



SEE A

SOUTHEAST ENERGY EFFICIENCY ALLIANCE

How Utilities Can Invest in Solutions to Reduce Energy Insecurity

Wednesday, April 12, 2023

OUR MISSION

To optimize the use and impact of energy to enhance the quality of life in the Southeast.

OUR VISION

All people in the Southeast live and work in healthy and resilient buildings, utilize clean and affordable transportation, and thrive in a robust and equitable economy.

OUR VALUES



Take Initiative

We take responsibility for realizing a better quality of life in the Southeast.



Value Others

We seek, respect, and promote diverse perspectives.



Earn Trust

We pursue our work with benevolence, competence, and reliability.



Pursue Equitable Solutions

We recognize, acknowledge, and account for a history of prejudice and inequality in Southeastern communities.

OUR CORE SERVICES



Research



Facilitation



**Consultation &
Education**



**Program
Management &
Financial Services**

Stakeholder Recommendations for Reducing Energy Insecurity in the Southeast United States

HOUSING WORKING GROUP AND RECOMMENDATIONS

01

Implement inclusive energy efficiency utility investments with robust consumer protections, such as Pay as You Save (PAYS).

02

Implement strong procedural protections, seasonal shutoff moratoria, protections for the socially vulnerable, and payment assistance programs to prevent disconnection from essential utility service.

03

Explore and implement Performance Based Regulation mechanisms that specifically benefit low-income customers.

04

Expand and implement non-energy benefits in energy efficiency cost effectiveness tests.

05

Reduce future capacity needs through aggressive pursuit of energy efficiency and peak demand reduction.

Today's Speakers



Shelley Robbins



Lynda Powers



Clean Energy Group (CEG) works at the forefront of clean energy innovation to accelerate an equitable and inclusive transition to a resilient, sustainable, clean energy future.

Visit www.cleanegroup.org to learn more about our current initiatives, recent publications, and upcoming events.

FOUR QUESTIONS

What data is out there?

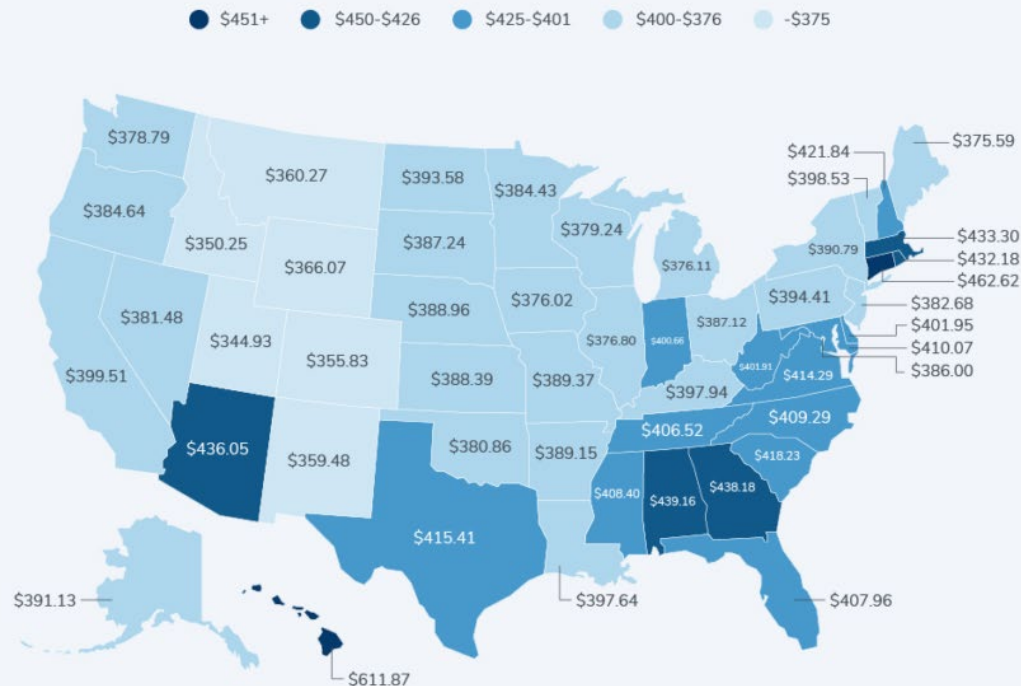
What data has Duke Energy collected and reported in NC?

What does it show?

What are the implications of this data for program design and customer engagement?

AVERAGE MONTHLY GAS AND ELECTRIC COSTS BY STATE

Average Monthly Utility Costs by State



For energy bill costs, we pulled the average electricity consumption figures and pricing information from the U.S. Energy Information Administration. For natural gas bill costs, we pulled the average rate per 1,000 cubic feet for 2021 from the U.S. Energy Information Administration and assumed each household used 168 cubic feet a day. We used Bluefield Research's average monthly household water bill for 2021 for each state's water bill costs. Our data about the average cost of streaming services comes from a survey conducted by Reviews.org. The sum of these utilities make up our averages for each state's total utility costs per month. States were ranked solely based on how much these utilities cost their residents each month on average.



HOME ENERGY AFFORDABILITY GAP



Actual home energy bills minus
affordable home energy bills = home
energy affordability gap

Data is available by county.

2022 data has just been released

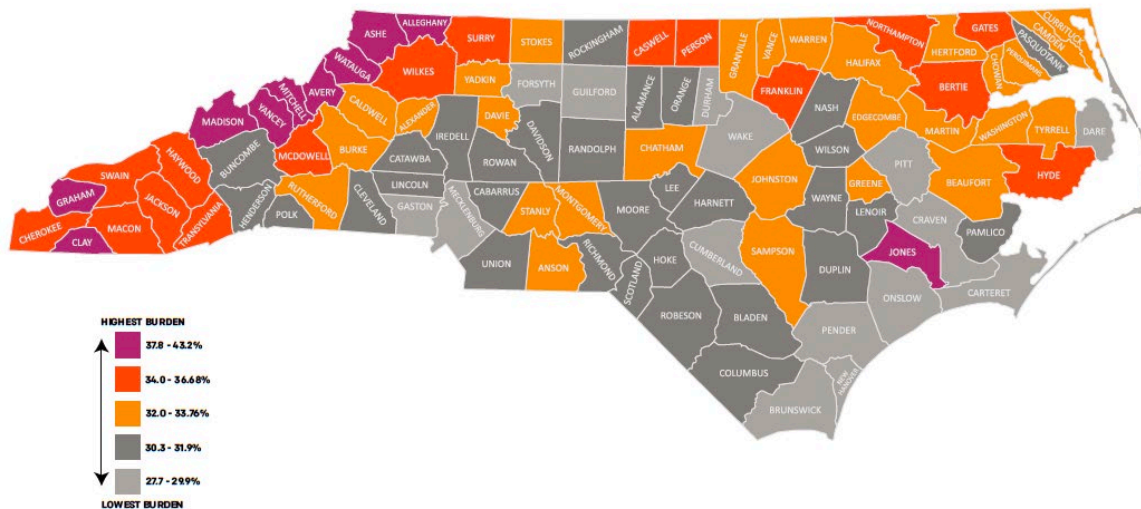
Which Southeastern state has the worst home energy affordability
gap for those living at less than 50% of the Federal Poverty Level?

[www.homeenergyaffordabilitygap.co
m](http://www.homeenergyaffordabilitygap.com)



ENERGY BURDEN IN NORTH CAROLINA

Households at 50% Federal Poverty Level



NC has **8th highest** energy burden in the US

- source Groundswell

FPL=\$27,750 for a family of four



Source: Dr. Elvis Moleka

Analyzing Rural Energy Burdens in North Carolina (June 2022)

<https://groundswell-web-assets.s3.amazonaws.com/report/The+Report+NC+rural+burden++FINAL.pdf>



WHAT DO WE KNOW AT THE UTILITY (DUKE ENERGY) LEVEL?

Low-Income Affordability Collaborative Final Report – filed August 2022, part of a March 2021 stipulated settlement

- **Facilitated** by Guidehouse
- North Carolina only
- Focuses on rates and rate design
- 548 pages
- Low-Income <200% FPL

Low and Moderate Income Penetration Study – filed March 2023, outcome of December 2022 EE/DSM rider approval

- **Prepared** by Opinion Dynamics
- North and South Carolina
- Focuses on energy efficiency and demand-side management programs
- 108 pages
- Low-Income < 50% AMI, Moderate Income 50%-80% AMI

Coming soon: Non-Energy Impacts of Duke Energy's EE/DSM programs



BY THE NUMBERS

Duke Energy has **900,000** customers below 200% of FPL = **29% of Duke's 3 million customers in NC**

- source: LIAC Final Report

23% (almost one quarter) of Duke Energy households in the Carolinas have **electricity-dependent medical needs**

- source: LMI Penetration Study

43% (almost half!) of Duke Energy's customers in the Carolinas **are LMI**

- source: LMI Penetration Study

Arrears struggling households in NC use **50% more energy per square foot in the winter and 33% more in the summer**

- source: LIAC Final Report

69% of Duke Energy's LMI customers in the Carolinas **are renters**

- source: LMI Penetration Study



IMPLICATIONS FOR PROGRAM DESIGN

These are just a few...

- Find solutions for LMI renters
- Focus energy efficiency programs on winter months
- Upfront costs are a barrier, so find ways to mitigate this (such as with tariffed on-bill finance or TOBF)
- Start adding low-income carve-outs and adders to EE/DSM programs
- Foster trust in Duke Energy's programs by featuring testimonials and utilizing existing LMI word-of-mouth networks

LESSONS FOR OTHER UTILITIES

- Do not be afraid to collect and analyze LMI customer data
- Do not be afraid to share this data with stakeholders
- Do not be afraid to share this data with regulators and policy-makers and ask stakeholders to help education them if needed
- Start paying attention to the non-energy impacts. They matter.

Shelley Robbins
Project Director
Clean Energy Group
shelley@cleanegroup.org

Find us online:
www.resilient-power.org
www.cleanegroup.org
www.facebook.com/clean.energy.group
@cleanenergygrp on Twitter



Improve & Save Single Family Retrofit Program

Program Description

A residential program designed to make homes more efficient and save customers money by reducing energy usage through tariffed residential improvements that are paid for as part of the home's Duke Energy bill coupled with Duke's Smart \$aver program.

Duke Energy will pay for the installation and equipment up-front. The customer will receive energy efficiency incentives based on their home's actual projected savings.

Improvements include:

- HVAC replacement
- Water Heater replacement
- Attic insulation
- Air-duct sealing

Solving Customer Problems



Affordable Payments

Average total monthly electric bill is less with the TOB charge than it is before the improvements so that customers can afford the upgrades.



No Credit Barriers

No credit check or home lien. Access to low interest rates that may not otherwise be available to customers.



Older Homes

Customers will be able to update older homes and receive Smart \$aver incentives.



Moving Out

The TOB charge is associated with the home. If someone moves out the TOB charge will persist with the next resident.



Maintenance

Maintenance will be provided to ensure the continued operation and efficiency of the equipment.

The Customer Journey



Step One: Learn about the program through direct marketing



Step Two: Sign-up online and schedule an initial evaluation



Step Three: Understand what the home needs to reduce monthly energy usage based on tests and analysis



Step Four: Select improvements from a list of options based on energy savings



Step Five: Duke manages the Install, removal of old materials and equipment, Quality Assurance checks, and Inspection and permitting



Step Six: Make affordable monthly payments as part of the Duke Energy bill

Built-In Savings Multifamily New Construction Pilot

Pilot Description

A pilot designed to incent builders to upgrade to more energy efficient selections by allowing renters to pay the incremental costs as part of their monthly bill.

Duke Energy will pay the difference of the builder's original selection to more energy efficient selections.

Improvements include:

- HVAC upgrade
- Water Heater upgrade
- Air-duct sealing
- ENERGY STAR® appliances
- Smart thermostat

Product Features



Energy Payment

Renter's average total monthly electric bill is less with the TOB charge than it would have been with less efficient options.



Monthly Payment on the Bill

The TOB charge will show as a line item on the monthly bill.



Non-Payment

Low risk of a customer not paying the TOB charge as the electricity is subject to disconnect for non-payment.



Move In/Move Out

The TOB charge is associated with the premise. If someone moves out the TOB charge will persist with the next account.



Maintenance

Property owner or management would provide routine maintenance to ensure the continued operation and efficiency of the equipment.

Who will benefit the most?

Customer Concerns

- Upgrades can be expensive
- Access to inexpensive capital is limited for some customers
- No credit history or poor credit history is a barrier to obtaining financing
- It is hard to understand how making energy efficiency improvements will save money and to be certain the savings will be realized



Estimated repayment less than projected savings



High energy usage at both peak and non-peak



Available to renters with homeowner approval



Payment option opens the door for additional customers to participate and save

Next Steps for Expansion and Improvement

Incorporate Federal funding

- Once distribution details are available, ToB participants may be able to use them to reduce the payback or cover a potential copayment

File a pilot in South Carolina

- The interest rate must be a fixed rate and must not exceed four percent above the stated yield for one-year treasury bills as published by the Federal Reserve at the time the agreement is entered
- An electricity provider shall assume no liability for the installation, operation, or maintenance of measures and shall not provide any warranty as to the merchantability of the measures or the fitness of the measures.
 - The choice of a contractor to perform the work must be made by the owner of the residence. Upon request, the electricity provider must provide the owner of the residence with a list of contractors.
 - The provisions of this section apply only to a residence already occupied at the time the measures are taken. The procedures allowed by this section may not be used with respect to a new residence or a residence under construction.

Tariffed On-Bill Program Overview



Multi-Family New Construction (MFNC) Pilot ("Smart Saver® Built-In Savings")

- Pilot (700-1000 rental units)
- Work with property developers to install more energy efficient features in rental units (as compared to minimum building code)
- Duke pays the incremental costs of the more efficient features
- Renters pay for the incremental costs over time as part of their electric bill



NC Smart Saver® Early Replacement and Retrofit with Improve and Save ("Improve & Save")

- Duke Energy will fund the installation of energy efficiency improvements that a residential customer pays for over time through a flat monthly amount on their bill.
- Solution = **Smart Saver Early Replacement and Retrofit** (approved EE program) + **ToB Monthly Charge Program** (optional, newly filed payment mechanism)
- Supports NC House Bill 951
- Available to single family, mobile home, multi-family
- Evaluating expansion to DEF & DEI



SC ToB Monthly Charge PILOT w/ Smart Saver® Early Replacement and Retrofit

NC		Filed	Launch
DEP	Multi-Family New Construction (MFNC) ToB Pilot	Sep '22	Q3 '23*

NC		Filed	Launch
DEC & DEP	Residential Smart Saver® Early Replacement and Retrofit Energy Efficiency Program	Sep '22	Q2 '23*
	Residential ToB Tariff - Electric Customer Monthly Charge	Sep '22	Q4 '23*

SC		Filed	Launch
DEC & DEP	Residential Smart Saver® Early Replacement and Retrofit Energy Efficiency Program	Apr '24?	Q3 '23*
DEP	Residential ToB Tariff - Electric Customer Monthly Charge Pilot	Q4 '24	Q1 '24

*Launch dates depend on receiving regulatory approval in Q2

Questions?

Future Webinars Topics	Future Webinar Dates
Working Group: Awareness and Community Engagement	January 25th
Working Group: Housing	March 15th
Working Group: Utility Solutions	April 12th, 1-2 pm
Working Group: Data Access and Improvement	May 3 rd
Working Group: Systemic Change	End of May
Working Group: Programs and Access to Financing	End of June

Upcoming Events



southeastenergysummit.com



seealliance.org/events

Thank You



SMART ENERGY. STRONG ECONOMY. FOR ALL.

WWW.SEEALLIANCE.ORG