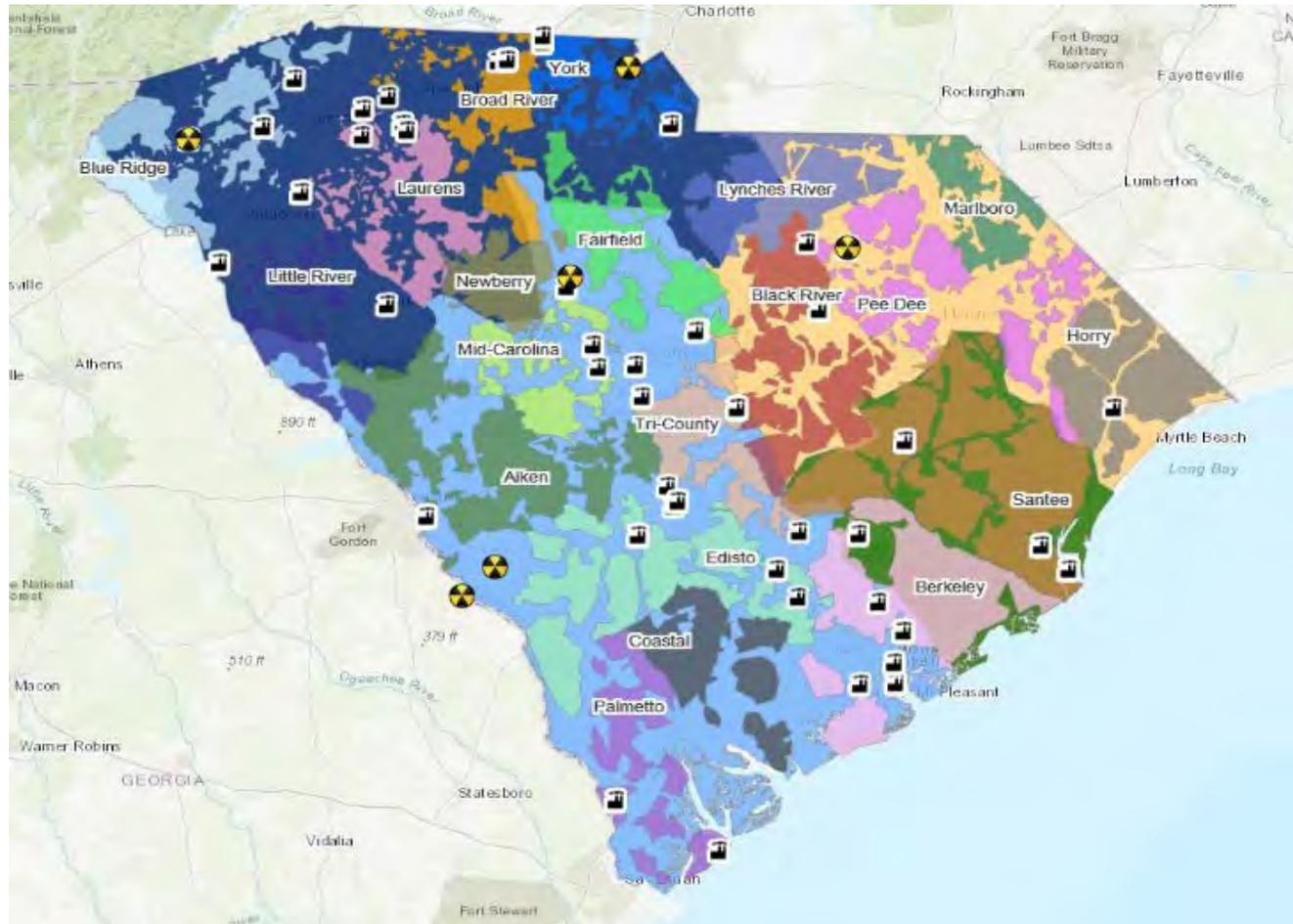


Utilities



2018 Electricity Landscape	Investor Owned	State Owned Utility	Municipal (Public)	Electric Cooperative	Total
Number of entities	4	1	21	20	46
2018 Number of customers	1,653,037	183,815	162,689	802,321	2,801,862
Percentage of customers	59%	7%	6%	29%	

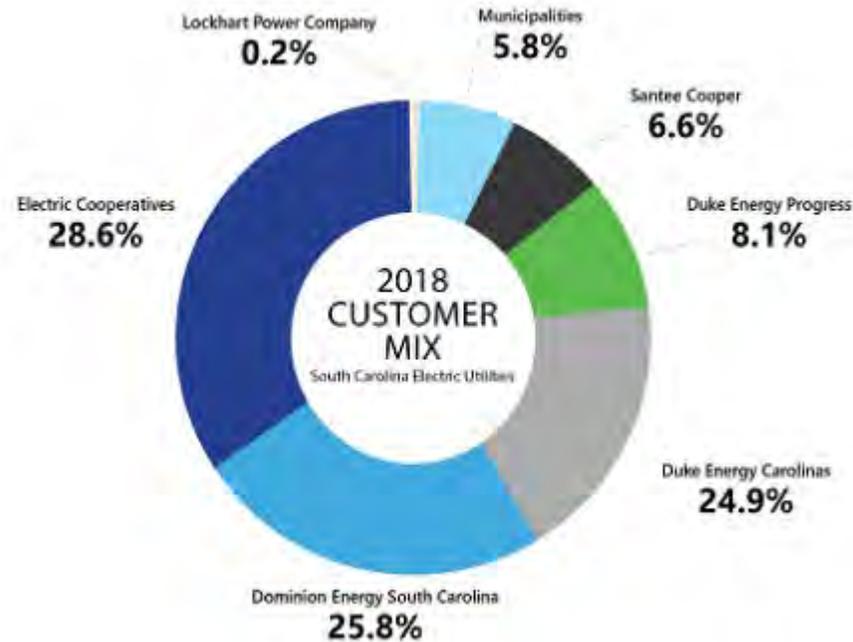
Utility Territories



Utility Customers



Utility	Customers
	2018
Electric Cooperatives	802,321
Dominion Energy South Carolina	722,196
Duke Energy Carolinas	698,444
Duke Energy Progress	226,225
Santee Cooper	183,815
Municipalities	162,689
Lockhart	6,172
Total	2,801,862



Investor-Owned Utilities (IOUs)

- Four IOUs in South Carolina
 - Dominion Energy
 - Duke Energy Progress
 - Duke Energy Carolinas
 - Lockhart Power

- Regulated by the PSC



Public Utility

- Santee Cooper (a.k.a., SC Public Service Authority)
- Not regulated by the PSC
- Board governs and approves programs and rates, etc.
- Board candidates
 - appointed by the Governor
 - deemed fully qualified by Public Utilities Review Committee
 - confirmed by the Senate



Electric Cooperatives



- 20 Cooperatives in SC
- Member-owned
- Not regulated by the PSC
- Board governs and approves programs and rates, etc.
- Members elect the board
- Under new legislation the ORS audit department has the ability to audit co-op financials
- ORS Consumer Services will also handle bill complaints from co-op members



Municipal Electric Utilities

- 21 municipal electric utilities in SC
- Not regulated by the PSC
- Municipality governs and approves programs and rates, etc.
- SC Association of Municipal Power Systems



Office of Regulatory Staff (ORS)

- ORS represents consumers of investor-owned utilities before the Public Service Commission
- Departments:
 - Consumer Services
 - Safety
 - Transportation
 - Telecommunications
 - Energy Office



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Investor Owned Utility EE Programs – Dominion Energy

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Dominion Energy

Sheryl Shelton

Manager, Demand Side Management
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Dominion Energy

Demand Side Management

SC Utility SME Webinar – February 13, 2020



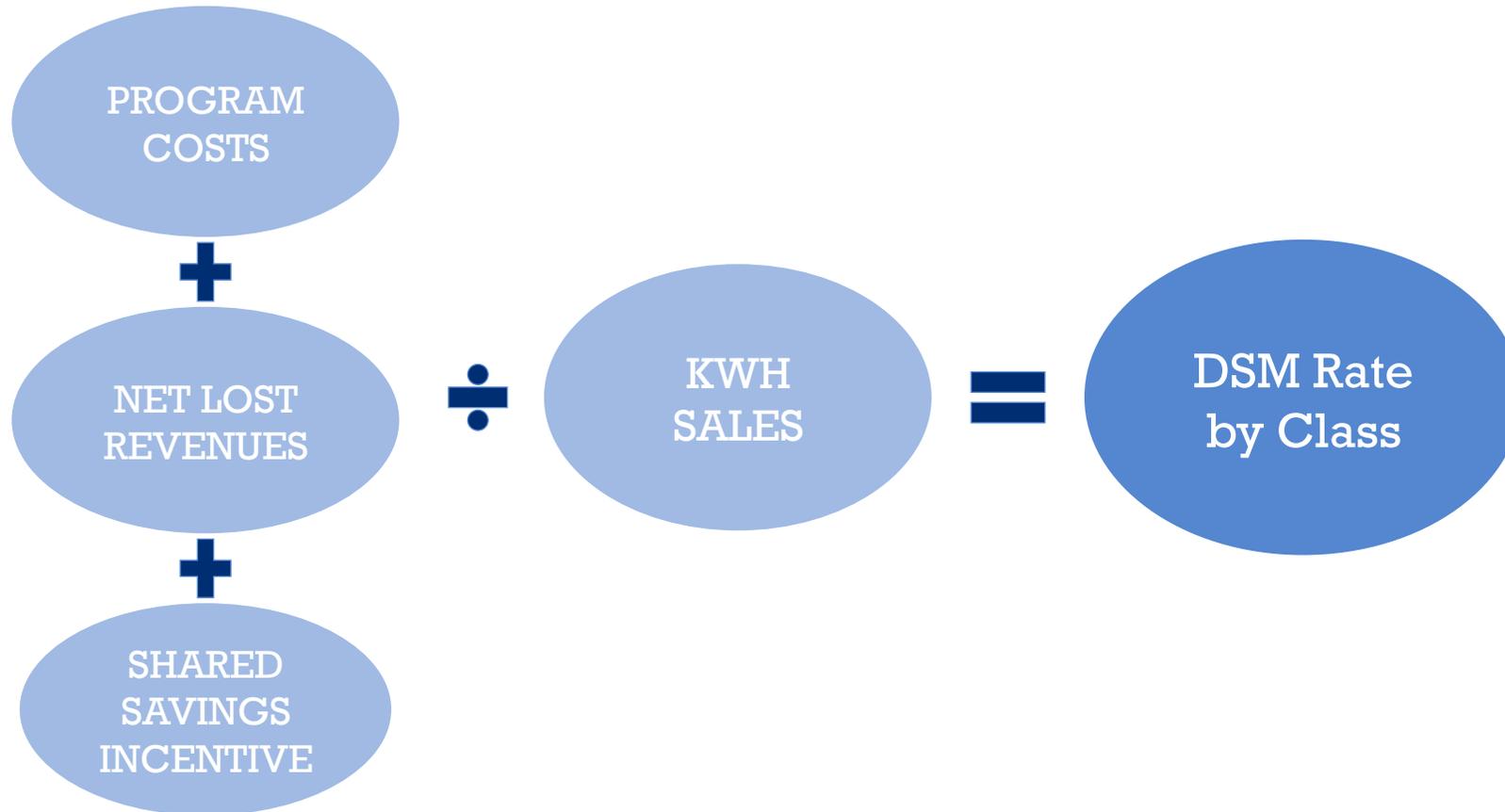
DSM Program History

Timeline Review

2008	Company commits to complete a thorough and comprehensive review of potential DSM programs and bring the results to the Commission in 2009
June 2009	Submitted proposed suite of DSM Programs to SCPSC for approval
July 2010	Received PSC approval of portfolio of DSM programs for three years (PY1-PY3)*; settlement agreement included an opt-out provision for industrial customers
Fall 2010	Launched residential, commercial, industrial programs
May 2013	Submitted application to SCPSC to continue DSM programs with revised portfolio (PY4-PY6)
Nov 2013	The Commission voted to approve the Company's DSM Application and programs for six more years (PY4-PY9)
June 2018	DSM Potential Study Kickoff (PY10-PY14)
June 2019	DSM Potential Study and Application filed with SCPSC
Dec 2019	Launch Program Year 10

**Program Year = December 1 – November 30.*

DSM Cost Recovery Mechanism



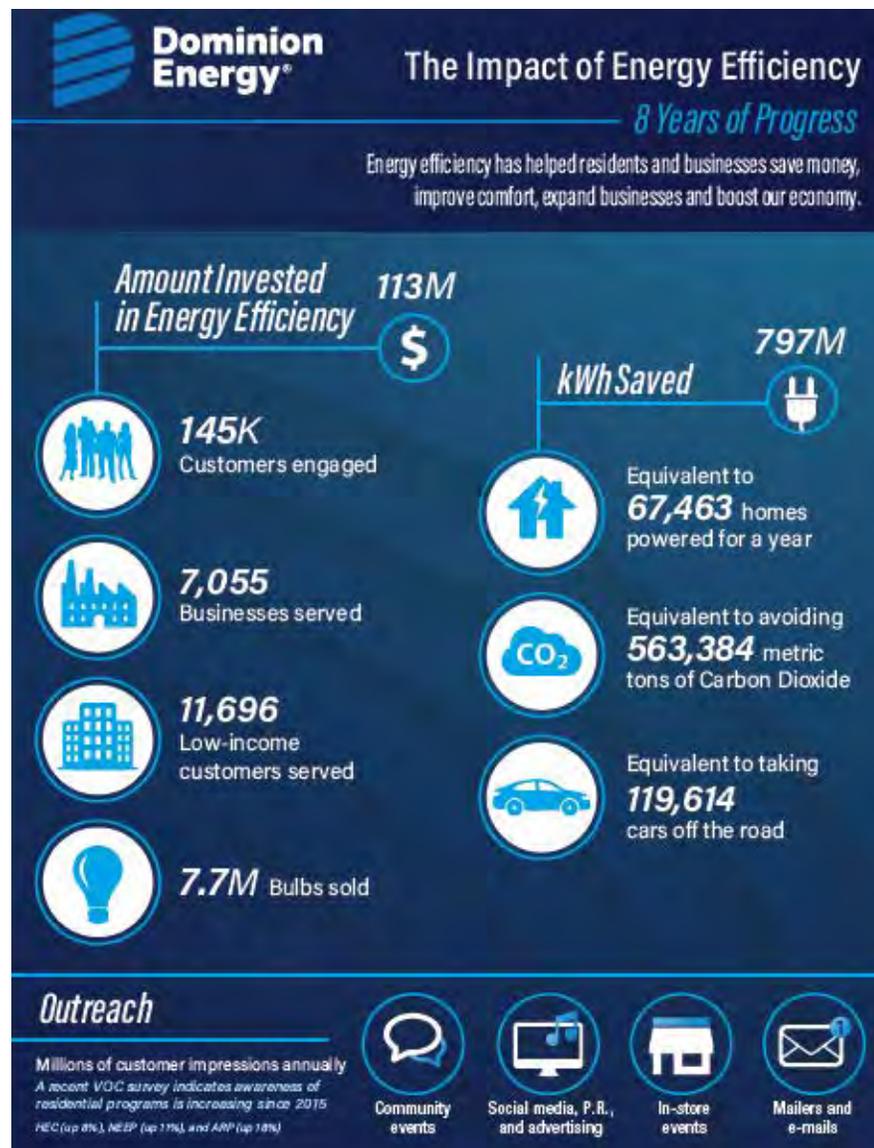
Evaluation, Measurement & Verification (EM&V)

May – File Annual EM&V Report

- 6 months after the end of each program year – currently in PY10
- 1st DSM Order (2011) requires 3rd party evaluation with an EM&V plan be in place prior to the programs launching - RFP lead to Opinion Dynamic (PY1-PY9)
- Following the Annual Portfolio EM&V report, individual Program Guidance Reports are completed, as needed.
- 3-5% of the total Portfolio budget is spent on EM&V
- Activities based on the program % of savings to the total portfolio savings, more rigor and review goes to the top energy savings programs Ex. C&I programs received the most oversight, Low-income the least

EM&V Results thru PY8

- Over 21,500 HEC visits completed
- Over 48K Heating and Cooling rebates issued with average time of 4 weeks for processing
- Over 10K appliances recycling
- Of the \$113M invested \$72M or 64% = customer rebates with PY8 = 73%



DSM Prior Programs

6 RESIDENTIAL / 2 C&I PROGRAMS

	PROGRAMS	Rebates/ Incentives	Education	In-Home / On-site Services
RESIDENTIAL	Home Energy Check-up		✓	✓
	Heating & Cooling and Duct Work	✓	✓	
	Neighborhood Energy Efficiency		✓	✓
	Home Energy Report		✓	
	Appliance Recycling	✓	✓	✓
	EnergyWise Savings Store (online store, business offices, community)	✓	✓	
C&I	EnergyWise for Your Business	✓		
	Small Business Energy Solutions	✓	✓	✓

DSM POTENTIAL STUDY EXPANDED PROGRAMS

7 RESIDENTIAL / 3 C&I PROGRAMS

Expanded Programs Scenario	Key Differences in Expanded Scenario
Appliance Recycling	Expanded participation
Heating & Cooling	Higher incentives; electric resistance heating - > Air Source Heat Pump <i>New!</i> measures added, Heat Pump Water Heater added <i>New!</i>
Home Energy Check-up	Tier 2 measures added <i>New!</i> ; additional direct install measures <i>New!</i>
Home Energy Reports (opt-out)	Transition from opt-in to opt-out model by 2023
Neighborhood Energy Efficiency	Expanded participation
EnergyWise Savings Store (online)	Smart thermostats <i>New!</i>
Multifamily <i>New!</i>	New program
Expanded Programs scenario	Key differences in Expanded scenario
EnergyWise for Your Business	Added Agricultural offering <i>New!</i> ; Higher incentives & expanded participation for lighting, other end uses Strategic Energy Management <i>New!</i>
Small Business Direct Install	Higher incentives; expanded participation
Municipal LED Lighting <i>New!</i>	New program

Non-energy benefits included in TRC



1. Public water and wastewater savings

- Measures that save energy by reducing water consumption such as low-flow showerheads



2. Natural gas savings

- Measures in gas-heated buildings such as higher R-value insulations, air sealing, or duct sealing



3. Avoided and deferred equipment replacement costs

- Measures that have longer estimated useful lives (EULs) than the technologies they are replacing, meaning they will require fewer replacements over the efficient equipment lifetime (i.e., avoiding purchase of baseline efficiency equipment) such as LED bulbs

Challenges and Constraints

- Industrial Opt-outs
- Declining avoided costs/cost effectiveness
- Appliance standards – lighting, HVAC
- Rigorous EM&V and impact of net to gross
- Customer behaviors
- Hard to reach customers – low to moderate income, small businesses
- Lack of awareness and education

EE and Resource Planning

- Act 62 – 2020 Integrated Resource Plan
 - EE scenarios – High, Medium and Low
- Peak Demand
 - Interruptible Load
 - Standby Generation
 - Time of Use Program
- DR assessment in Potential Study
 - Opportunity to implement new programs and expand Time of Use with AMI implementation

DESC Energy Conservation - Rates

- **RATE 6 (Energy Saver/Conservation)** - seasonal rate designed to give residential customers whose homes meet stringent energy conservation requirements a savings over Rate 8. Customers requesting this rate must have their homes certified as meeting the Rate 6 requirements by a Dominion Energy South Carolina representative. These requirements include substantial insulation in ceilings, walls and floors, as well as double glass or storm windows, sufficient attic ventilation, weather stripping, air conditioning and other home weatherization requirements.
- **RATE 7 (Time of Use)** - residential service time-of-use demand rate that bills a demand charge for on-peak kW and an energy charge for on/off peak kWh. The on-peak and off-peak hours vary depending on summer or winter season. This rate is designed to encourage usage during off-peak hours. The rate requires a written contract for a period of not less than one (1) year.
- **RATE 16 (General Service Time-of-Use)** - seasonal time-of-use rate available to nonresidential customers having an on-peak demand of less than 1,000 KW. This is an energy-only rate.
- **RATE 21 (General Service Time-of-Use Demand)** - seasonal time of use rate available to nonresidential customers having a minimum contract demand of 50 KVA and a maximum demand of less than 1,000 KVA. This is a combination demand and energy rate.

Summary of Programs for Implementation

Program	TRC	Sum of Incremental for Program Years 10–14				
		Non-Incentive \$	Incentive \$	Total \$	MWh	MW
Appliance Recycling	1.11	\$2,547,062	\$2,425,774	\$4,972,836	14,149	1.7
H&C and Water Heating	1.02	\$3,386,440	\$11,702,348	\$15,088,788	27,271	13.5
Home Energy Check-up	1.00	\$6,808,468	\$9,015,591	\$15,824,059	27,406	6.1
Home Energy Reports	1.88	\$895,740	\$3,847,221	\$4,742,962	24,473	9.3
Neighborhood Energy Efficiency	5.90	\$969,974	\$3,730,671	\$4,700,645	24,439	2.8
Online Store	8.15	\$345,799	\$1,533,467	\$1,879,266	19,799	1.7
Multifamily	1.76	\$1,527,150	\$3,442,875	\$4,970,025	18,627	2.9
Residential Portfolio	1.84	\$16,480,633	\$35,697,946	\$52,178,580	156,164	37.8
EnergyWise for Your Business	1.84	\$18,672,720	\$35,828,135	\$54,500,855	252,196	57.1
Small Business Direct Install	1.91	\$4,910,887	\$8,184,812	\$13,095,699	71,541	20.6
Municipal LED Lighting	2.37	\$5,035,877	\$14,957,202	\$19,993,079	19,070	–
C&I Portfolio	1.89	\$28,619,484	\$58,970,149	\$87,589,633	342,807	77.7
Total Portfolio	1.88	\$45,100,117	\$94,668,095	\$139,768,212	498,971	115.5

Investor Owned Utility EE Programs – Duke Energy

Tim Duff

General Manager of Retail Customer and Regulatory Strategy

Duke Energy

Lynda Shafer

Strategy & Collaboration Manager

Duke Energy

Three Components of Energy Efficiency Recovery Mechanism:

❑ Cost Recovery

- ❑ Recover the costs associated with offering customer programs (incentives, program administration and EM&V)
- ❑ DEP amortizes program costs and earns return (WACC) on unamortized balance

❑ Lost revenue Recovery

- ❑ Recovery of up to 36 months of net lost revenues.
- ❑ Allows utility to be made whole for under recovery of fixed costs associated with EE savings
- ❑ Reduced for found revenue activities (activities that increase customer consumption)

❑ Shared Savings

- ❑ Company incentive is based on net benefits provided to the overall utility system by EE programs
- ❑ Aligns shareholder interest with customer interests by promoting highly cost effective delivery of programs

- **Shared Savings** is an incentive structure that enables Duke to earn an incentive equal to a pre-defined percentage of the net benefit (NPV of Avoided Costs less Program Costs) generated from EE and DR programs
- Shared Savings revenue is based on
 - ❑ kWh impacts (avoided energy costs) generated by EE programs,
 - ❑ kW impacts (avoided capacity and T&D costs) generated by EE programs,
 - ❑ Program and M&V costs, and
 - ❑ Allowed Shared Savings percentage

$$\text{Shared Savings Revenue} = X\% (\text{Avoided Cost} - \text{Program Costs})$$

% of savings shared with Duke
Savings to be Shared

- Duke Energy Carolinas operates under shared savings incentive structures that that will allow DEC to earn an incentive equivalent to 11.5% of the net benefit achieved through its EE and DR programs on a pre-tax basis.
- Duke Energy Progress operates under shared savings incentive structures that that will allow it to earn an incentive equivalent to 11.75% of the net benefit achieved through its EE and DR programs on a pre-tax basis.

Avoided Costs

- Used to determine Cost Effectiveness of EE measures
- Used for Shared Savings EE revenue calculations
- There are three types of Avoided Costs
 - ❑ *Avoided Energy Cost* = kWh impacts * Cost per kWh of energy generation
 - ❑ *Avoided Capacity Cost* = kW impacts * Cost per kW of capacity construction
 - ❑ *Avoided T&D Cost* = kW impacts * Cost per kW of T&D construction

No Cost to Participant

- **Income Qualified Programs and Weatherization**
 - ❑ By neighborhood
 - ❑ Recently approved to include new measures including smart thermostats
- **Home Energy House Call**
 - ❑ Recently approved to perform blower door test and install upgraded measures at additional cost
- **Energy Efficiency Education**
 - ❑ K12 program with kit for home installation
- **My Home Energy Report**
- **Multi-family Residences**

- **Energy Wise Home and Power Manager**
 - ❑ Demand response provided by switches
 - ❑ Gives on bill credit to participants

Low Cost to Participant

- **Residential New Construction**
 - ❑ Incentive for meeting or exceeding NC High Efficiency Residential Option (“HERO”) standard
 - ❑ In DEP only
- **Energy Efficient Appliances and Devices**
 - ❑ Online Store, Retail
- **Residential Smart \$aver**
 - ❑ HVAC, duct, water heaters, pool pumps
 - ❑ Uses a trade ally network and referral system (FindItDuke.com)

Non-Residential Programs

- **Small Business Energy Saver**
 - ❑ Provides incentives and vendor offers financing for remaining expense
- **Smart \$aver Prescriptive**
 - ❑ Lighting, HVAC, Food Service, Pumps and Drives, IT, and Process equipment
- **Smart \$aver Custom**
 - ❑ Smart \$aver Performance Incentive
 - ❑ Energy Assessments
 - ❑ Design Assistance
- **Energy Wise Business and Power Share**
 - ❑ Demand response gives credit for curtailing load
- **CIG Demand Response Automation**
 - ❑ Monitor and control electric load

Pay for Performance Income-Qualified Program

- ❑ 3 year pilot in NC
- ❑ Pays nonprofits for EE upgrades based on the savings per kwh

Non-residential Upstream Channel

- ❑ Midstream discounts account for 44% of prescriptive incentives in 2019
- ❑ Developing approach to capture sales direct from manufacturers

Expansion of Small Business Energy Saver Model

- ❑ Allow vendor to offer incentives and third-party financing to more than small businesses
- ❑ In very early development

Santee Cooper EE Programs

Jim Rabon

Manager, Conservation and Energy Efficiency, Retail Operations

Santee Cooper

Santee Cooper

Conservation & Energy Efficiency



Who is Santee Cooper

86 Years Old (1934)

1,650 employees

Reliable – 18 minutes/ year/ customer

Of 2,000+ Public Power Electric Utilities

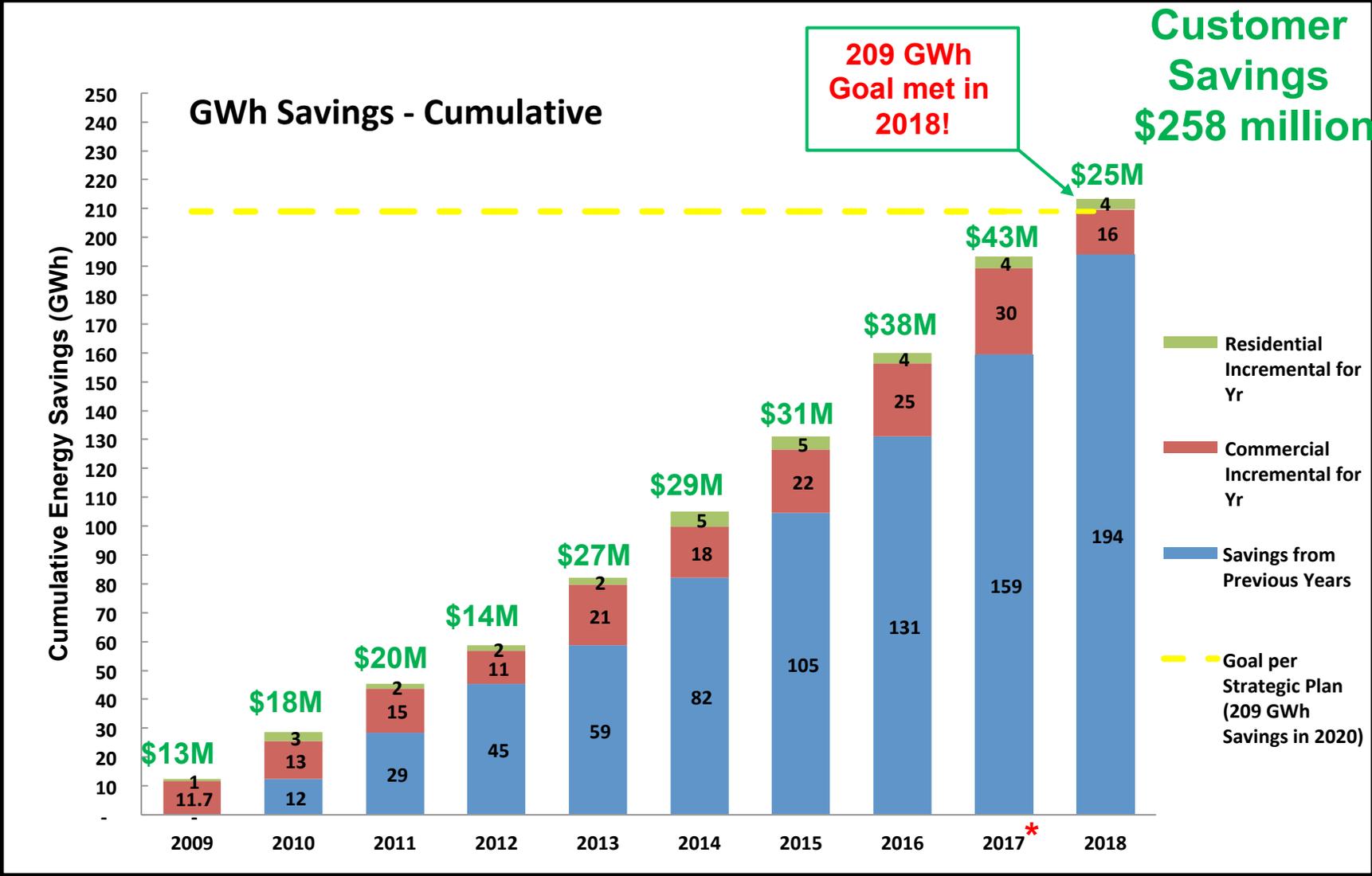
- 4th in Megawatt-hour Sales

- 6th in Electric Revenues



**CLICK TO SEE HOW WE ARE
POWERING
SOUTH CAROLINA**

2020 Energy Efficiency Plan

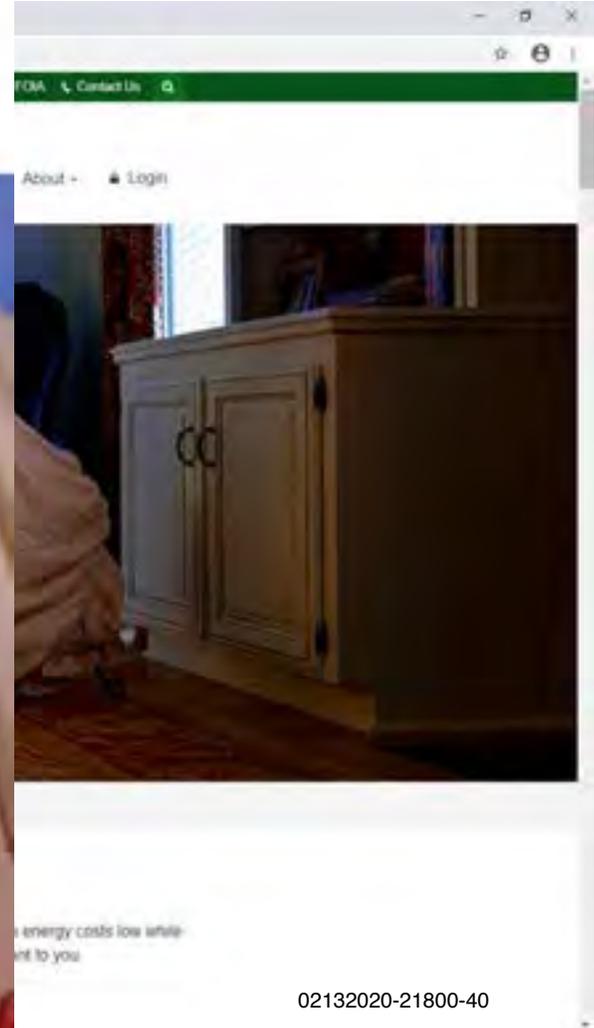
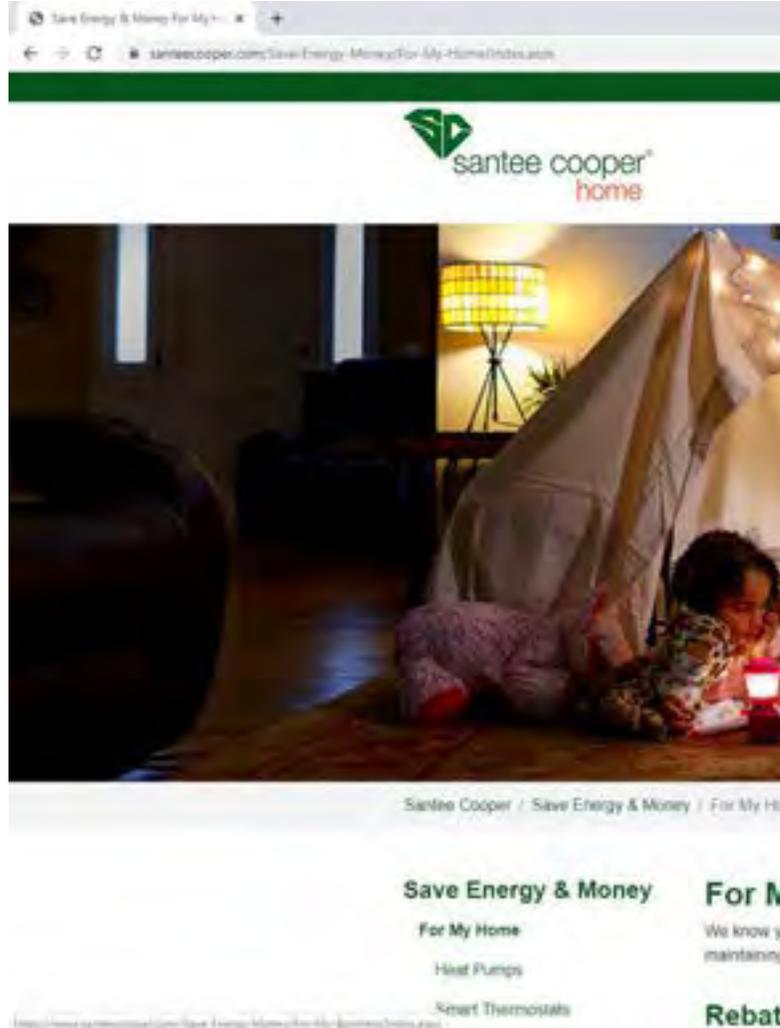


* Reduced inception-thru-2017 Energy Savings by 0.4 GWh due to attrition.

Santee Cooper Energy Efficiency Programs - Current



www.SanteeCooper.com



Santee Cooper EE Programs For My Home



Rebates

Santee Cooper offers rebates through our Smart Energy Existing Homes Program for qualifying equipment installed in your home. Our rebates include High Efficiency Electric Heat Pumps, Duct Replacements, Smart Thermostats and Heat Pump Water Heaters.



Heat Pumps
[Learn More](#)



Smart Thermostats
[Learn More](#)



Duct Replacement
[Learn More](#)



Heat Pump Water Heaters
[Learn More](#)



Pool Equipment
[Learn More](#)



ENERGY STAR® Appliances
[Learn More](#)

Energy Efficient Heat Pumps



Pump Up the Savings

Most of your electric bill comes from heating and cooling. If your heat pump is older than 10 years, you may want to consider replacing it with a more energy efficient heat pump. There are several energy efficient options available that could save you energy and money.

Heat Pump Measures	Rebate Amount
Variable Speed Mini-Multi-Split Heat Pump - ≥ 16 SEER, 8.5 HSPF	\$40 per 1/2 ton
Variable Speed Mini-Multi-Split Heat Pump - ≥ 18 SEER, 9.5 HSPF	\$50 per 1/2 ton
Single Phase Heat Pump - ≥15 SEER, 8.5 HSPF (Split System) - ≥15 SEER, 8.2 HSPF (Packaged System)	\$200 per installed system
Single Phase Heat Pump - ≥17 SEER, 9.0 HSPF (Single Family Only)	\$400 per installed system
Geothermal Heat Pump - ENERGY STAR® certified Geothermal system (Single Family Only)	\$600 per installed system
Hybrid Heat Pump - ≥15 SEER, 8.5 HSPF	\$500 per installed system
Hybrid Heat Pump - ≥17 SEER, 9.0 HSPF or ENERGY STAR® certified Geothermal system (Single Family Only)	\$700 per installed system

House Call




Santee Cooper EE Programs For My Business



Rebates

Santee Cooper offers rebates through our Commercial Prescriptive Lighting Program for qualifying lighting improvements to your business, which include Certified Retrofit Lighting, Non-Certified Retrofit Lighting, Lighting Controls and Underwater LED Lighting.



Certified Retrofit Lighting

[Learn More](#)



Non-Certified Retrofit Lighting

[Learn More](#)



Lighting Controls

[Learn More](#)



Underwater LED Lighting

[Learn More](#)



HVAC Improvements

[Learn More](#)



Commercial Refrigeration and Kitchen Equipment

[Learn More](#)



Domestic Hot Water Equipment

[Learn More](#)



Pumps and Motors

[Learn More](#)

Certified Retrofit Lighting



Light Up Savings

The most efficient business lighting is the ENERGY STAR® or DesignLights Consortium certified retrofit lighting. These LEDs have been tested and approved as high-quality LEDs, and are more energy efficient than previous light bulb designs. These changes normally have a short payback period. When you change out your old lightbulbs for LEDs, you could receive a **\$1.20** reduced wall rebate from Santee-Cooper.

Get Started!

Step 1: Call Step 2: Choose Step 3: Complete Step 4: Get Your Rebate

A Santee Cooper Trade Ally can help you choose the best LEDs for your business.

[Select a Trade Ally](#)

Frequently Asked Questions

- Am I required to use a Trade Ally? +
- How do I find a Trade Ally? +
- What is the difference between certified and non-certified lighting? +
- Can I get a rebate for new construction? +
- Can I reuse my old equipment? +
- Do you need more information about our rebate programs for your business? +



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Santee Cooper EE Programs

Loan Program



The screenshot shows the 'Santee Cooper Home' website. At the top left is the logo. The navigation menu includes 'My Account', 'Save Energy & Money', 'Community', 'About', and 'Login'. The main image shows a man and a woman inspecting a piece of equipment in a home. Below the image is a breadcrumb trail: 'Santee Cooper / Save Energy & Money / For My Home / Loans'. On the left, under 'Save Energy & Money', there is a list of services: 'For My Home', 'Heat Pumps', 'Smart Thermostats', 'Duct Work', 'Heat Pump Water Heaters', and 'House Call'. The main content area is titled 'Loans' with the sub-heading 'Rebates and Loans Go Hand in Hand'. It states 'Low-interest loans are available to qualifying Santee Cooper customers' and features a green box with the text 'Current Loan Rate : 2.75%'. Below this is the section 'Energy Efficient Loans' with the text 'Santee Cooper offers loans to approved customers to help with the expense of replacing energy efficient'.

Santee Cooper / Save Energy & Money / For My Home / Loans

Save Energy & Money

For My Home

- Heat Pumps
- Smart Thermostats
- Duct Work
- Heat Pump Water Heaters
- House Call

Loans

Rebates and Loans Go Hand in Hand

Low-interest loans are available to qualifying Santee Cooper customers

Current Loan Rate : 2.75%

Energy Efficient Loans

Santee Cooper offers loans to approved customers to help with the expense of replacing energy efficient

Stepping Stones to the Future



2020 Plan:

Santee Cooper started its Reduce the Use Program in 2009 as part of the *2020 Energy Efficiency Plan* which offered rebates to customers for installing qualifying energy efficiency measures



2030 Plan:

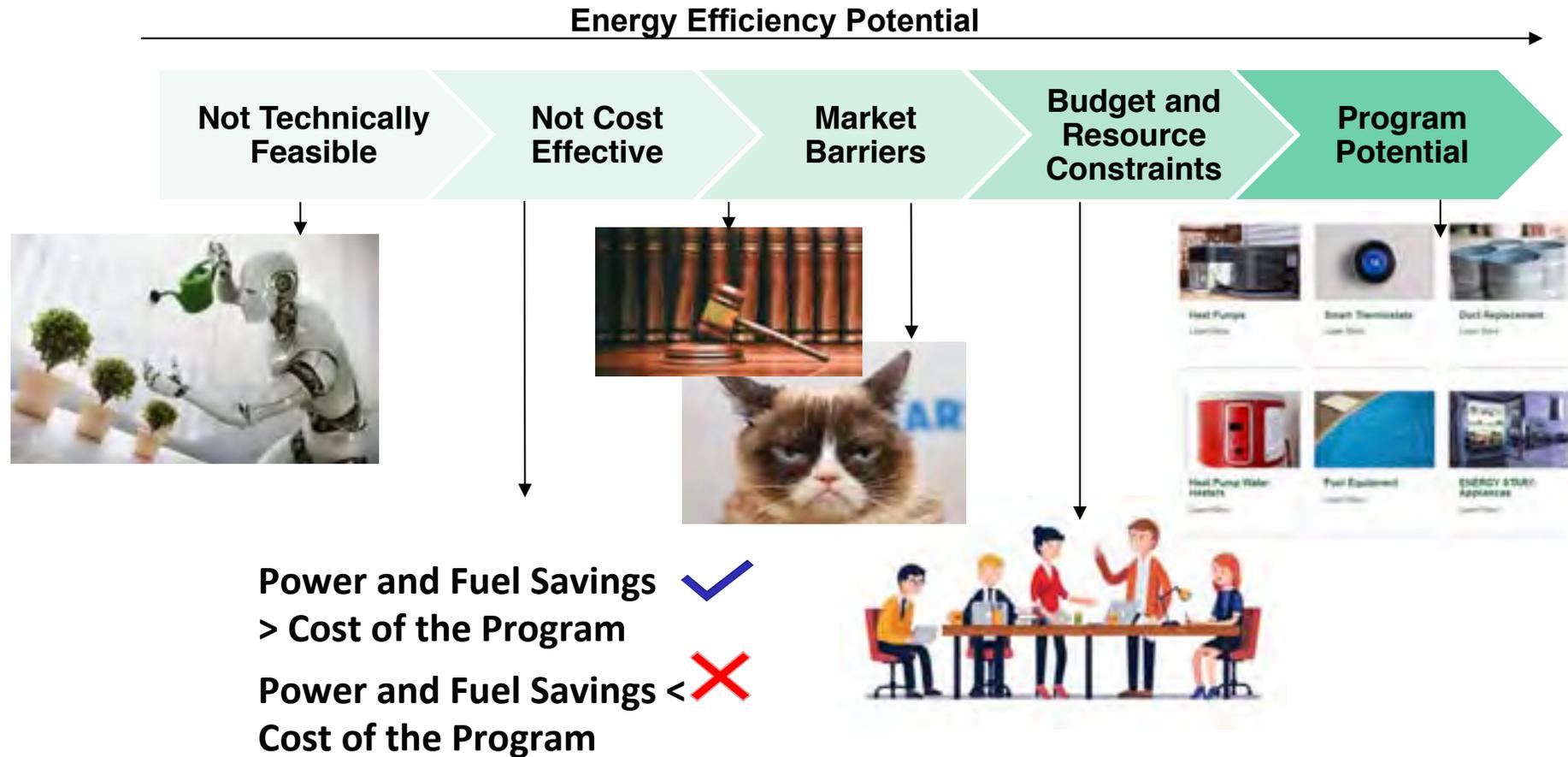
Focus will be to develop programs that support our customers' needs and desire to interface more actively with their electricity provider

Buying a Light Bulb



	Incandescent Light Bulb	LED Light Bulb
Cost Per Bulb		
Utility Fuel Needed		
Lighting Power Costs		
Lifespan of a Bulb	~1,000 Hours	~25,000 Hours

Making an Energy Efficiency Program



Questions?



Electric Cooperative EE Programs

Mike Smith

Manager, Conservation and Energy Efficiency, Retail Operations

Electric Cooperatives of South Carolina



A Model for Weatherizing South Carolina Homes

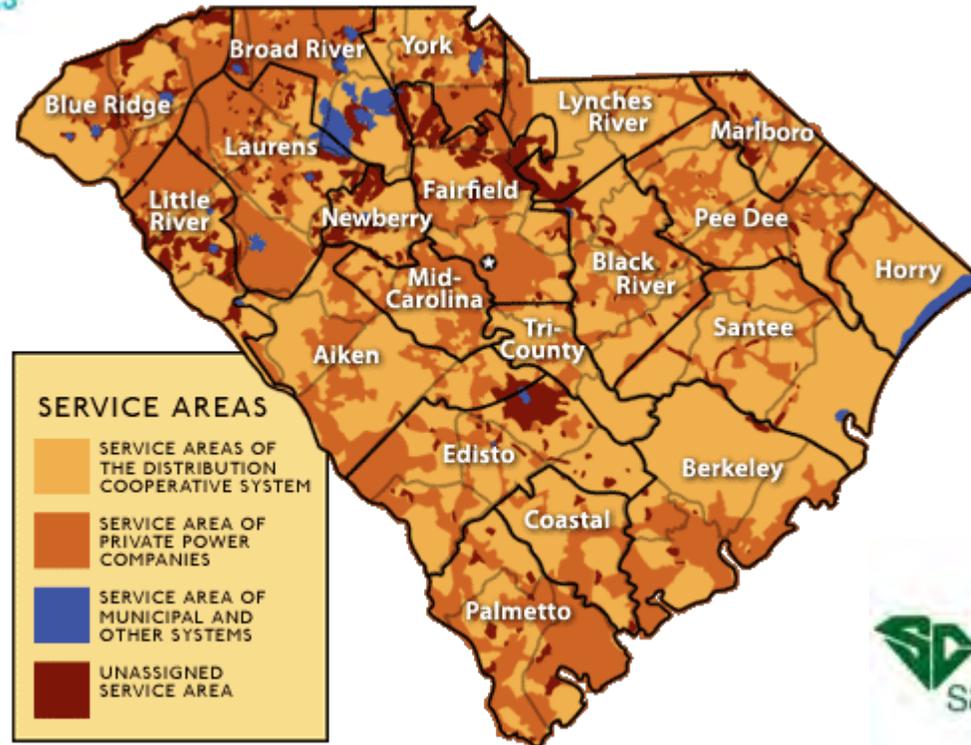
Mike Smith

Electric Cooperatives of South Carolina
Cayce, SC

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The cooperatives of South Carolina



24% of our membership lives in a
manufactured home



Energy Burden in South Carolina



- Almost half of the Help My House homes are manufactured
- No credit checks means that fixed income, low income, and moderate income households are included
- An example of a member on a fixed income
 - Low monthly bill \$250, high bill \$600
 - Annual electric bill of \$3800 on fixed income less than \$12,000/year



Shape Up Your Home for Energy Savings

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

Origins: The HMMH Pilot (2011)



- Research effort by Central Electric Power, our G&T
- Testing the program model
- 8 of 20 S.C. co-ops
- 125 homes

Our questions to answer: HMMH Pilot

- Can energy efficiency be a “generation” resource, not just a member service? (touch a third of our membership)
- Can we intentionally target candidate homes, accurately model energy and demand savings, find (or train) a contractor base to perform the work, and execute with persistent savings?
- Will member satisfaction increase or decrease by offering this program?
- Can the cost of energy saved pay for the work performed with a low interest 10 year loan?

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



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)

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

THE AVERAGE HMMH PILOT HOME...

- Reduced energy use by more than 30%
- Had a combined electric bill and loan payment lower than the electric bill *alone* before EE improvements
- Saved participants more than \$200/yr. *after* loan payments
- Was more comfortable to live in

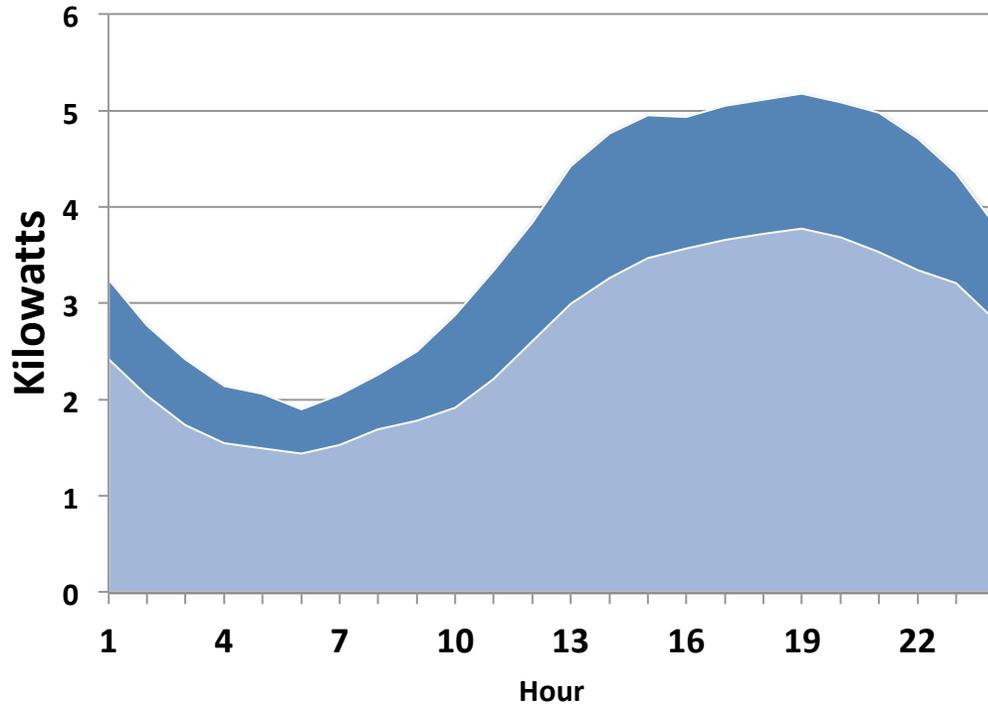


Question:

Where have EE programs been used to **reduce or supplant peak demands?**

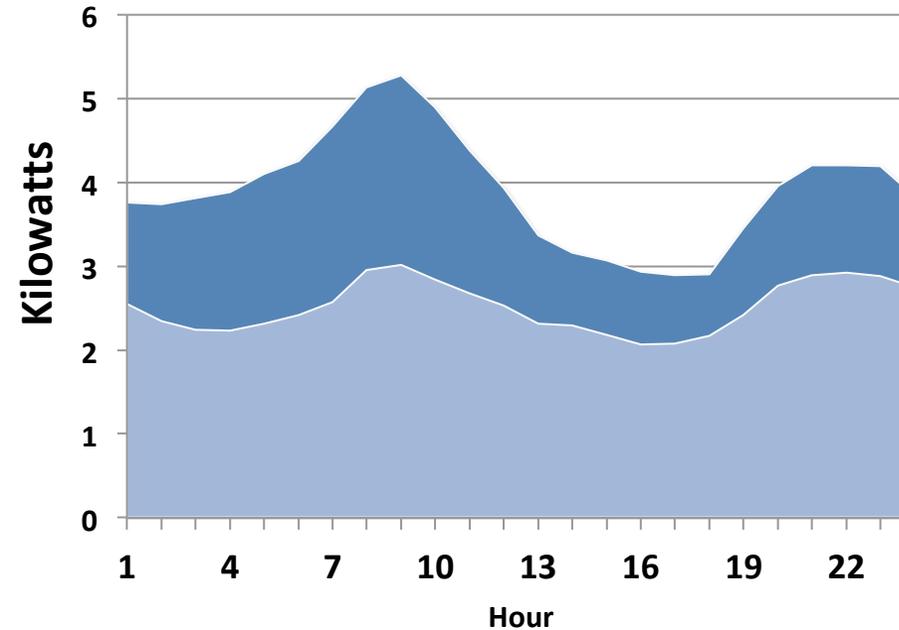
DEMAND SAVINGS

Average Summer Day Load Shape



■ Pre-Project ■ Post-Project

Average Winter Day Load Shape



■ Pre-Project ■ Post-Project

*From comprehensive pilot report by Collaborative Efficiency, 2013)

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



DEMAND SAVINGS – TARGETED



Smart Thermostats



Water Heater Control

Question:

In addition to telling us about the current utility programs, could you also tell us the **number of homes affected** by each of those programs in the most recent year and the proportion of those homes receiving services which are **low-income and/or low-moderate income households?**

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%



UPDATE: THE HMMH PROGRAM TODAY

	Homes/Loans Completed
<i>*2011 Pilot Program</i>	<i>125</i>
Aiken Electric	319
Santee Electric	255
Black River	66
*York Electric	10
*Lynches River Electric	12
Little River Electric	7
Running Total	794⁺

+December 2019

* Inactive programs



Total Program Metrics Annually

- 794 Homes Weatherized
- Over \$7M loaned
- Average Loan \$9,200
- Savings => “by design”
 - 6,338GWh
 - 4,716 mtCO2
 - Equivalent to 475 average co-op homes

Rural Energy Savings Program (RESP)

- 0% interest
- 5% interest cap to members - 3.75-5.00%
- Functions like a line of credit
- Up to 10 years to loan with 10 year term
- \$15.5M reserved for eight S.C. co-ops
- Carve out for each co-op ranges from \$750k to \$5M



Question:

I am interested in the opportunities for financing programs, particularly for the **underserved and hard-to-reach customers**, that have not been reached by the traditional utility rebate programs and customer outreach initiatives. Historically, utility financing programs (i.e. on-bill) have focused on **whole-house energy efficiency measures, but** now a new crop of programs that also **finance solar rooftop panels, beneficial electrification projects, and battery storage devices, are emerging in various parts of the country.** What are the SC utilities doing or planning in this area?

Rural Energy Savings Program (RESP)

- Application window will reopen early 2020 – Letter of Intent
- Approximately \$100M – current or former RUS borrowers, entities that provide retail electric service to rural areas
- Anticipated application deadline September 30, 2020
- Variety of eligible measures but utility must justify the cost effectiveness to the end user:
 - Building envelope upgrades
 - Lighting
 - Permanently installed energy storage
 - On- and off-grid renewable energy systems
 - Water and Waste Efficiency
 - Manufactured home replacement

For more information visit:

USDA <https://www.rd.usda.gov/programs-services/rural-energy-savings-program>

EESI <https://www.eesi.org/Rural-Energy-Savings-Program>



Question:

What is the impetus for the private sector to try and **sell fewer kWhs rather than more kWhs** to its rate base(s)? This notion seems to be reinforced by the fact that the energy efficiency programs currently in place seem to be very, very small (like only 10,000 families) and are often given out as a last resort for families struggling with summer bills.

Question:

We are being pressured by outside organizations (i.e. Sierra Club) to commit to **100% renewable energy**. As a school district with limited resources this is not realistic. What programs or assistance is available to government buildings to increase their use of renewable resources?



Improving Energy Efficiency in Existing Homes using On-bill Financing

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Municipal Utility EE Programs

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Municipal Electric Utilities

Municipal Electric Utilities

- **Background**

- 21 Municipal Electric Utilities operate in SC
- MEUs among oldest electric systems in state
- Some systems date to the 1890s

Municipal Electric Utilities



Municipal Electric Utilities

Legal Authority

- Article VIII, SC Constitution grants to cities and towns
 - ♦ the authority to acquire, own, and operate electric utilities, and
 - ♦ the sole authority to grant or deny consent to other utilities to use the streets and public property within their municipal limits for utility purposes

Municipal Electric Utilities

Legal Authority

- State Statutes – General Municipal Powers 5-7-60
- Title 58 – Public Utilities, Chapter 27 – Electric Utilities and Electric Cooperatives

Municipal Electric Utilities

Service Territory

- Generally limited to:
 - Customers within incorporated municipal boundaries
 - New premises in annexed areas
 - Unassigned territory

Municipal Electric Utilities

Governance

- Governed by elected municipal officials
 - 14 MEUs by a city or town council
 - 7 MEUs by a commission or board of public works
- Elected council or board responsible for:
 - Establishing policies
 - Setting rates
 - Broad oversight
 - Hiring management staff

Municipal Electric Utilities

Characteristics

- Collectively MEUs:
 - ◆ Serve approximately 170,000 customers
 - Largest – City Of Rock Hill, approximately 34,000 customers
 - Smallest – Due West, approximately 435 customers
 - ◆ Operate exclusively as electric distribution systems
 - ◆ Own no significant generation assets

Municipal Electric Utilities

Power Supply

- MEUs purchase wholesale power by long term contract
- Wholesale power suppliers include:
 - ◆ Piedmont Municipal Power Agency – 10
 - ◆ NTE Carolinas – 3
 - ◆ Dominion Energy SC – 2
 - ◆ Duke Energy Carolinas – 2
 - ◆ Santee Cooper – 2
 - ◆ Distribution Coops – 2
- An MEU's generation portfolio mirrors that of the wholesale supplier

Municipal Electric Utilities

Power Supply

- Most MEUs have SEPA allocations
- An MEU's generation portfolio mirrors that of the wholesale supplier(s)

Municipal Electric Utilities

South Carolina Association of Municipal Power Systems

- SCAMPS is a nonprofit corporation created to foster cooperation between the MEUs
- SCAMPS' Primary functions include:
 - Emergency mutual aid assistance
 - Education and training
 - Shared legal services
 - Legislative advocacy

Municipal Electric Utilities

South Carolina Association of Municipal Power Systems

- Contracts with the Municipal Association of SC for management and operational support
- Municipal Association of SC has no regulatory authority over SCAMPS members

Municipal Electric Utilities

Energy Efficiency Programs

- Local policy decision
- EE decisions impacted by:
 - Terms of all requirements wholesale power contracts
 - Cost benefit of program

Questions?

Thank you to our speakers
and all of you!!