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September 22, 2021

VIA ELECTRONIC FILING

Ms. A. Shonta Dunston
Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, North Carolina 27699-4300

**RE: Duke Energy Progress, LLC's Redirect Exhibit
Docket No. E-2, Sub 1273**

Dear Ms. Dunston:

Pursuant to the Commission's August 31, 2021 *Order Changing Expert Witness Hearings to be Remotely Held and Setting Procedures* (the "Order"), enclosed for filing is the redirect exhibit that Duke Energy Progress, LLC entered into evidence during the September 21, 2021 hearing:

- DEP – SACE, NCJC, NCHC Redirect Exhibit 1 – Energy Efficiency in the Southeast, Third Annual Report – January 26, 2021

Please do not hesitate to contact me if you have any questions or need additional information.

Sincerely,

Kendrick C. Fentress

Enclosure

cc: Parties of Record

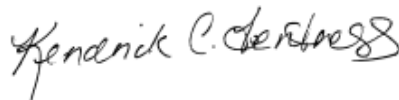
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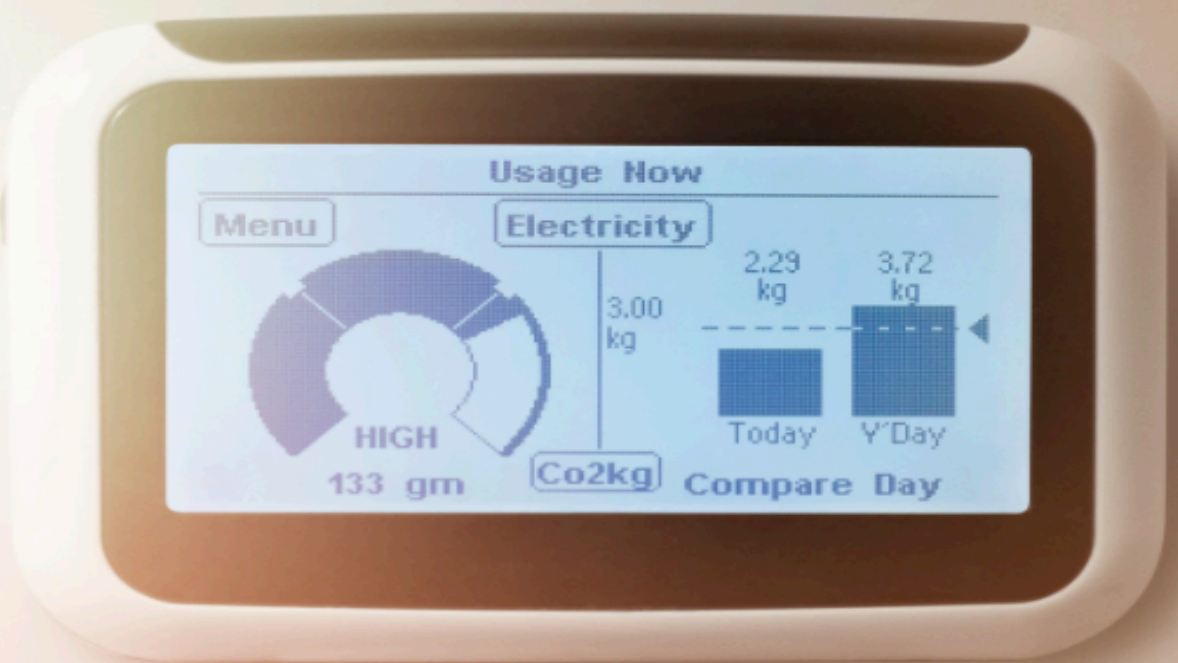
CERTIFICATE OF SERVICE

I certify that a copy of Duke Energy Progress, LLC's Redirect Exhibit, in Docket No. E-2, Sub 1273, has been served by electronic mail, hand delivery or by depositing a copy in the United States mail, postage prepaid to the parties of record.

This the 22nd day of September, 2021.



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ENERGY EFFICIENCY IN THE SOUTHEAST

THIRD ANNUAL REPORT – JANUARY, 26 2021



INTRODUCTION

Efficiency is a proven low-cost clean energy resource, but Southeastern utilities and regulators continue to underinvest and deprioritize it. As a result, households in many Southeastern states have some of the highest electricity usage and monthly energy bills in the nation.

In 2020, COVID-19 fundamentally disrupted Southeast efficiency programs, while intensifying energy insecurity for millions of already-vulnerable households. The data in this report predates the pandemic, but its effects on the Southeast region are featured throughout our commentary.

This report also explores efficiency as a tool to reduce carbon emissions, a leading cause of the climate crisis. Despite commitments from local governments, utilities, and other corporate interests, to date there have been very few examples of utilities in the Southeast actually including carbon reduction strategies in resource plans or proposals to local regulators – a trend we will continue to monitor and engage with through intervention and advocacy.

The purpose of our “Energy Efficiency in the Southeast” annual report is to document recent policy developments and trends in electric utility efficiency data from 2019.

In this report utility energy efficiency programs are scored primarily on the basis of energy saved in 2019 as a percentage of the previous year’s total electricity sales. Additional policy context is then added along with comparisons to state, regional, and national averages that highlight recent trends. Appendix A on page 28 details the Southeast utilities that fall within the reports scope.

ABOUT SACE

The Southern Alliance for Clean Energy (SACE) is a nonprofit organization that promotes responsible and equitable energy choices to ensure clean, safe, and healthy communities throughout the Southeast. As a leading voice for energy policy in our region, SACE is focused on transforming the way we produce and consume energy in the Southeast.

Proper citation for this report: Southern Alliance for Clean Energy (2021). *Energy Efficiency in the Southeast, Annual Report published January 2021.*

TABLE OF CONTENTS

1.	Introduction	2
2.	Efficiency Performance of the Southeast, States, and Utilities	4
3.	Utility Company Profiles	9
4.	Energy Efficiency and the Pandemic	15
5.	State Profiles	17
6.	Conclusion	26
7.	Data Sources, Methods, and Assumptions	27
8.	Appendix A: Southeast Utility Systems	28
9.	Appendix B: Southeast Utility Data Tables	28



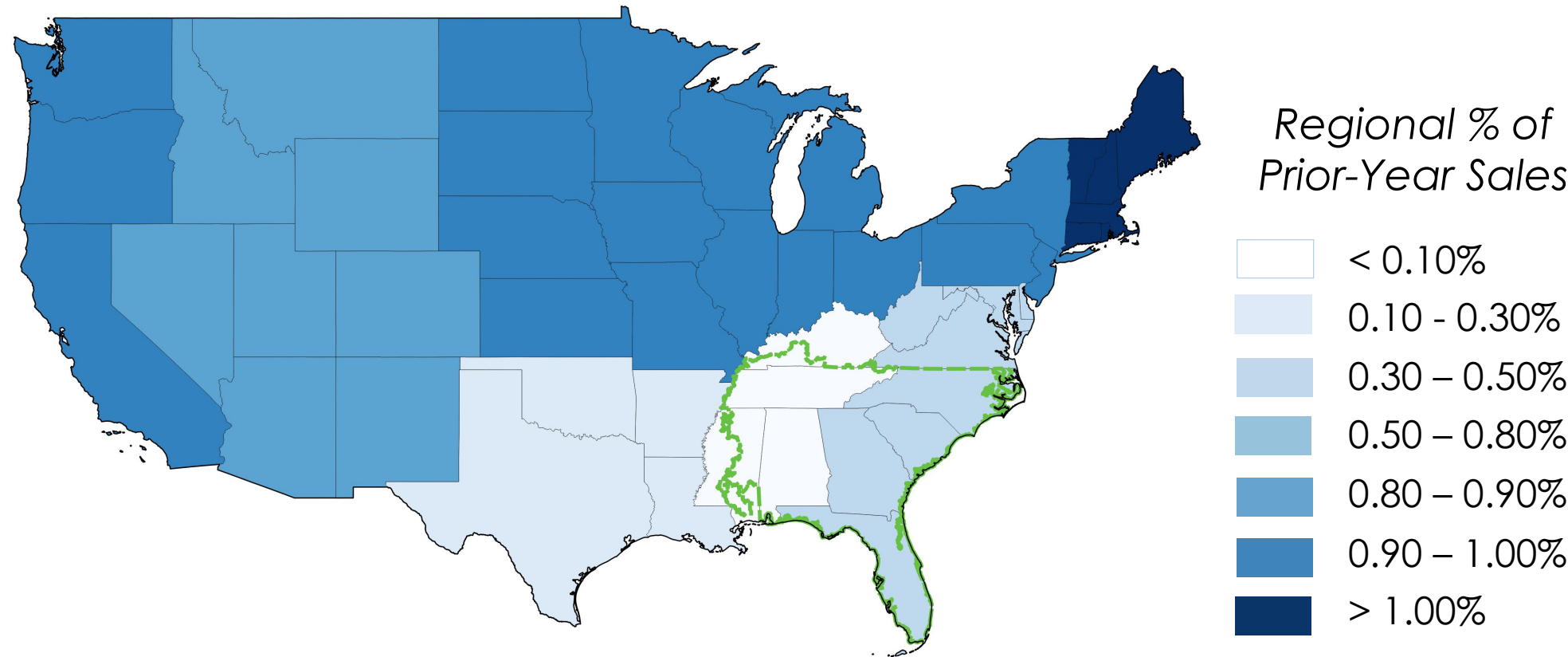
EFFICIENCY PERFORMANCE ACROSS REGIONS

PERFORMANCE OF REGIONS

REGION	% OF SALES
NORTHEAST	2.15%
WEST-PACIFIC	0.87%
MIDWEST	0.97%
WEST-MOUNTAIN	0.87%
SOUTHEAST	0.26%
U.S. TOTAL	0.67%

REGION-TO-REGION COMPARISON

Efficiency performance in the Southeast has consistently lagged behind other parts of the country, often falling dead last in regional rankings. 2019 was no exception with the Southeastern region remained solidly at the bottom, with just 0.26% annual savings. This is less than half the national average, and just a fraction of savings in the Northeast, which invested early in energy efficiency, built up an industry and workforce, and continued to expand its energy efficiency investments as the financial benefits rolled in. Despite total efficiency savings remaining fairly level, the national savings average went down from 2018 to 2019 due to an overall increase in electric sales.



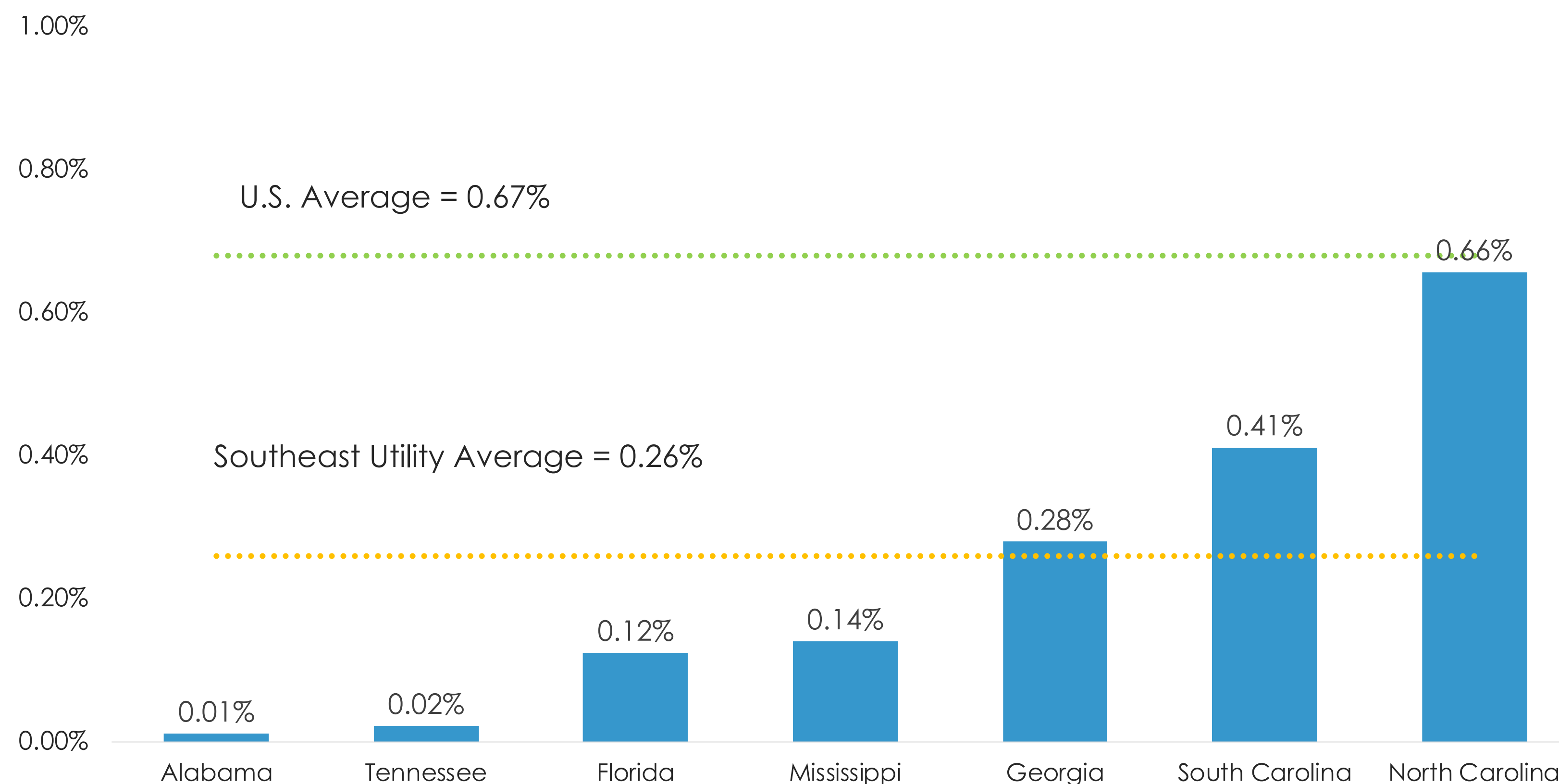
Area outlined in green covered in report.

EFFICIENCY OFFSETS FOSSIL FUELS

Like other parts of the country, the Southeast is starting to see states, cities, and utilities strive to reduce carbon emissions. Energy efficiency is a crucial tool for attaining climate reduction goals. It is helping the region retire its aging fleet of fossil fuel power plants, reducing the need for more expensive fossil gas generation, and making the transition to renewable energy more affordable. In 2019, efficiency eliminated an estimated 2,142 gigawatt hours (GWh) of energy waste across the Southeast, enough to power 162,000 homes for a year. Efficiency in the Southeast is reducing carbon emissions by approximately one million tons per year.

EFFICIENCY PERFORMANCE OF SOUTHEASTERN STATES

2019 ENERGY SAVINGS AS % OF PRIOR YEAR RETAIL SALES



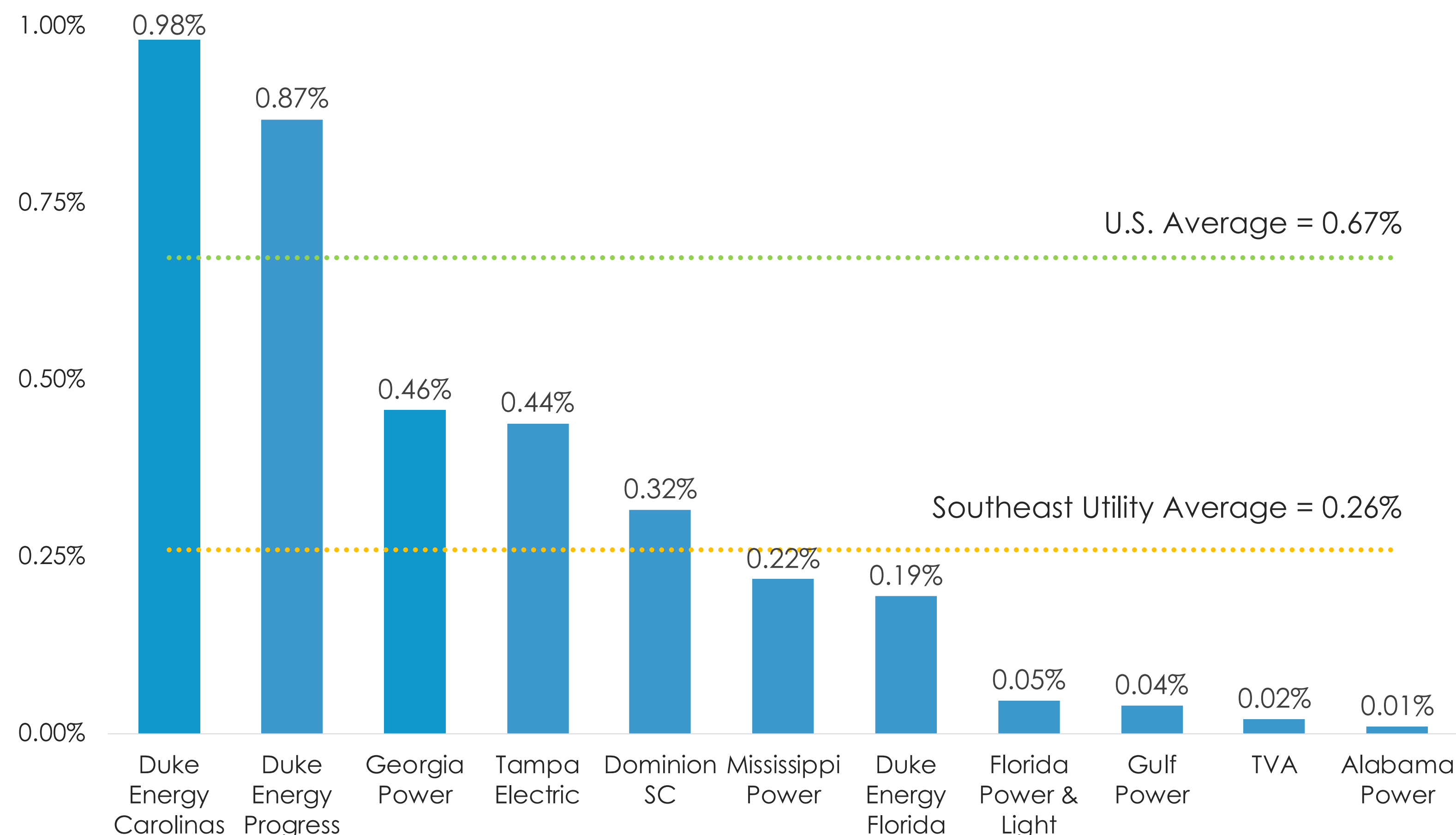
STATE RANKINGS IN THE SOUTHEAST

States in the Southeast continue to underperform compared to other regions and the country as a whole. In 2019, North Carolina had more than double the annual savings of the Southeast as a whole, but fell just short of the national average. South Carolina and Georgia also exceeded the regional average (if only barely), but trailed the nation as a whole. Florida and Mississippi continue to drag the regional average down, while Tennessee and Alabama now deliver virtually no utility efficiency savings for residents.



EFFICIENCY PERFORMANCE OF MAJOR SOUTHEASTERN UTILITIES

2019 ENERGY SAVINGS AS % OF PRIOR YEAR RETAIL SALES



FROM THE TOP TO THE BOTTOM

In 2019, Duke's utilities in the Carolinas continued to lead the region in annual efficiency savings. They substantially exceeded the national average and delivered about twice as much efficiency as the next closest utilities. Georgia Power, Tampa Electric, and Dominion were above the regional average.

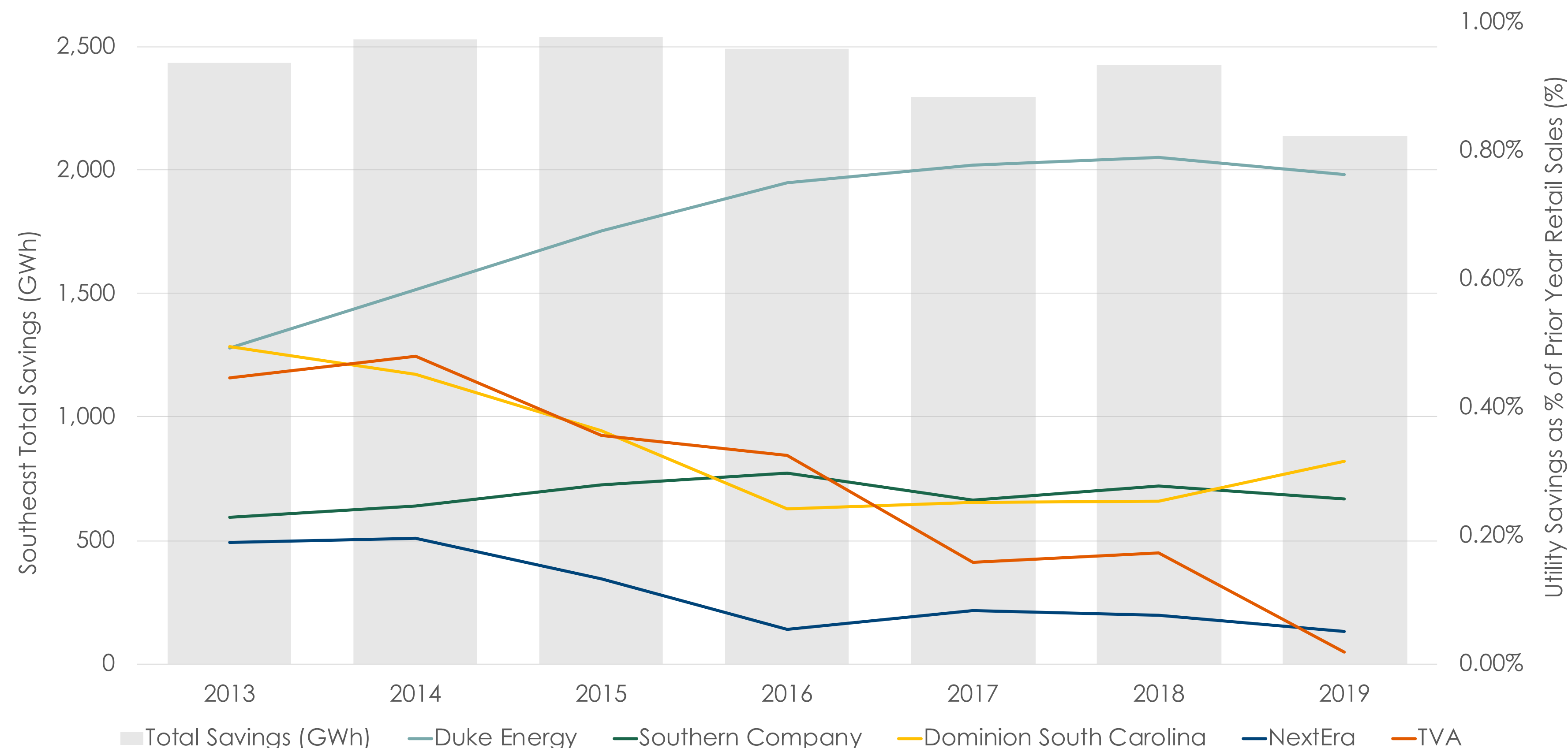
Two mega-utilities are having an outsized negative effect on efficiency in the Southeast. Just a few years ago, Tennessee Valley Authority (TVA) and Florida Power & Light (FPL) were important contributors to the region's total Southeast savings, despite comparatively poor performance when looking at regional and national peers. But since that time, TVA and FPL have slashed their efficiency programs to almost nothing. Because these are such large utilities, their lack of efficiency savings effectively drag the entire Southeast average sharply downward.

SOUTHEAST UTILITY SYSTEM BREAKDOWN

RISE AND FALL

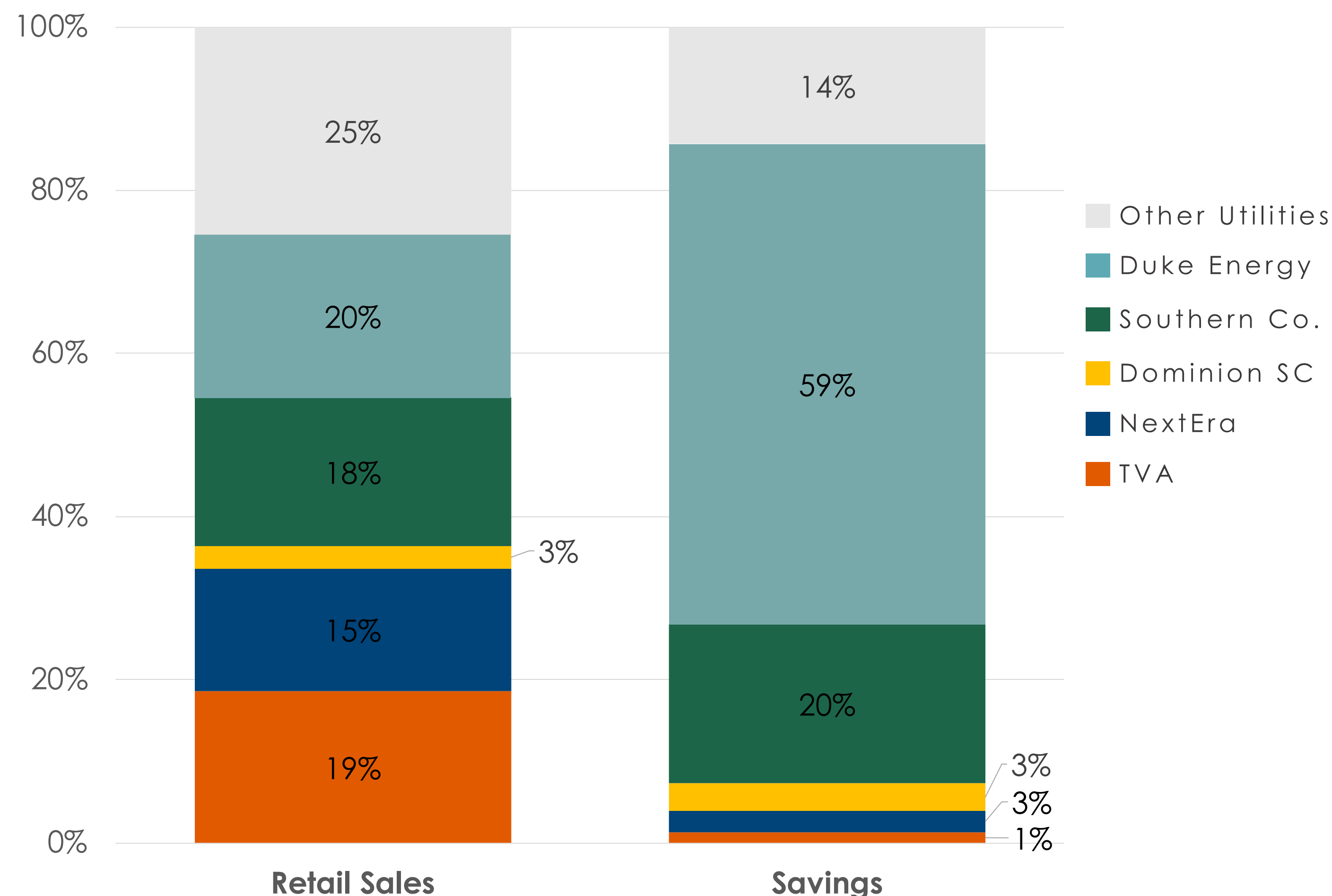
TVA, NextEra (which owns Florida Power & Light and Gulf Power), and Dominion have all seen sharp declines in efficiency savings since 2013, while Duke has trended upwards. Over the past three years, total efficiency savings in the Southeast have fallen from their previous highs. The steepest drop occurred in 2019, driven almost entirely by TVA's decision to abruptly eliminate all direct financial incentive programs for customers who install efficiency upgrades. Looking ahead, recent regulatory decisions in South Carolina and Georgia are expected to lead to increased savings for Georgia Power and Dominion in coming years.

SAVINGS AS PERCENT OF PRIOR YEAR RETAIL SALES BY UTILITY GROUP
COMPARED TO TOTAL REGIONAL SAVINGS



SOUTHEAST UTILITY SYSTEM BREAKDOWN

2019 RETAIL SALES AND SAVINGS BY UTILITY GROUP



OVER-ACHIEVERS AND UNDER-PERFORMERS

A handful of the Southeast's 500+ electric utilities make up the bulk of the region's savings. Just three individual utilities, Duke Energy Carolinas, (DEC) Duke Energy Progress (DEP), and Georgia Power, account for nearly three quarters of the region's total efficiency savings.

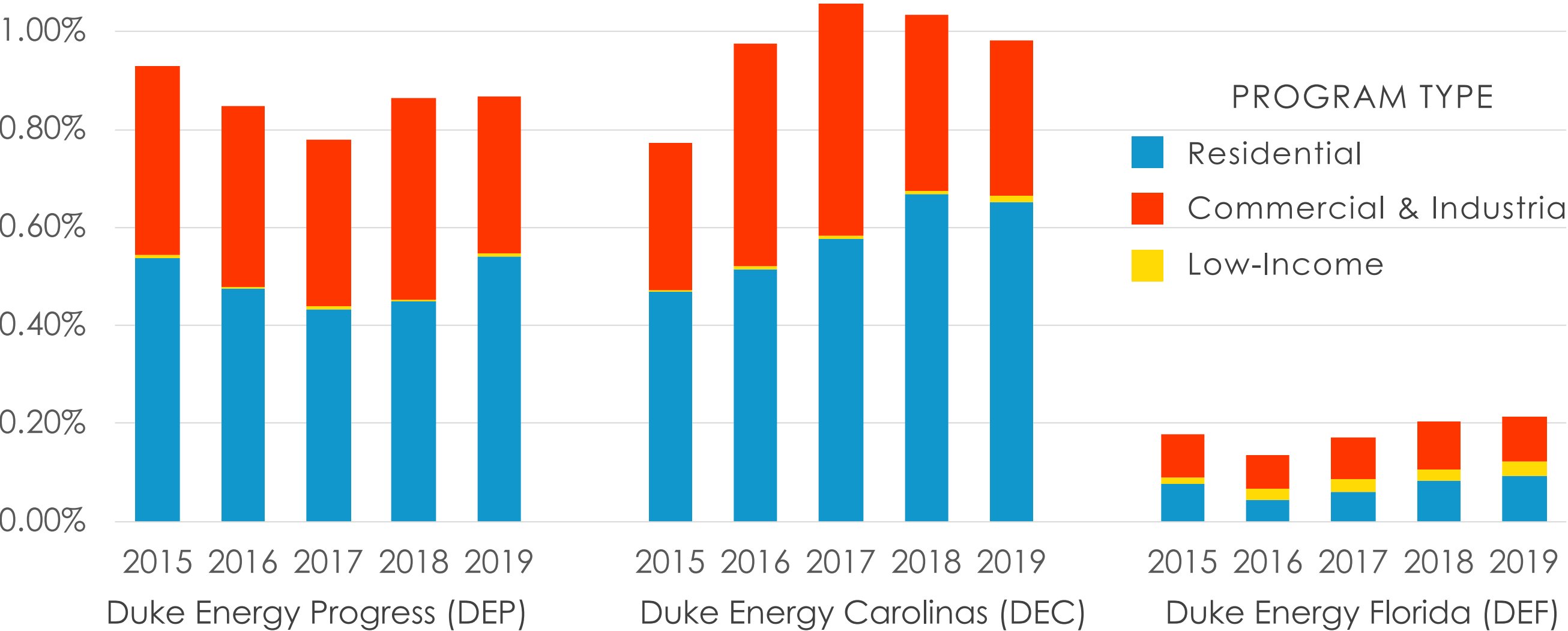
While Georgia Power and Dominion Energy South Carolina (DESC) delivered efficiency savings levels that were roughly equal to their share of regional electric sales in 2019, Duke Energy delivered savings that were proportionately three times higher than their electric sales.

By contrast, other large utilities, delivered far less than their share. Most notably, NextEra accounts for 15% of total electric sales in the Southeast but a mere 3% of efficiency savings, While TVA is 19% of regional sales but a mere 1% of efficiency savings.

DUKE ENERGY

FLEXIBILITY AND EVOLUTION KEY TO SAVINGS PERFORMANCE

ENERGY SAVINGS AS % OF PRIOR YEAR RETAIL SALES



SAVINGS GAP PERSISTS BETWEEN DUKE COMPANIES

Duke Energy Carolinas has raised the bar for its sister companies by reaching the 1% savings mark for two of the last three years. Despite identical state policies and a merger agreement that both companies would strive to deliver 1% annual savings, Duke Energy Progress has not yet reached that target. Florida State policies are far worse, and so is Duke's performance there. But Florida's efficiency rules are finally being reformed, giving Duke the chance to once again demonstrate its leadership, throw its weight in favor of modern efficiency policies, and close the savings gap between its Southeast subsidiaries.

MODIFICATIONS KEY TO HIGH SAVINGS

Technologies, consumer preferences, and efficiency standards for buildings and appliances are frequently changing, so it takes consistent effort to sustain high utility energy savings. More than any other Southeast utility, Duke's utilities in the Carolinas are perpetually developing new programs and ways to enhance program delivery - with considerable help from collaborative stakeholders like SACE. Recently, Duke proposed expanding residential new construction programs, financing for commercial upgrades, midstream delivery channels, and demand response to reduce winter peaks.

MAINTAINING EFFICIENCY IN THE COVID CRISIS

The pandemic caused efficiency programs to grind to a halt around the country. Too many utilities failed to innovate and likely experienced significant savings declines. In contrast, DEC and DEP modified their programs and instituted new safety protocols that minimized program disruption. As a result, both companies expect to hit their previously projected savings targets for 2020. More could still be done to direct efficiency services to families who are struggling to repay outstanding energy bills. But Duke has once again shown peer utilities why they lead the Southeast in energy savings—through adaptation and a commitment to sustain higher savings performance.

UTILITY PERFORMANCE MECHANISM

The North Carolina Utilities Commission (NCUC) periodically reviews key policies related to energy efficiency operations in the state. In 2020 the NCUC approved changes that may spur additional savings:

- Created a new performance incentive for achieving 1% annual savings and higher savings for low-income customers.
- Called for a study of participation rates and savings impacts for low-income customers using non-income qualified programs. This is part of an overall effort to increase savings for low income households.
- Switched to using the Utility Cost Test, which compares only utility costs and benefits. The Commission also acknowledged issues with its previously used Total Resource Cost test approach, and directed the Collaborative to examine ways to better account for non-energy benefits.

CARBON REDUCTION TARGETS

Duke highlighted efficiency's role for achieving a net zero carbon future in its 2020 Climate Report, stating "Some of the most effective carbon reductions we can make involve helping customers avoid energy usage in the first place." Building on its commitment to cut carbon emissions 50% by 2030 and achieve net zero carbon by 2050, Duke's Board recently announced plans to add a new executive compensation metric tied to climate change starting in 2021.

INTEGRATED RESOURCE PLANNING

Commissions in both North and South Carolina have placed additional requirements on integrated resource planning in recent years, such as requiring utilities to model higher levels of efficiency, requiring analysis of existing coal plants, and showing how resource plans achieve state and corporate emissions targets. These are some of the key issues being reviewed in the company's recent IRP, filed September 2020. In parallel Duke has studied the impacts of demand resources on its winter peak load forecast, revealing an array of new savings opportunities. While these steps all point in the right direction, it still remains to be seen how much they will ultimately impact efficiency resource investments for North and South Carolina in the future. Despite increased focus on the subject, there is still no formal integrated resource planning requirements in Florida

ANNUAL SAVINGS TARGETS

While included in the recent North Carolina efficiency mechanism review, the Commission took no action towards establishing annual efficiency savings targets, which have been shown to be the most effective policy for increasing annual energy savings. Duke points to its leadership status in the Southeast and the effectiveness of financial performance incentives to suggest such targets are not needed. But the question remains whether Duke can ever reach national leadership status on efficiency without new policy requirements.

DOMINION SOUTH CAROLINA

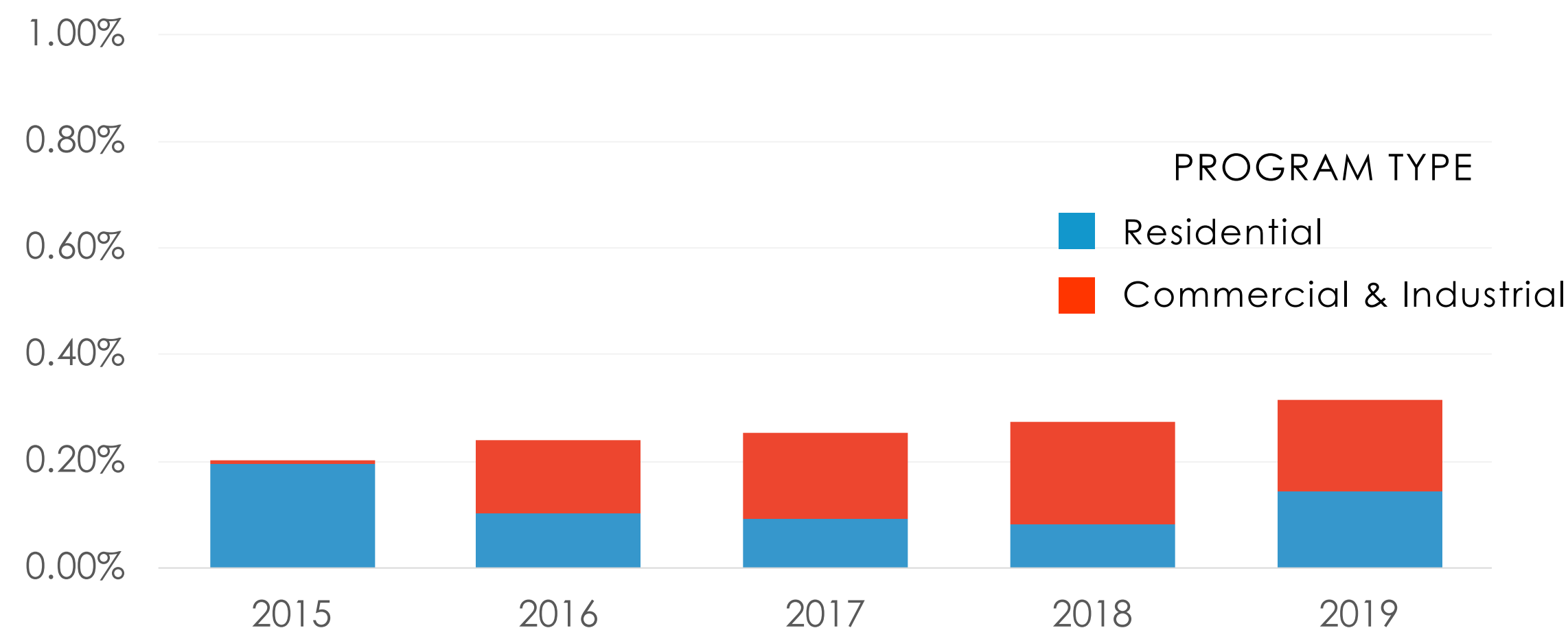
NEW COMPANY + NEW COMMISSION = NEW EXPECTATIONS

TIME TO PLAN FOR HIGH EFFICIENCY

For many years, South Carolina Electric & Gas (SCE&G) underinvested in efficiency while recklessly pursuing the expensive V.C. Summer nuclear power plant project. When the project went bust, the utility was bought by Dominion and renamed Dominion Energy South Carolina (DESC) in 2018. DESC proposed doubling its energy efficiency budget and increasing annual savings to 0.7%. With additional funding, the utility could expand efficiency program offerings to reach more customers with deeper savings.

The South Carolina Public Service Commission has entirely new members since the V.C. Summer debacle. This new PSC rejected DESC's IRP in late 2020 and required the utility to work with SACE, SC Coastal Conservation League, and other stakeholders to produce a new IRP within sixty days. As part of this new IRP, the PSC orders DESC to analyze higher levels of efficiency to at least 1% annual savings. In the future, Dominion must regularly engage stakeholders to consider changes to its IRP methodology, inputs, assumptions, and "evaluate realistic options to achieve greater energy savings and model a high DSM scenario in the 2023 IRP."

ENERGY SAVINGS AS % OF PRIOR YEAR RETAIL SALES



POTENTIAL STUDIES SHOW THEIR LIMITATIONS

Dominion Energy argued against higher savings in its 2020 IRP by pointing to an efficiency potential study it commissioned the previous year. Utilities in other jurisdictions have often made similar claims, but later achieved higher savings when directed to do so by their regulators. This is because utility-funded potential studies often place their thumb on the scale, by:

- Failing to account for technology advances or price declines
- Skewing cost effectiveness analysis by excluding key benefits
- Unduly limiting participant adoption rates

This time, the Commission expects more from the utility.



SOUTHERN COMPANY

PROGRAM SUSPENSIONS AND ROLLOUT DELAYS

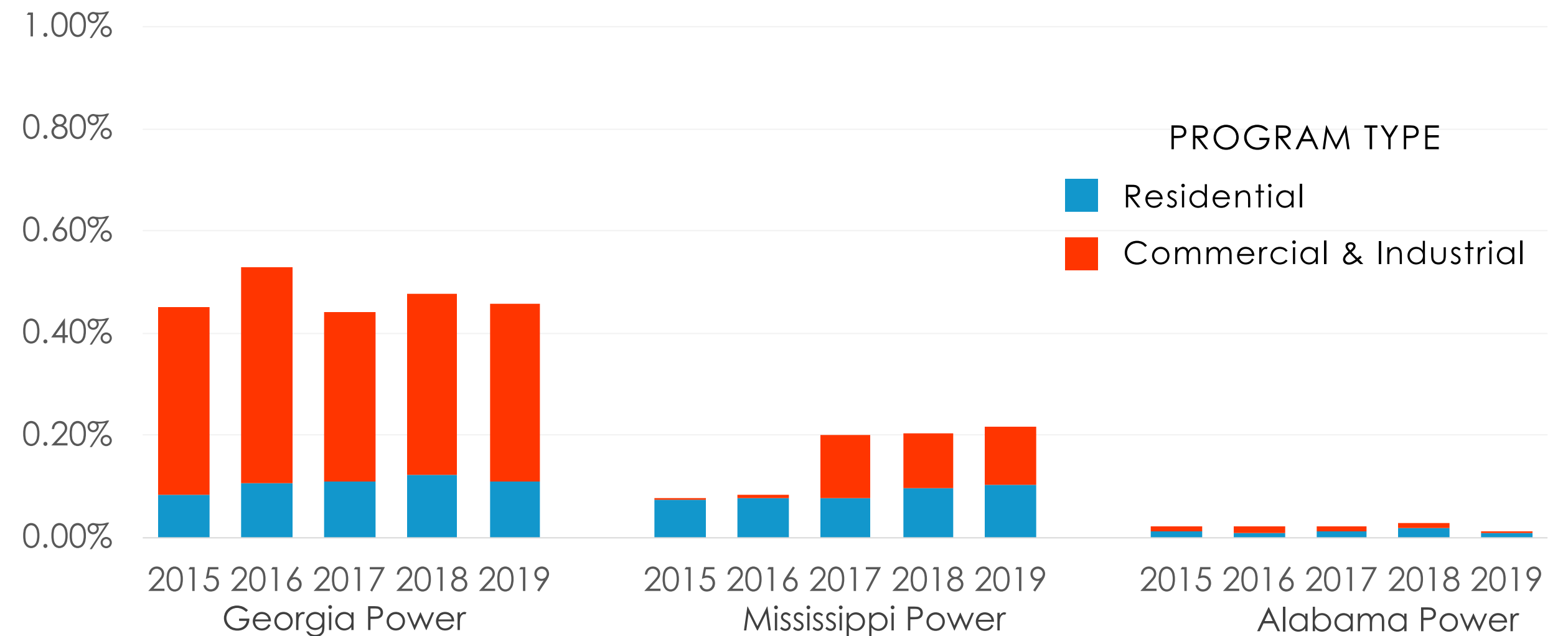
A SLOW START FOR GEORGIA POWER

Last year, the Georgia Public Service Commission (PSC) increased Georgia Power's efficiency savings target by 15% for each of the next three years. However, in 2020 the company switched many of its program implementers, causing both new and existing programs to get a late start. Some had not even begun when the COVID-19 pandemic struck, throwing 2020 savings levels into a tailspin. At just 27% of its annual savings target in September, it became clear the utility would not reach its first year savings goal – and has no plans for recovering the lost savings later.

RELUCTANT TO ADAPT: EFFICIENCY SAVINGS LIKELY TO PLUMMET DURING COVID CRISIS

In March of 2020, Georgia Power stopped all energy efficiency marketing and program operations because of the pandemic. Even as the economy collapsed, the utility was able to secure protection for its own profits against losses from unpaid customer bills. Meanwhile, efficiency programs for struggling low-income households were suspended until the year was nearly over. But peer utilities (even Mississippi Power) implemented new safety protocols and resumed program operations within a few months. Duke Energy and Entergy have both shown how adaptation, even during difficult times, is key to maintaining higher efficiency savings. With the pandemic still going in 2021, let's hope this year Southern Company will be up to the challenge.

ENERGY SAVINGS AS % OF PRIOR YEAR RETAIL SALES



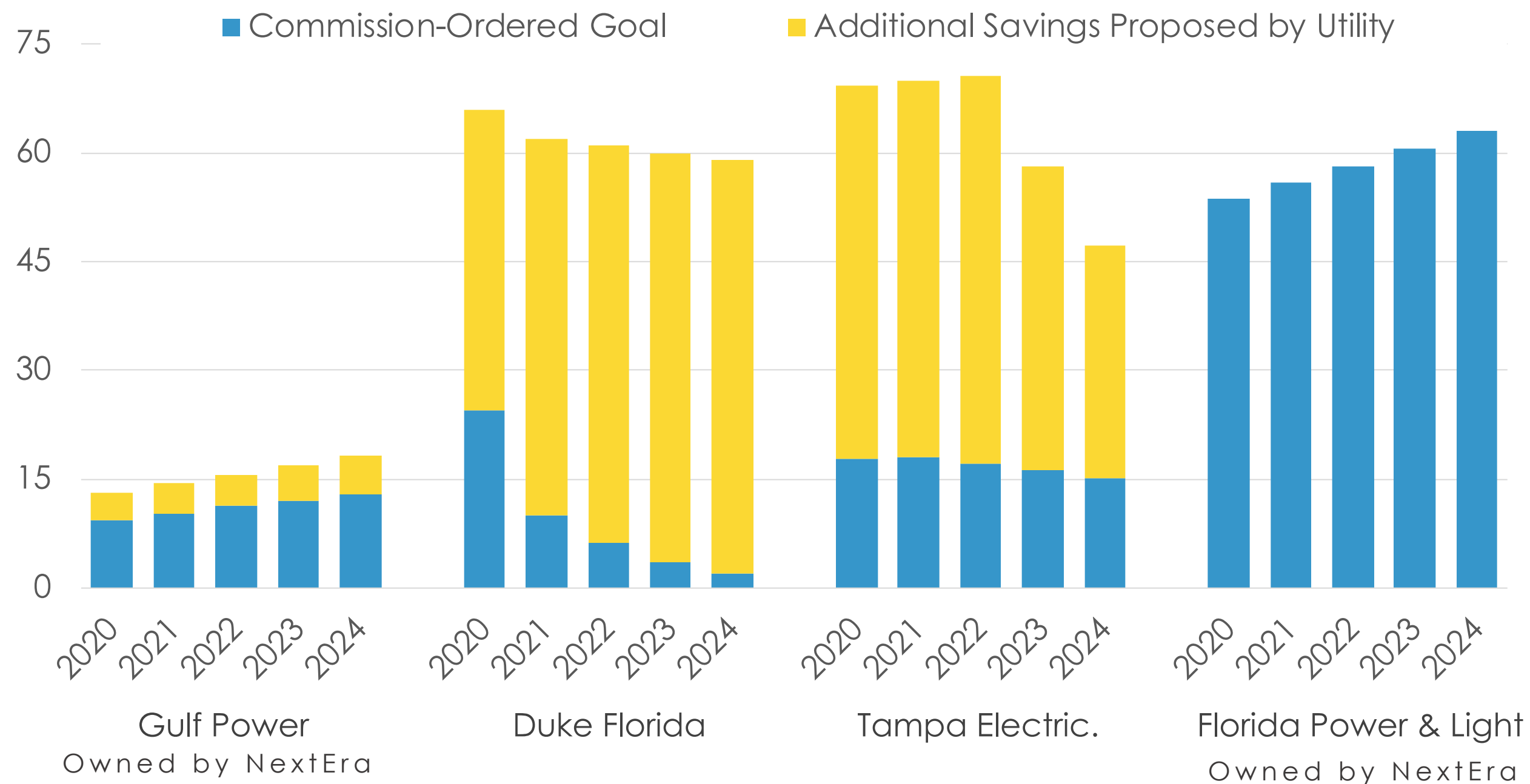
AN EFFICIENCY FINANCING BREAKTHROUGH?

The up-front costs for efficiency improvements prevent many customers from escaping the cycle of unaffordable high electric bills. But innovative inclusive financing mechanisms have proven to be a game-changer for several co-op utilities in the region. In 2019, the Commission approved a new Pay-As-You-Save (PAYS) pilot program, making Georgia Power the first investor owned utility in the Southeast to offer low-income customers on-bill repayment for a comprehensive package of efficiency measures.

NEXTERA ENERGY

THE LEAST THEY COULD DO

UTILITY-PROJECTED ENERGY SAVINGS (GWH)



SMALL STEPS FOR THOSE IN NEED

FPL historically provided among the lowest levels of efficiency savings for its low-income customers. Relative to size, Duke and TECO delivered 20 and 50 times more savings, respectively. While still lagging most of its peers, FPL is expected to more than triple participation in low income programs over the next five years. Still, this is only a small step forward for those in need and far short of what we should expect from the state's largest utility.

THE BOTTOM LINE:

NEXTERA COMPANIES AIM LOW

Florida utilities have a history of downplaying efficiency. In 2019 many Florida utilities used calculation tricks to slash proposed efficiency savings to zero. The Commission rejected these proposals in favor of keeping previous targets, and most utilities came back with plans to exceed the required savings - but not NextEra-owned Florida Power & Light (FPL). Instead, FPL filed plans to do the absolute minimum - less than TECO and Duke, which are far smaller utilities. Even NextEra's other utility in the state, Gulf Power, proposed additional savings above the Commission-ordered goal. FPL later admitted its rates will stay the same or decrease with the required higher savings levels.

NEW RULES: WILL FLORIDA'S BIGGEST MONOPOLY BE EFFICIENCY'S GREATEST OBSTACLE?

It's well known that FPL exerts considerable political influence over policies and practices in Florida. In the past, the utility supported seriously flawed restrictions *against* efficiency measures that pay back quickly or *might* effect rates. As a result, Florida utilities are often at the bottom of efficiency rankings. But after 27 years, Florida's efficiency rules are finally being updated. Will FPL continue to oppose reform, or be ready to move into the 21st Century?

TENNESSEE VALLEY AUTHORITY

AN INNOVATION LAB FOR THE FUTURE?



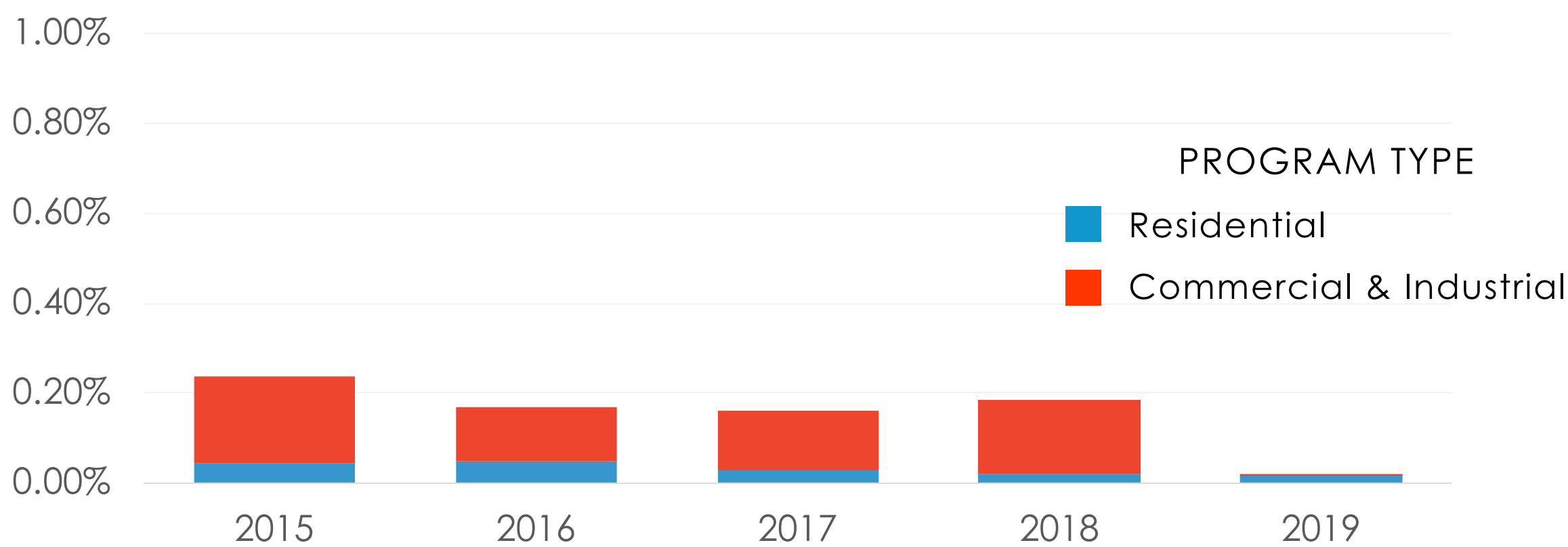
TVA COULD BECOME A LEADER FOR THE NATION

The Tennessee Valley Authority is the nation's largest public power utility. It was founded in the 1930s as part of the New Deal with a mission that included electrification and job creation.

TVA has gutted its investment in energy efficiency over the last decade. Its low-income weatherization program now requires matched funds from local utilities and residential programs are limited to educational resources that do not drive significant, long-term savings or jobs.

The Biden Administration has promised sweeping action on climate change as part of its Build Back Better proposal, including energy efficiency. As a federal utility, the administration could use TVA as a living laboratory to demonstrate the decarbonization and job-creation potential of efficiency. It could greatly expand and modernize TVA's current efficiency offerings, and then export the practices across the country to help meet the administration's climate goals. A major investment in energy efficiency could also help put people in the region back to work after the economic pains associated with the COVID-19 pandemic.

ENERGY SAVINGS AS % OF PRIOR YEAR RETAIL SALES



MEMPHIS CONSIDERS A FUTURE WITHOUT TVA

TVA requires all of the municipal and cooperative utilities it serves to source all their power generation needs exclusively from TVA. A few have challenged this arrangement in the past, but never in TVA history has a customer as large as Memphis Light, Gas, and Water (MLGW) gone so far towards breaking ties with TVA. In 2020 MLGW completed a study that showed it could get power cheaper and cleaner from sources other than TVA, which included saving 0.5% of annual retail sales from energy efficiency. That level of energy savings is 25 times higher than what the utility currently sees through TVA. If MLGW ultimately decides to follow through and break its ties with TVA, it could easily strive for even higher levels of efficiency savings for its customers.

COVID-19 SHINES A LIGHT ON EXISTING INEQUALITIES IN ACCESS TO EFFICIENCY

EVEN BEFORE THE PANDEMIC 17% OF HOUSEHOLDS ALREADY WORRIED ABOUT HOW TO KEEP THE LIGHTS ON AFTER RECEIVING A DISCONNECT NOTICE FROM THEIR UTILITY, ACCORDING TO THE ENERGY INFORMATION ADMINISTRATION.



ECONOMIC HARDSHIP MAKES ENERGY BILLS UNAFFORDABLE

In the ongoing pandemic and resulting unemployment crisis, moratoriums on utility disconnection provided vital short-term protection for customers in 2020. But with millions across the Southeast now behind on their electric bills, it is clear the severity of the problem was actually deeper and more acute than the effects of the recent economic downturn alone. It is now clearer than ever that many families have been struggling with energy affordability for years. When disconnection moratoriums ended, bills came due. Families continue to struggle with their high energy bills – but now must also bear the added cost of repaying the bills carried over from the pandemic.

The key to breaking the downward spiral caused by energy unaffordability is to combine gradual repayment plans and some degree of debt forgiveness with energy efficiency services. This will lower future energy bills and provide steady access to electricity, a basic need that promotes home safety and security.

HOW CAN PROGRAMS OPERATE SAFELY IN A PANDEMIC?

Energy efficiency programs were largely shut down in the early days of the pandemic to protect workers and customers from exposure to COVID-19. Direct install and deeper retrofit programs required additional safety planning. With new safety protocols and equipment, utilities like Duke were able to resume most in-home efficiency services after just a few months, while striving to sustain their annual efficiency savings levels. As a result, customers benefited from lower bills, workers received much-needed wages, and utilities were able to achieve savings.

COVID-19 CREATES NEW CHALLENGES AND INCREASED NEED FOR EFFICIENCY

FLEXIBILITY AND NEW PROGRAM STRATEGIES

Some examples of program delivery adaptations implemented in the Southeast include:

- Offering virtual audits in place of in-home visits
- Increasing distribution of do-it-yourself energy efficiency kits
- Deploying more LED light bulbs to make up for savings elsewhere
- Increasing customer rebates for select measures
- Shifting to midstream delivery channels for equipment replacement
- Expanding efficiency offerings through utility-run online marketplaces

MAJOR DIFFERENCES IN UTILITY EE RESPONSE TO COVID

Duke in the Carolinas was among the first utility to implement new safety protocols and resume in-home energy efficiency services. This, combined with several of the program adjustments described above, have helped the utility to get back on track to achieve its 2020 efficiency savings targets. By contrast, Georgia Power has struggled to adapt its programs, shift funding from underperforming programs, or resume in-home efficiency services. As a result, its low-income customers have been underserved, the utility will miss its 2020 savings by a large degree, and there are no plans to make up for lost savings in the future.

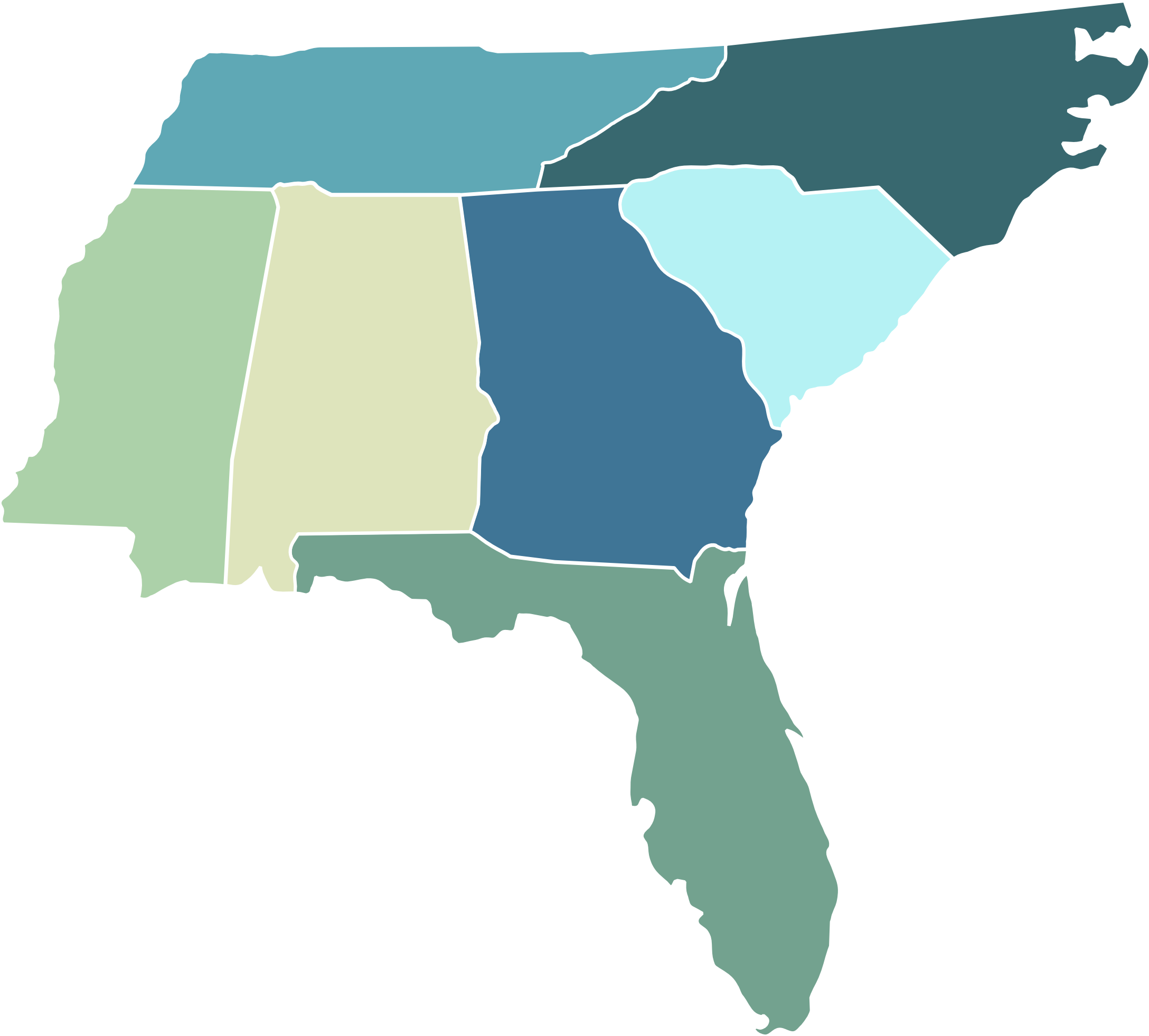
EE LEADERSHIP AS A RESPONSE TO COVID: CASE STUDY FROM OUTSIDE THE REGION

Leadership on how to use energy efficiency as an effective response to COVID-19 can be found outside the Southeast region. In Arizona, with input from a wide range of stakeholders and a request from the state's largest utility, Arizona commissioners approved an energy efficiency plan with adjustments related to the pandemic. These included substantially increased incentives for efficient residential and non-residential heating and cooling replacements, increasing per home spending for low-income households from \$6,000 to \$9,000, and increased flexibility to shift unused funds to higher performing programs.



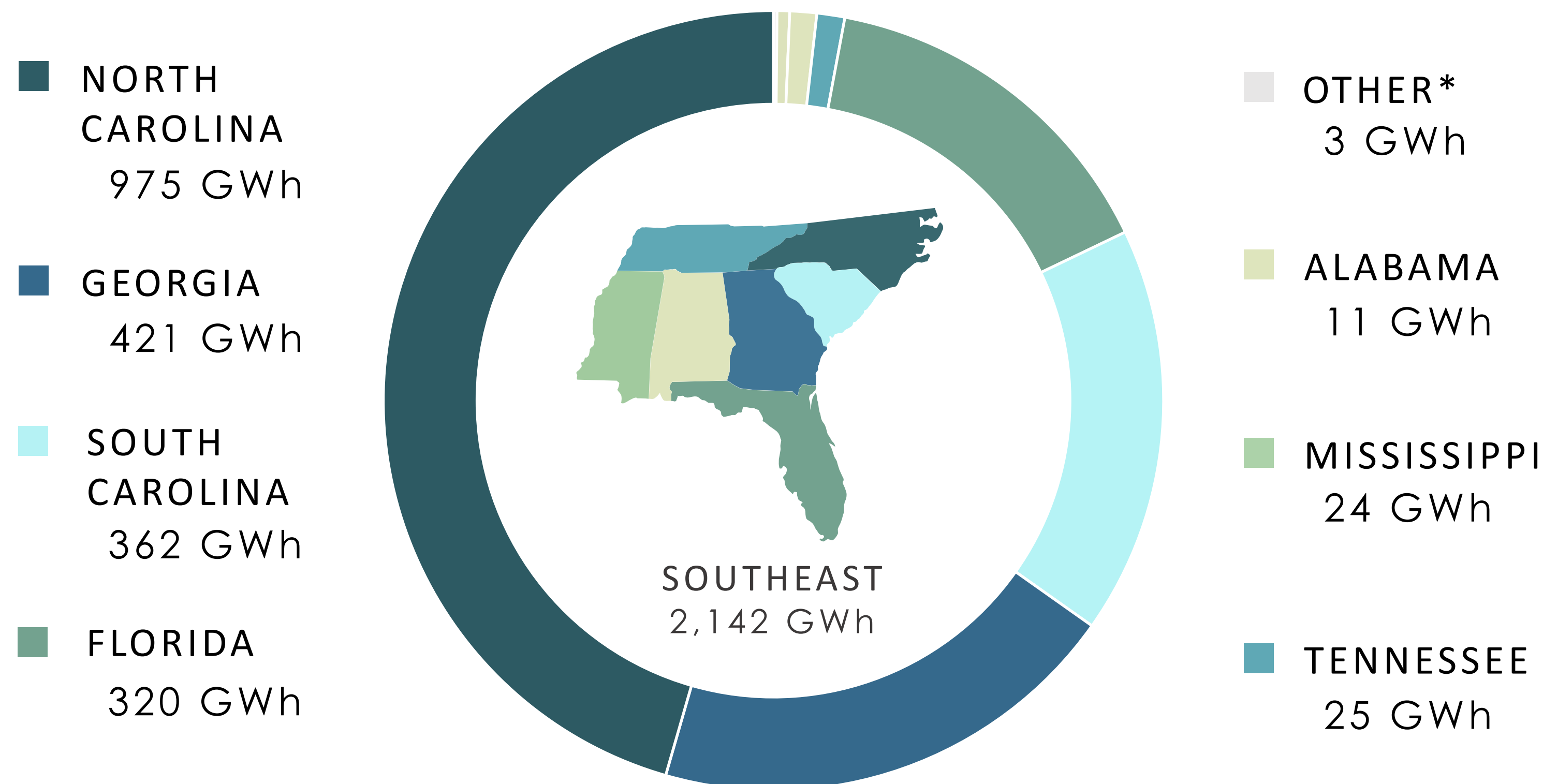
STATE PROFILES

ALABAMA
FLORIDA
GEORGIA
MISSISSIPPI
NORTH CAROLINA
SOUTH CAROLINA



For information on Tennessee, please refer to the page on the Tennessee Valley Authority, which provides electricity to most of the state.

SOUTHEASTERN STATES EFFICIENCY SAVINGS BREAKDOWN



- North Carolina accounts for 45% of the region's total GWh savings and just 17% of the total population. Duke Energy and Southern Company accounted for nearly 80% of regional savings, especially in the Carolinas and Georgia.
- At 21.5 million people, Florida has more than one third of the region's total population, but captures less total efficiency savings than South Carolina, which is one quarter the size. Florida Power & Light was the most responsible for holding the state back.
- TVA's decision to scrap nearly all of its residential incentive programs resulted in single year drops from 48 GWh in 2018 to 11 GWh in 2019 for Alabama and from 174 GWh in 2018 to 25 GWh in 2019 for Tennessee, a decline of 86%.

ALABAMA

A GLIMMER OF HOPE, OR JUST A MIRAGE?

THE SOUTH’S WORST PERFORMANCE

For nearly a decade, Alabama has ranked worst in the region for energy efficiency performance, which has consistently kept it in the nation’s top five for highest electric usage and household monthly electric bills. Alabama also has one of the highest poverty rates in the country. Without significant efficiency policy reform, high energy bills, and the energy savings gap between Alabama customers and the rest of the region, will only continue to worsen.

THE POTENTIAL OF 200 MEGAWATTS OF DSM

Alabama Power recently received approval to acquire 2,400 MW of fossil gas powered generation. The request also sought authorization to pursue 200 MW of demand-side management and distributed energy resources. Alabama Power currently offers almost no customer incentives for efficiency upgrades. So while this approval could open a window to expand Alabama Power’s offerings to include the kinds of effective efficiency programs that are common throughout the country, it appears likely that the company will instead increase its interruptible load programs...or do nothing at all.

ENERGY SAVED AS A % OF ANNUAL SALES

UTILITY	2019
SOUTHEAST AVERAGE	0.26 %
POWERSOUTH	0.04 %
ALABAMA AVERAGE	0.01 %
ALABAMA POWER	0.01 %
TENNESSEE VALLEY AUTHORITY	0.01 %

ALMOST NOTHING PASSES THE RIM TEST

Even if Alabama Power does pursue expanded energy efficiency programs, the Commission and utility continue to rely on the Ratepayer Impact Measure (RIM) test to determine what energy efficiency programs are cost effective. Neighboring Florida has shown this test eliminates nearly all efficiency measures. Why? Because the RIM test treats energy savings as a cost, rather than a benefit – since the utility takes in less revenue when customers reduce energy waste.

FLORIDA

A LONG TIME COMING: EFFICIENCY RULE REFORM

IS FLORIDA READY FOR 21ST CENTURY EFFICIENCY?

A lot can change in 27 years. The last time the Florida Commission modified rules for the Florida Energy Efficiency Conservation Act (FEECA), most people hadn't even heard of the internet. Now that the rules are being revised, the question is: will the PSC modernize its badly outdated measure screening practices to be more in line with the rest of the country? Or merely tweak the margins with its procedural timeline?

EFFICIENCY'S IMPACT ON BILLS AND RATES

Despite utility claims during the 2019 FEECA goal setting proceeding that efficiency measures with low RIM test scores would lead to higher rates, the Commission rightly noted that costs under the new higher savings plans would in fact go down for nearly all customers, and that changes would be negligible for the rest. This is reason enough to justify increased utility investment in energy efficiency measures.

WHY FLORIDA IS SUCH AN OUTLIER

Florida is one of the lowest performing states for utility efficiency, and the only one that regularly eliminates the most cost-effective and impactful efficiency measures before setting savings targets. This is because Florida is the only state primarily relying on screening energy efficiency programs with the Ratepayer Impact Measure (RIM) test, a test which favors utility profits over customer bill savings. Florida is also the only state to automatically remove efficiency measures that pay back in two years or less, based on assumptions about customer behavior that have no supporting evidence. Illustrating just how ridiculous these practices are, last year most Florida utilities used them to argue for efficiency goals of zero. The Commission rejected the proposals and in 2021 will reform its FEECA efficiency rules.

FLORIDA ENERGY EFFICIENCY AND CONSERVATION ACT (FEECA) THROUGH THE YEARS

1980 Florida legislature enacts FEECA.	1991/93 The last time FPSC modified its FEECA rules.	2008 Legislature amends FEECA law to emphasize pursuit of all cost-effective efficiency.	2009 Despite new law, FPSC takes no action to amend its FEECA rules, but substantially increases utility efficiency targets.	2014 Utilities and FPSC slash FEECA savings targets by 87%.	2019 Utilities propose reducing efficiency savings even further (a 99.5% reduction from 2009 levels) with some proposing goals of zero.	2019/20 FPSC rejects their proposal and calls for rule reform.	2021 Rulemaking underway.
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FLORIDA

THE UTILITY DIVIDE

SOME UTILITIES STRIVE, OTHERS SLIDE

Tampa Electric, Jacksonville, and Orlando each delivered efficiency savings above the regional average in 2019, while Duke Energy Florida was below average. But FPL and Gulf Power, both owned by NextEra, scraped the bottom of the barrel. Because these two NextEra utilities serve over half the state, their poor performance effectively dragged the overall state average down to a truly disappointing 0.12% annual savings – less than one fifth of the national average.

ENERGY SAVED AS A % OF ANNUAL SALES

UTILITY	EFFICIENCY AS % OF PRIOR YEAR SALES
TAMPA ELECTRIC	0.44 %
JACKSONVILLE ELECTRIC	0.40 %
ORLANDO UTILITIES COMMISSION	0.35 %
SOUTHEAST AVERAGE	0.26 %
DUKE ENERGY FLORIDA	0.19 %
FLORIDA AVERAGE	0.12 %
FLORIDA POWER AND LIGHT	0.05 %
GULF POWER	0.04 %

THE STRANGE CASE OF OUC AND JEA

Florida’s largest municipal utilities have a strange relationship with energy efficiency.

- Orlando Utilities Commission publicly supports energy efficiency but regularly undermines it at the Public Service Commission. In front of its local board, OUC has committed to 1% annual savings, but its resource plans include just half that much.
- JEA offers fairly standard efficiency programs to its customers, but regularly pushes through dubious program plans at the Commission.

Instead of promoting sound efficiency policy, both argued for zero efficiency goals last year. With rulemaking underway, it is time for these public utilities to end the games.

LEADERSHIP AT THE LOCAL LEVEL

Many local communities like Tallahassee, Orlando, Sarasota, St. Petersburg, and South Miami Beach are committed to 100% renewable energy and/or reducing carbon emissions. Eliminating energy waste is key to achieving those goals. Depending on their actions during the efficiency rulemaking, utility companies will either be an ally or an obstacle to achieving local resilience policies.

GEORGIA

EFFICIENCY ON MY MIND

ENERGY SAVED AS A % OF ANNUAL SALES

UTILITY	EFFICIENCY AS % OF PRIOR YEAR SALES
GEORGIA POWER	0.48 %
GEORGIA AVERAGE	0.28 %
SOUTHEAST AVERAGE	0.26 %
TENNESSEE VALLEY AUTHORITY	0.14%
OGLETHORPE POWER	0.08 %
MUNICIPAL UTILITIES	0.00 %*

*efficiency savings round down to 0%

WILL CITIES BECOME EFFICIENCY LEADERS?

Savannah has added to the growing list of Georgia cities that have adopted 100% clean energy goals. Together, the population in Atlanta, Savannah, Augusta, and other municipalities represent nearly 850,000 residents. That's a lot of opportunity for energy efficiency! Meanwhile, savings at Georgia Power are somewhat stagnant, and membership cooperatives have yet to invest in energy efficiency. With a growing number of citizens living in cities with climate commitments, that also means a growing number of opportunities to advocate for new energy efficiency programs.

BILL PAY ASSISTANCE AND ENERGY EFFICIENCY

Even before the pandemic, an estimated 1% of households in the Atlanta metro area had experienced a utility disconnection due to nonpayment. Programs such as the Low Income Home Energy Assistance Program (LIHEAP), a federal bill assistance program, were intended to help avoid disconnections, but due chronic underfunding were only able to reach 16% of the eligible population in Georgia in 2019. States also generally have limitations of 25% of funds on bill-lowering measures, making it hard to address the chronic nature of high energy bills.

Until recently, *LIHEAP* was even in danger of being cut from the federal budget altogether. The Trump Administration originally set aside \$0 for the program in Fiscal Year 2020. Yet LIHEAP was later deemed as *essential* in responding to the COVID-19 national emergency, and was granted \$900 million in supplemental funding in the CARES Act, passed in March of 2020. With additional funding, Georgia may be able to reach more customers, or extend more assistance for bill-lowering measures to participating households.

MISSISSIPPI

WAIT AND SEE

FUTURE OF EFFICIENCY PLANNING STILL UNCLEAR

Entergy and Mississippi Power both claim to have done integrated resource planning (IRP) for years – albeit behind closed doors and without including efficiency resources. With the Commission enacting rules for a public IRP process in 2019, future IRPs will include energy efficiency. But will the efficiency be competitively modeled against supply resources? At their first public hearings Entergy said yes, but Mississippi Power didn’t know. For the past six years, both companies have operated limited scale quick start programs -- Mississippi EE rules define Quick Start as programs “that have been widely implemented in other jurisdictions -- but what comes next is still unclear.

EFFICIENCY LIMPS ALONG, AHEAD OF FIRST IRP

As part of interim reporting requirements for the IRP, Entergy Mississippi recently proposed increasing its spending on efficiency 16% in 2021 and indicated that it “intends to explore, implement, and test additional DSM offerings and develop a holistic, customer-centric DSM portfolio into 2021 and beyond.” Mississippi Power also acknowledged the transition out of quick start, but is proposing to increase savings in 2021 just 2% over its 2019 levels. Prior to completing their respective IRPs, it does not appear either utility is set to deliver particularly impressive savings compared to regional and national leaders.

A HEAD START FOR LOW INCOME PROGRAMS

Despite historically low overall spending and savings in Mississippi, serving low income customers with efficiency has been a priority. In 2019, 34% of Entergy Mississippi’s residential savings were delivered to income-qualified customers. While the percentage of annual savings appears to be lower for Mississippi Power, income qualified programs nevertheless accounted for more than half of its residential efficiency spending.

ENERGY SAVED AS A % OF ANNUAL SALES

UTILITY	2019
SOUTHEAST AVERAGE	0.26 %
MISSISSIPPI POWER	0.22%
ENTERGY MISSISSIPPI	0.22%
MISSISSIPPI AVERAGE	0.14%
TENNESSEE VALLEY AUTHORITY	0.01%

NORTH CAROLINA

EFFICIENCY LEADER IMPLEMENTS CARBON POLICIES

PROGRESS ON GOVERNOR’S EXECUTIVE ORDER 80

In October 2018, Governor Roy Cooper enacted Executive Order 80, aimed to reduce the state’s carbon emissions 40% from 2005 levels by 2025. A year later, the Department of Environmental Quality issued its corresponding Clean Energy Plan. There is a long history of support for clean energy across government in North Carolina, which is fortunate, because implementation of EO 80 will ultimately require action by not only the executive branch, but also by the legislature, Utilities Commission, and the utilities themselves.

ENERGY SAVED AS A % OF ANNUAL SALES

UTILITY	2019
DUKE ENERGY CAROLINAS	0.98%
DUKE ENERGY PROGRESS	0.87%
NORTH CAROLINA AVERAGE	0.66%
NC ELECTRIC COOPERATIVES	0.31 %
SOUTHEAST AVERAGE	0.26 %
NC MUNICIPAL POWER	0.03 %

SOURCES OF EMISSIONS AND TARGETED REDUCTIONS

SACE’s most recent “Decarbonization in the Southeast” report, released in August 2020, shows North Carolina’s energy-based carbon emissions are split nearly evenly between transportation and electric power, with additional emissions coming from direct fuel use in the industrial, residential, and commercial sectors. A multipronged approach will be needed to achieve sufficient emissions reductions within each sector. The electric power sector has already seen a reduction in carbon emissions since 2005 while emissions in other sectors have remained largely flat. Within the electricity sector, the most promising strategies for reducing emissions involve policies that reduce coal-fired generation and replace it with clean renewable energy and energy efficiency.

A robust stakeholder process has been a part of the implementation of EO80 to date. In 2021, the recommendations from stakeholders will go to the legislature to advise legislation to meet the EO 80 goals. Stakeholders have made clear that the transition to a clean energy future must include addressing issues of equity, to ensure a fair distribution of costs and benefits for North Carolina’s citizens.

Note: The Southeast region for SACE does not include the portion of North Carolina in the PJM territory served by Dominion Energy.

SOUTH CAROLINA

IMPLEMENTING THE ENERGY FREEDOM ACT

THE ENERGY FREEDOM ACT

Unanimous passage of the Energy Freedom Act (EFA) in 2019, driven in large part by the failed V.C. Summer nuclear project, marked a significant shift towards clean energy and utility accountability for South Carolina. The law included a new requirement that utilities fairly evaluate low, medium, and high levels of energy efficiency and demand response in future resource plans. But will utilities truly uphold the requirement for fair evaluation?

YES, THOSE ARE REAL REQUIREMENTS

Dominion Energy was the first utility to submit a full integrated resource plan to the PSC after the EFA took effect, but the utility initially took a dismissive approach to modeling higher efficiency levels. Advocates pushed back and the response from the Commission was swift and unambiguous – it rejected Dominion’s IRP in late 2020 and made clear that the EFA’s requirements will be enforced. As a result, Dominion must include analysis of annual savings of 1% or greater in its revised utility’s resource plan, to be filed in early 2021. In this first test of the new EFA rules, the new Commission broke from the past, where excessive deference saddled customers with billions of dollars for utility boondoggles.

ENERGY SAVED AS A % OF ANNUAL SALES

UTILITY	2019
DUKE ENERGY CAROLINAS	0.98 %
DUKE ENERGY PROGRESS	0.87 %
SOUTH CAROLINA AVERAGE	0.41 %
SOUTHEAST AVERAGE	0.26 %
DOMINION ENERGY	0.32 %
Santee Cooper	0.07 %

Santee Cooper: Opportunity in Potential Sale?

A big question from the 2020 South Carolina legislative session went unanswered: would the state sell its state-owned utility, Santee Cooper, to NextEra? The legislature will decide whether and how to reform Santee Cooper in 2021, and selling it to NextEra appears to still be on the table. With either option lies the opportunity to drive the utility to further invest in energy efficiency and make sure demand-side resources are accurately considered in the utility's integrated resource plan.

CONCLUSION

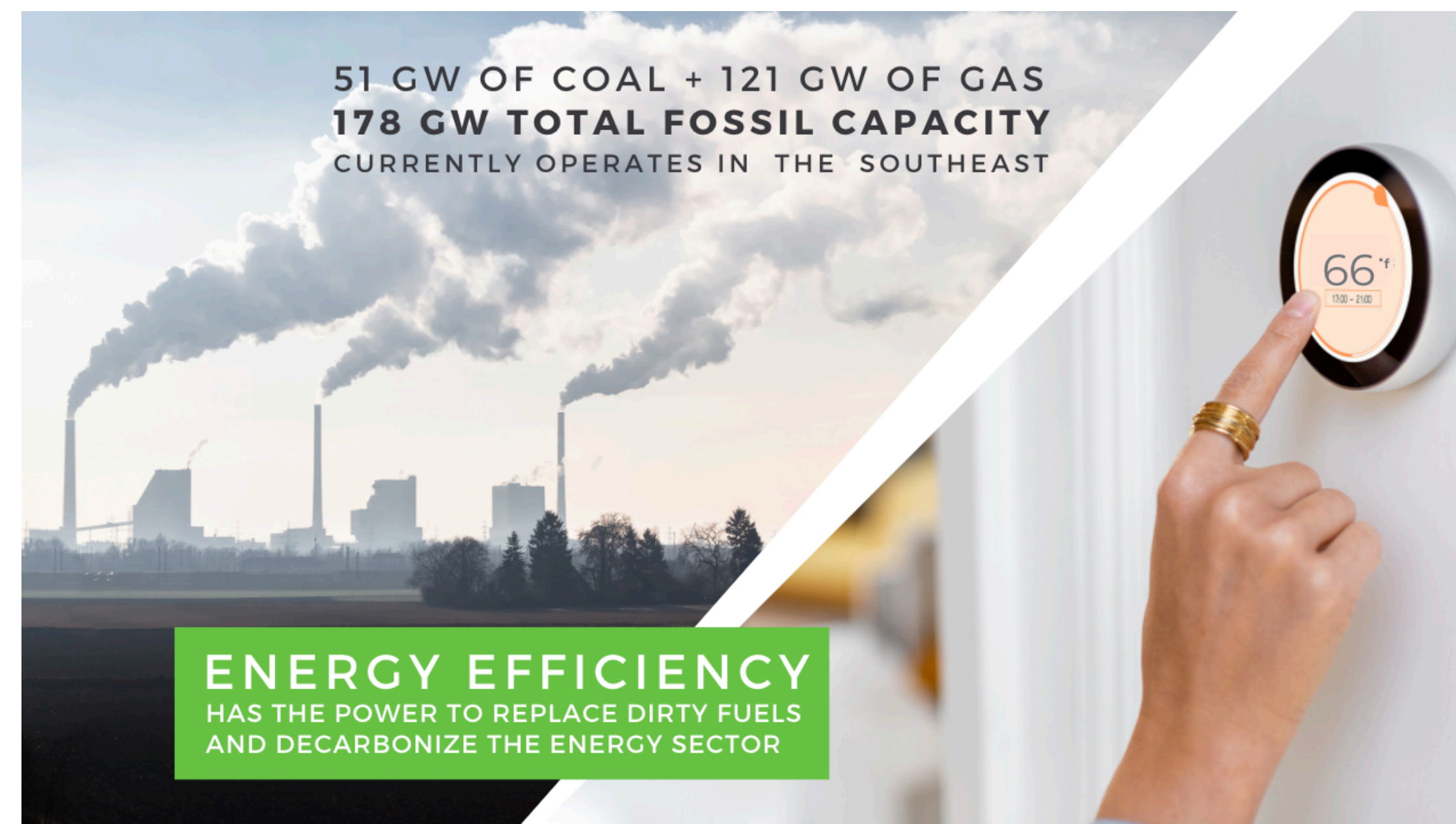
RETIRING FOSSIL FUELS FOR A CLEAN AND AFFORDABLE ENERGY FUTURE

EFFICIENCY IS THE CLEAR SOLUTION

It is no coincidence that the Southeast has among the highest electricity bills in the country, and the lowest investment in energy efficiency. This points to a clear solution: It is time that Southeastern utilities and regulators finally and fully embrace low cost energy efficiency for the sake of our people, our economy, and our planet.

CLEAN ENERGY LEADERSHIP

The new Biden Administration is prioritizing energy efficiency as a tool to reduce carbon emissions and build a stronger economy. The Southeast has historically lagged behind other regions, but examples of clean energy leadership are emerging in the region. Our nation's energy transition must include the South. With new federal investment in energy efficiency, renewable energy, battery storage, and electric vehicles there has never been a better time for our utilities, legislators, and regulators to push forward with energy efficiency. No utility is better matched for this opportunity than the nation's only federally administered utility, TVA, where innovation could usher in a new era for its customers while modeling innovation for the rest of the region and the nation.



AN INVESTMENT IN THE FUTURE

Retiring aged and dirty fossil fuel power plants is critical, but the path to a cleaner, more affordable energy future centers on renewable energy and energy efficiency. The current rush to build new fossil gas generation undermines clean energy investments and risks squandering billions of dollars customers simply cannot afford to waste.

DATA SOURCES, METHODS, AND ASSUMPTIONS

The primary metric in this report is net energy savings as a percentage of prior-year retail sales. SACE relies on two sources for historical efficiency savings, the first is annual energy efficiency reports that utilities are required to file by state regulators. In most cases, regulatory reporting requirements for investor-owned utilities allow SACE to gather detailed performance and budget data on specific programs on an annual basis.

In the absence of adequately detailed annual reports, SACE obtains energy efficiency savings data from EIA Form 861. For example, nearly all of our data for municipal and co-op utilities come from EIA-861. EIA-861 instructions state that savings are reported at the customer meter and as of 2016 specify that, “transmission and distribution or reserve requirement savings should be excluded.” However, EIA’s reporting instructions have shifted over the years, and have often lacked clarity surrounding who is responsible for reporting (utility or nonutility demand-side management administrators). As a result, we have greater confidence in the consistency and reliability of more recent data, particularly with respect to costs.

For the comparison with other regions of the country, our Southeast regional energy savings calculation is matched with EIA’s regional and national averages. Our regional energy savings calculation differs from EIA’s due to different geography and the additional data we include.

DSM/EE spending is inclusive of the total budget for each program approved or certified by a utility’s respective regulator. Our review of data specific to programs may not reflect any sub-programs or add-ons. For example, income-qualified spending reflects standalone programs only.

Annual energy efficiency savings are generally viewed from the customer (at the meter) perspective. But to understand the impact on the utility’s resources, the accumulated energy efficiency reduction to gross system demand is often viewed from the utility (at the generator) perspective. For MWh savings reported at the generator, an estimated average line loss of 7% is assumed.

Accumulated energy efficiency demand savings (MW) represents the maximum peak reduction to gross system demand. To capture the “maximum peak” and assign a nominal capacity to efficiency, SACE uses the summer demand reduction reported for programs and measures. Planning reserve margins for Southeastern utilities are historically highest in summer, and therefore best reflect how efficiency lowers peak demand in the months where reliability is at risk.

Due to the fact that some utilities report net savings reflecting technical adjustments to energy efficiency program impacts, while others do not, we apply a net to gross ratio of 80% where gross savings are reported.

APPENDIX A: SOUTHEAST UTILITY SYSTEMS

The geographic coverage of the demand side data encompasses Southeastern utilities outside of the PJM/MISO regions. The states of Alabama, Florida, Georgia, and South Carolina are fully covered. Relatively small portions of North Carolina and Tennessee are served by utilities that participate in PJM, and thus while statewide reports for these states are relatively comprehensive, they may not align exactly with other data sources. The states of Mississippi and Kentucky are only included insofar as they are part of TVA or the Southern Planning Area.

TENNESSEE VALLEY AUTHORITY

Consists of 154 distributor utilities
TN, KY, VA, AL, MS, GA, & NC

SOUTHERN PLANNING AREA

Gulf Power (FL) *
Mississippi Power
Alabama Power
Georgia Power
Oglethorpe Power (GA)
PowerSouth (AL/FL)

*Owned by NextEra but operating in the
Southern Planning Area

DUKE ENERGY PLANNING AREA

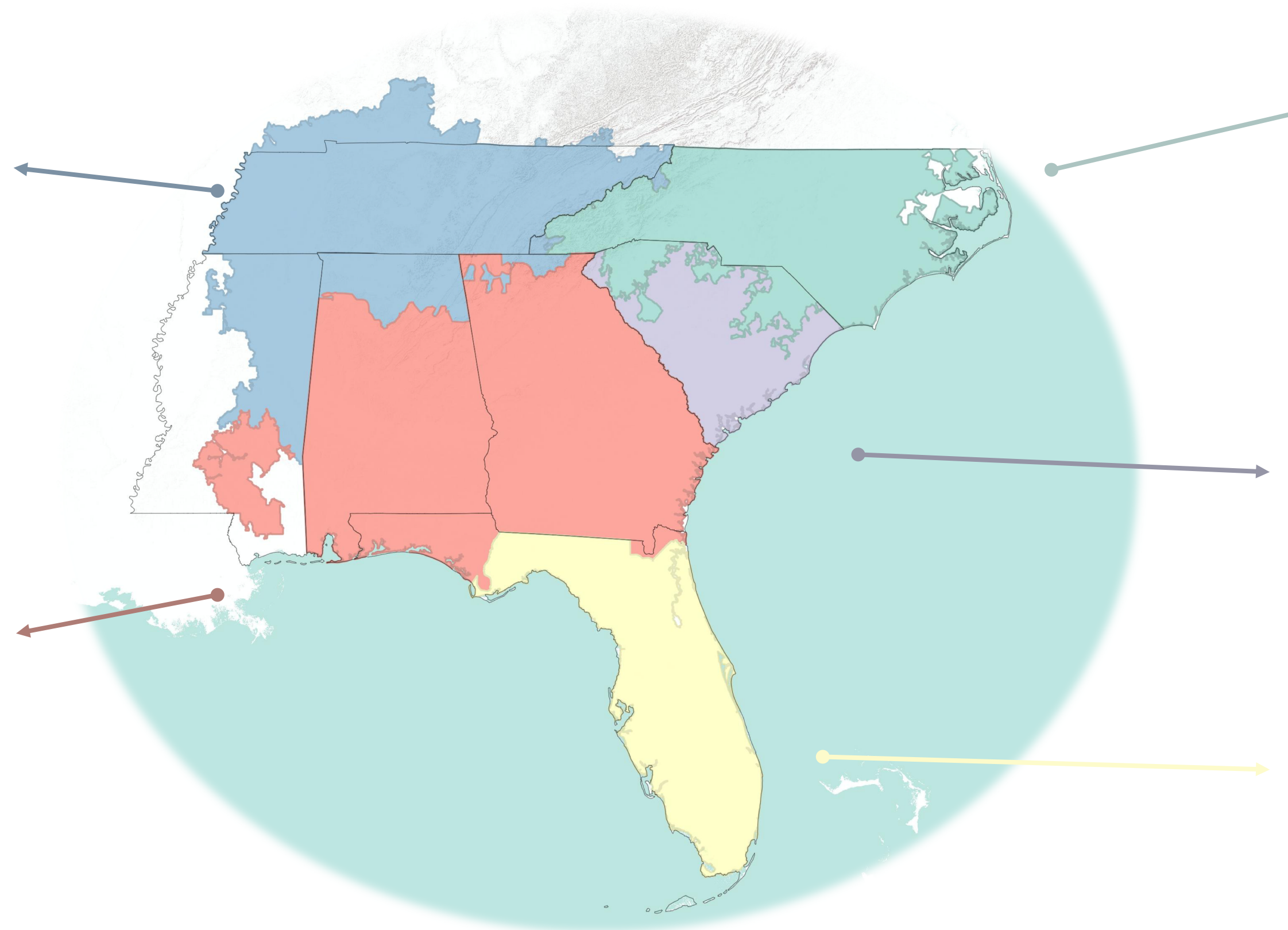
Duke Energy Carolinas
Duke Energy Progress
Municipal Utilities
Cooperative Utilities

SOUTH CAROLINA

Dominion South Carolina
Santee Cooper

FRCC

Duke Energy Florida
Tampa Electric
Florida Power & Light
Jacksonville Electric Authority
Orlando Utility Commission



[Download Appendix B: Southeast Utility Data Tables](#)

ENERGY EFFICIENCY IN THE SOUTHEAST

Annual Report, Released January 2021

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