SOUTHERN ALLIANCE FOR CLEAN ENERGY

SOLAR IN THE SOUTHEAST

SIXTH ANNUAL REPORT






cleanenergy.org Southern Alliance for Clean Energy

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SIXTH ANNUAL REPORT

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ABOUT SOUTHERN ALLIANCE FOR CLEAN ENERGY

The Southern Alliance for Clean Energy 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.

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CONTENTS

INTRODUCTION

"Solar in the Southeast" illuminates the critical role of utilities in the growing southeastern solar market. Southeastern states, particularly Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, and Tennessee, grant monopoly utilities – rather than a competitive marketplace – the responsibility and control over power supplies. Consequently, the location of a home or business is the primary determinant not only of which utility will supply the electricity but also the amount of solar within that portfolio.

To provide an equitable, unbiased comparison of various-sized utilities throughout the Southeast, SACE has ranked utilities on the basis of watts per customer (W/C) of solar power sourced to customers. SACE has also calculated a 2026 forecast for total installed capacity of solar power (in megawatts, MW), particularly for state comparisons.

The purpose of this report is to document current progress and trends at both utility and state levels, as well as identify policies and practices to drive continued solar growth in the Southeast.

EXECUTIVE SUMMARY

UTILITIES

Duke Energy Progress (DEP) remains the Southeast utility leader both for the 2022 baseline and the 2026 forecast**.**

Tampa Electric moved into the number two slot, surpassing **Dominion Energy South Carolina (DESC).**

STATES

Florida expanded its position as the Southeast region leader in total installed solar capacity, reaching 7,288 MW in 2022. The SACE forecast now shows the state exceeding 17 gigawatts (17,000 MW) by 2026.

Alabama, Tennessee, and **Mississippi** fall far short of other Southeast states in both installed capacity (MW) as well as watts per customer (W/C) solar ratio.

PROGRESS HAS RESUMED

The Southeast can now claim more than **18 gigawatts (GW) of solar (18,776 megawatts, MW)** on a full-year operational equivalent basis. That equates to an average solar ratio for 2022 of **580 watts per customer.** Despite last year's supply chain disruption, SACE is now forecasting solar in the Southeast to reach almost 40 GW for 2026.

FEDERAL AND STATE POLICY

The **Inflation Reduction Act (IRA)** was the most significant climate and clean energy policy last year – in fact, the most significant in history. The package of tax credits and other incentives will assure progress on clean energy and emission reductions for the next decade. Notable within the IRA is a new, $9.7 billion grant program called **New ERA (Empowering Rural America)** which will empower rural electric co-ops in the Southeast to achieve clean energy adoption rates comparable to investor-owned utilities.

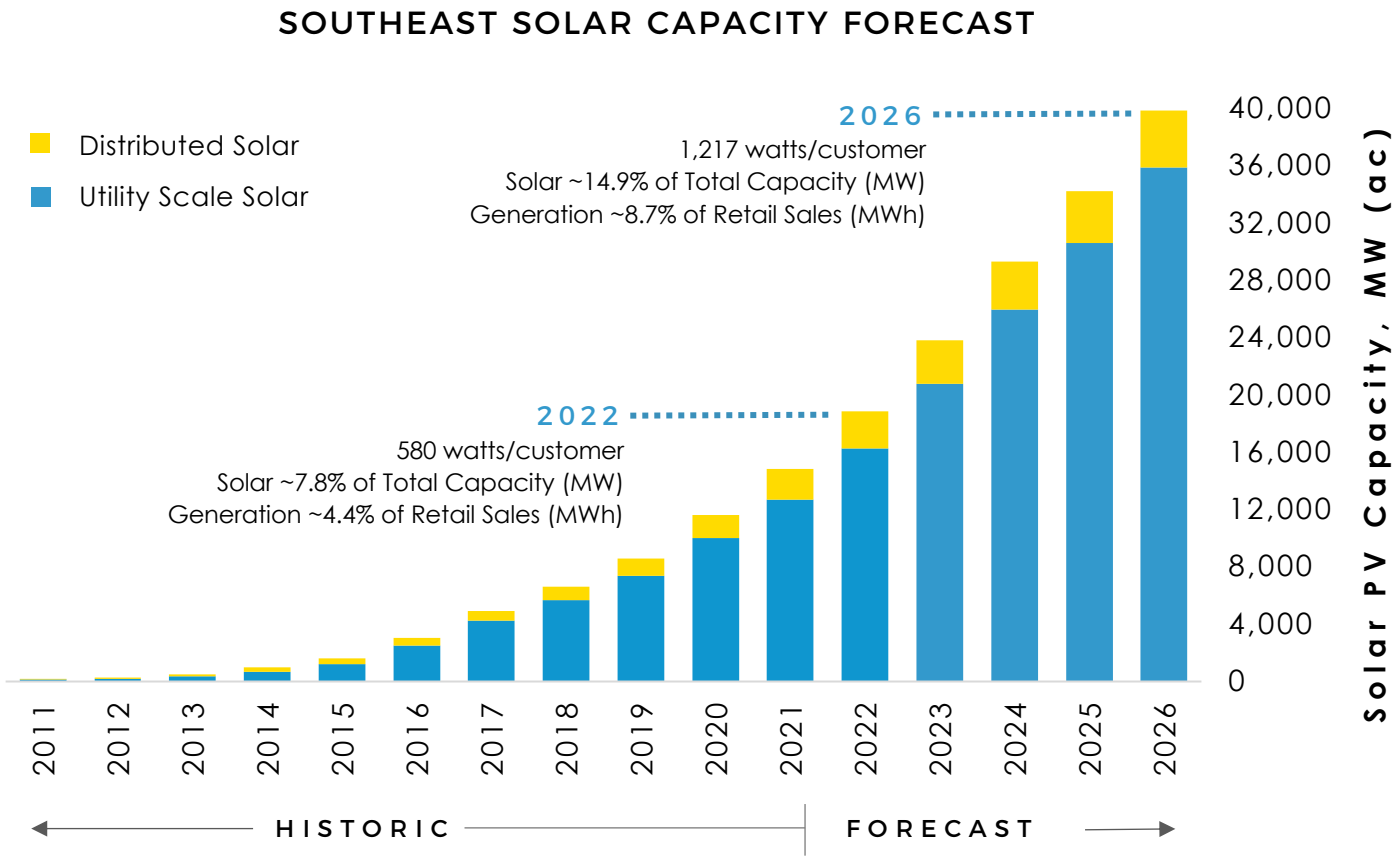
SUNRISERS

Santee Cooper made its debut on the SunRiser list, which includes the seven utilities exhibiting the highest solar ambition for the next four years. **Walton EMC** regained the top slot on this SunRiser list, and its lead over all the others is striking. Even though the **Knoxville Utilities Board (KUB)** reduced its "Green Invest" commitment from 502 MW to 325 MW, it still earned the number two slot on the SunRiser list.

SUNBLOCKERS

This year's report reflects three **SunBlockers**: utilities whose four-year forecast remains below last year's region average. Both **Alabama Power** and the **North Carolina Electric Cooperatives** are repeat offenders on this list. **PowerSouth** joins this category of laggards as a SunBlocker, as well. Current and forecast solar capacity at **Tennessee Valley** Authority and **Seminole Electric** remain considerably below the region averages, but mathematically they have shed the SunBlocker designation this year.

SOUTHEAST SOLAR CAPACITY FORECAST



SOLAR IS GROWING

The Southeast can now claim more than 18 gigawatts (GW) of solar (18,776 megawatts, MW) on a full-year operational equivalent basis. That equates to an average solar ratio for 2022 of 580 watts per customer. Expressed another way, 2022 represented an *increase* of approximately 100 watts per customer for the entire Southeast region which now exceeds 32 million retail customers.

PROGRESS HAS RESUMED

Decisive action by President Biden in June 2022 to impose a 24-month moratorium on import duties from four key countries helped the U.S. solar industry regain its footing after an extended supply chain disruption. Progress has resumed in the Southeast and the impact of those supply chain issues is hardly perceptible in the graph. In fact, after reducing the short-term forecast last year, the 2024 forecast has now *increased* from 27 GW to 29 GW – and SACE is now forecasting our seven-state Southeast region to have just shy of 40 GW for 2026.

INFLATION REDUCTION ACT

Moreover, Congress took decisive action, as well, by passing the Inflation Reduction Act (IRA) – the most significant climate legislation in U.S. history. Extending and expanding the Investment Tax Credit (ITC) and Production Tax Credit (PTC) provides necessary certainty for investment decisions. Bonus credits further support site selection and encourage procurement of domestic content. Similar tax credits for manufacturing components in the U.S.A. provide additional incentives for onshoring the supply chain. The $2.5 billion investment by Hanwha Qcells in Georgia is a direct example of this progress.

LARGE UTILITY SYSTEM RANKINGS

SYSTEMS WITH > 500,000 CUSTOMERS	2022 W/C
Duke Energy Progress	1,704
Tampa Electric	1,322
Dominion Energy SC	1,315
Georgia Power	945
Florida Power & Light	752
Duke Energy Carolinas	739
Duke Energy Florida	641
Southeast Average	**580**
Oglethorpe Power	560
Tennessee Valley Authority	260
Santee Cooper	229
NC Electric Cooperatives	133
Seminole Electric Co-Op	92
PowerSouth	92
Alabama Power	64

SYSTEMS WITH > 500,000 CUSTOMERS	2026 FORECAST W/C
Duke Energy Progress	2,431
Tampa Electric	2,110
Dominion Energy SC	1,941
Georgia Power	1,915
Florida Power & Light	1,772
Duke Energy Florida	1,466
Santee Cooper	1,327
Southeast Average	**1,217**
Duke Energy Carolinas	1,192
Oglethorpe Power	995
Tennessee Valley Authority	658
Seminole Electric Co-Op	600
Alabama Power	331
NC Electric Cooperatives	197
PowerSouth	169

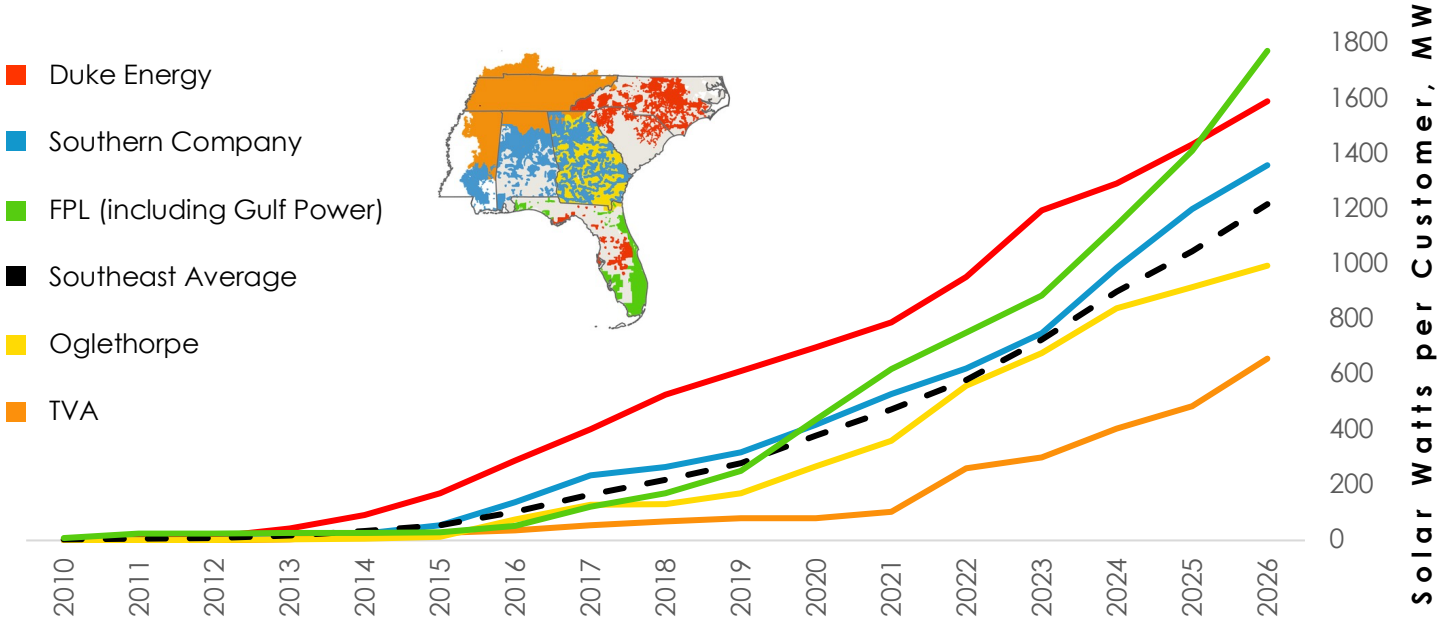
The 14 largest utility systems in the Southeast each serve more than 500,000 customers. This includes individual investor-owned utilities like Georgia Power, as well as the combination of utilities organized into cooperatives like Oglethorpe and the federally-owned Tennessee Valley Authority. Also studied, but not exceeding the 500,000-customer benchmark, are several regional municipal power agencies.

Duke Energy Progress (DEP) remains the Southeast utility leader both for the 2022 baseline and the 2026 forecast. These are based on watts per customer, our primary metric. Tampa Electric moved into the number two slot, surpassing Dominion Energy South Carolina. The top five utilities are projected to retain their same relative rankings in our four-year forecast for 2026. Tampa Electric has surpassed DESC for the number two slot on that leaderboard, as well.

The Southeast average will more than double over the next four years, from 580 W/C in 2022 to 1,217 W/C in 2026. Even with the North Carolina Carbon Plan, Duke Energy Carolinas is not keeping pace with the other Duke Energy subsidiaries in the Southeast and forecasts below the region average for 2026. The current forecast now anticipates Santee Cooper being above the Southeast region average in 2026. Santee Cooper has even earned leadership distinction as a SunRiser this year.

This year's report reflects three SunBlockers: utilities whose four-year forecast remains below last year's region average. Both Alabama Power and the North Carolina Electric Cooperatives are repeat offenders on this list. The number of retail customers served by PowerSouth now exceeds the 500,000 thresholds for this large utility system ranking – and consequently, PowerSouth joins the ranks as a SunBlocker, as well.

FORECAST FOR SELECT UTILITY SYSTEMS



These five utility systems serve more than 73% of retail customers in the Southeast.

DUKE ENERGY STILL LEADS THE SOUTHEAST

Duke Energy currently exhibits the highest solar W/C ratio of the major utility systems in the Southeast. DEP and DEC filed updates to their Integrated Resource Plans (IRP) in 2022. Perhaps in anticipation of the North Carolina Carbon Plan at the end of that year, both utilities increased their long-term solar forecasts.

FLORIDA POWER & LIGHT SOLIDLY NUMBER TWO

Florida Power & Light currently exhibits the second–highest W/C ratio. SACE had projected FPL to surpass Duke by 2025; we now anticipate that by 2026. The FPL "Real Zero" ™ program has a more substantial impact on its long-term forecast than the short-term focus of this report.

SOUTHERN COMPANY RESUMES PROGRESS

In addition to resuming progress on projects that had been delayed due to the supply chain disruption, the Georgia Power 2022 Integrated Resource Plan (IRP) was approved with 200 MW of distributed-generation solar by 2025 and 2,100 MW of utility-scale renewable resources – presumed to be primarily solar – from 2026-2029. Also noteworthy are solar projects Alabama Power is doing for Mercedes-Benz (160 MW) and for Novelis (160 MW).

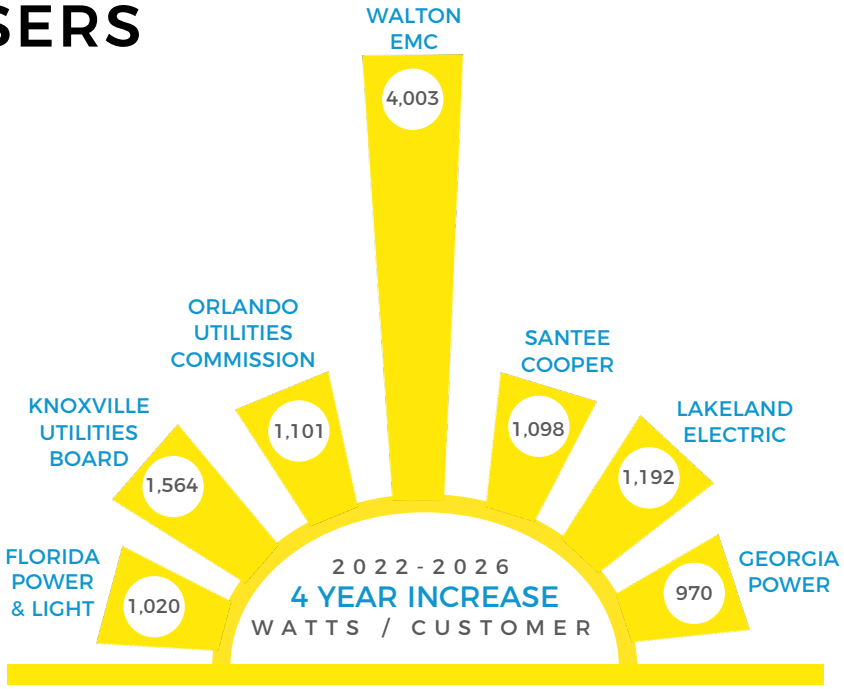
OGLETHORPE / GREEN POWER EMC

Facebook (now Meta) initially energized solar projects with Walton EMC, a perpetual SunRiser, which still represents about half of the total solar deployment within the Oglethorpe Power system and its Green Power EMC affiliate.

TENNESSEE VALLEY AUTHORITY STILL LAGS

TVA solar ambition obviously falls well below its peer utility systems. 37 Local Power Companies (LPCs) are planning 42 projects under the Generation Flexibility program. An upcoming Integrated Resource Plan (IRP) represents an opportunity for the nation's largest public power entity to exhibit higher solar ambition.

SOUTHEAST SOLAR MOMENTUM: SUNRISERS



- **SunRisers** are the seven utilities exhibiting the highest solar ambition – measured by the increase in watts *per customer* solar ratio between the base year (2022) and the four-year forecast (2026).
- **Walton EMC** regained the top slot on this SunRiser list. Its 3,848 W/C in 2022 is already the highest solar ratio of traditional utilities in the Southeast, and the forecast for 7,851 W/C in 2026 positions it well above the rest.
- The **Knoxville Utilities Board (KUB)** reduced its "Green Invest" commitment from 502 MW to 325 MW, yet that still earned KUB the number two slot on the SunRiser list.
- **Santee Cooper** makes its debut as a SunRiser. This includes both solar in Santee Cooper's own plan but also the solar that Central Electric Cooperative has commissioned directly.

SOUTHEAST SOLAR SUNRISERS

UTILITY	2022 WATTS PER CUSTOMER	2026 PROJECTED WATTS PER CUSTOMER
Walton EMC	3,848	7,851
Knoxville Utilities Board	386	1,950
Lakeland Electric	208	1,400
Santee Cooper	229	1,327
Orlando Utilities Commission	662	1,763
Florida Power & Light	752	1,772
Georgia Power	945	1,915

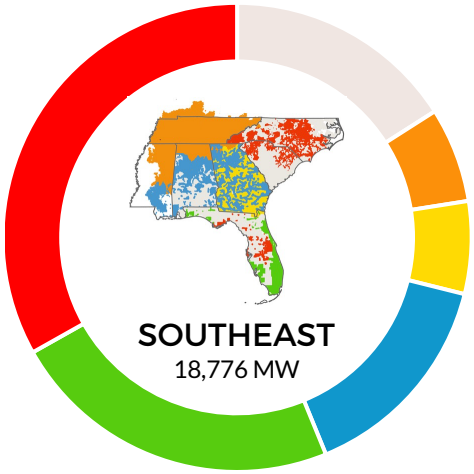
Minimum 10,000 customers.

2022 SOUTHEAST SOLAR SNAPSHOT BY UTILITY

DUKE ENERGY
6,225 MW

FPL (INCLUDING GULF POWER)
4,324 MW

SOUTHERN COMPANY
2,802 MW



OTHER UTILITIES
2,997 MW

TVA
1,229 MW | *TVA also has 135 MW in Kentucky*

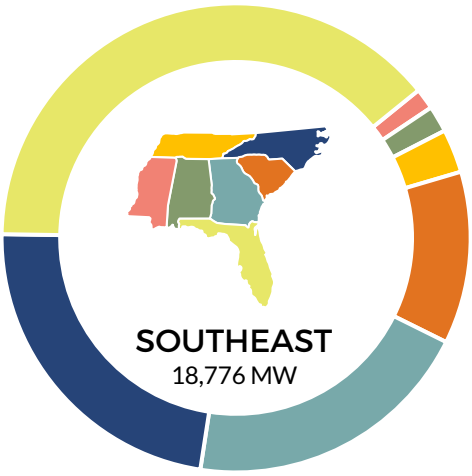
OGLETHORPE POWER
1,199 MW

2022 SOUTHEAST SOLAR SNAPSHOT BY STATE

FLORIDA
7,288 MW

NORTH CAROLINA
4,273 MW

GEORGIA
3,769 MW



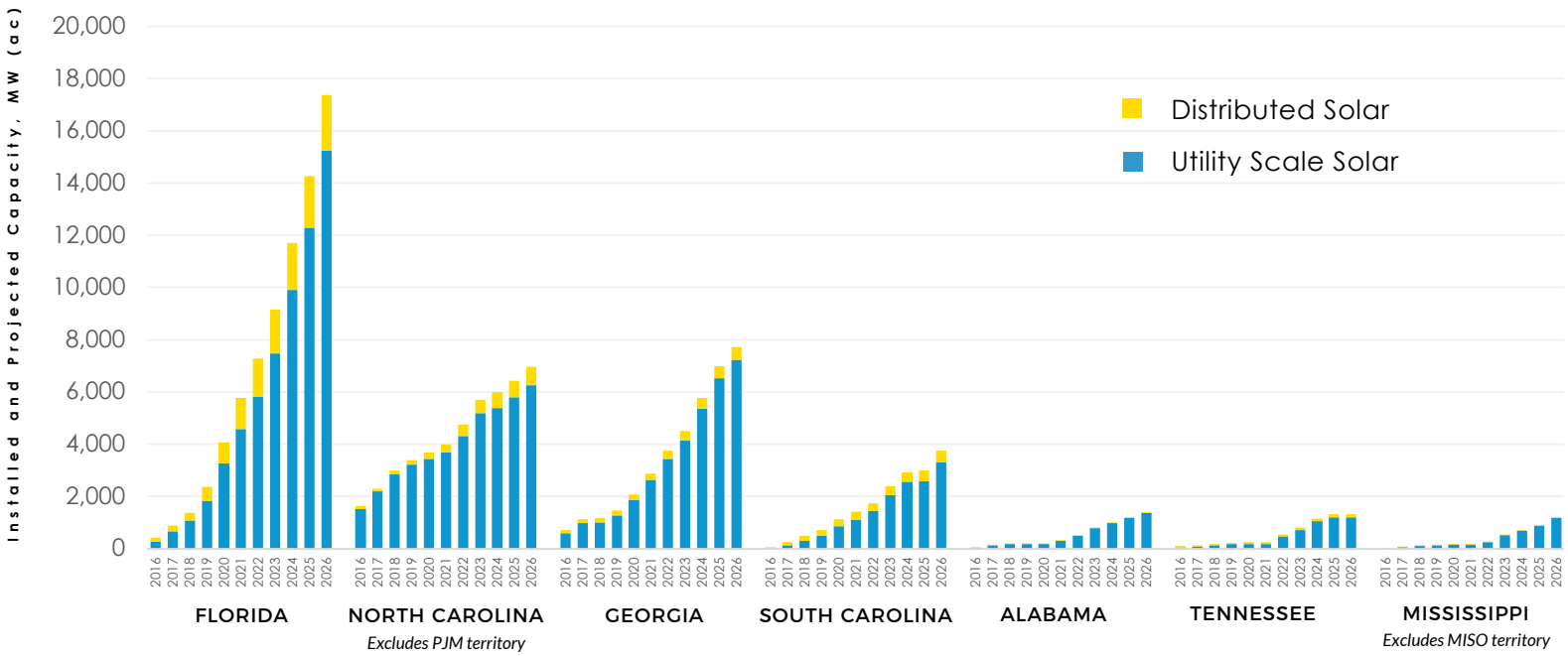
MISSISSIPPI
277 MW

ALABAMA
348 MW

TENNESSEE
595 MW

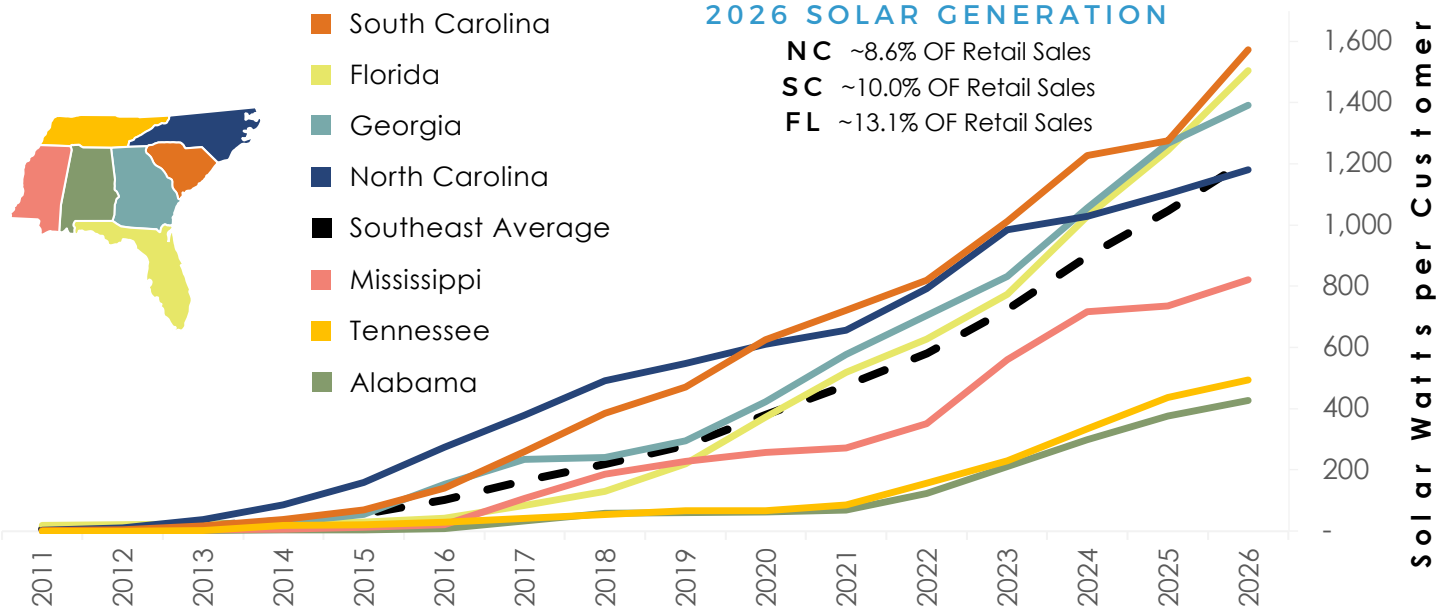
SOUTH CAROLINA
2,226 MW

SOUTHEAST STATES SOLAR FORECAST



- Florida expanded its position as the Southeast region leader in total installed solar capacity (MW) – reaching 7,288 MW in 2022. The SACE forecast now shows the state exceeding 17 gigawatts or 17,000 MW, by 2026.
- North Carolina currently remains second in the Southeast in installed solar capacity (MW). This chart reflects states where the solar is installed; other charts and tables in this report reflect where the load is served. For example, approximately 10% of North Carolina solar serves load in South Carolina. Of 4,760 MW physically in the Tarheel State, approximately 488 MW serves load in the Palmetto State.
- This updated forecast still indicates Georgia will surpass North Carolina in total installed solar by 2025, and on watts per customer solar ratio a year in 2024. *Page 11.*
- Alabama, Tennessee, and Mississippi continue to fall far short of other Southeast states in both installed capacity MW as well as watts per customer (W/C) solar ratio.

POLICIES BEHIND THE PERFORMANCE



- The Inflation Reduction Act (IRA) was the most significant climate and clean energy policy last year – in fact, the most significant in history. The package of tax credits and other incentives will assure progress on clean energy and emission reductions for the next decade.
- Implementation for many of those programs is just ramping up. For example, a $9.7 billion grant program called New ERA (Empowering Rural America) will empower rural electric co-ops in the Southeast to achieve clean energy adoption rates comparable to investor-owned utilities.

SOUTHEAST STATE SOLAR PERFORMANCE

STATE	2022 WATTS PER CUSTOMER	2026 PROJECTED WATTS PER CUSTOMER
South Carolina	820	1,573
Florida	626	1,511
Georgia	704	1,393
Southeast Average	**580**	**1,217**
North Carolina	793	1,181
Mississippi	357	878
Tennessee	165	473
Alabama	127	452

This analysis excludes the portion of Kentucky served by TVA. Similarly, the PJM portion of North Carolina is excluded as is the MISO portion of Mississippi.

STATE PROFILES

ALABAMA: SIGNS OF PROGRESS?

ALABAMA SOLAR WATTS PER CUSTOMER

UTILITY	2022	2026
Southeast Average	580	1,217
TVA	231	771
Alabama Average	127	452
Alabama Power	64	331
PowerSouth	108	207

- In the first six years after the Public Service Commission (PSC) approved 500 MW of solar, Alabama Power had only commissioned 90 MW. After extending the deadline, the PSC has since approved 80 MW in 2021 for Wells Fargo and Southwire, 160 MW in 2022 for Mercedes-Benz, and 160 MW in 2023 for Novelis. Those projects are in various stages of fulfillment.

- Alabama Power remains a SunBlocker. The projects referenced above are included in the 2026 forecast. That still leaves Alabama Power's 2026 solar ratio (331 W/C) below the region average from 2022 (580 W/C).

- In May of 2023, Alabama Power petitioned the PSC for modifications to its Renewable Generation Certificate which will allow up to 400 MW per year for six years. A *decision on this matter is still pending at the time of this report.*

- Huntsville Utilities announced a 30 MW project for Toyota to be online in 2024. This project utilizes the self-generation "flexibility" TVA has afforded to Huntsville Utilities.

- The 200 MW North Alabama Solar Project for TVA itself is estimated for operation in 2026.

- The 100 MW Blackbear 1 solar project for Alabama Municipal Electric Authority (AMEA) became operational in January 2023.

- Distributed or rooftop solar continues to lag in Alabama.

	UTILITY-SCALE SOLAR, MW		DISTRIBUTED SOLAR, MW	
UTILITY	2022	2026	2022	2026
TVA	143	510	11	17
Alabama Power	97	497	7	11
PowerSouth	40	80	0	1

FLORIDA: STILL SHINING

FLORIDA SOLAR WATTS PER CUSTOMER

UTILITY	2022	2026
Tampa Electric	1,322	2,110
Florida Power & Light	752	1,772
Orlando (OUC)	662	1,763
Florida Average	626	1,511
Duke Energy Florida	641	1,466
Lakeland	208	1,400
Southeast Average	580	1,217
Gainesville (GRU)	278	1,106
Jacksonville (JEA)	125	745
Tallahassee	585	610
Seminole	92	600
PowerSouth	89	139

- Florida expanded its position as the Southeast region leader in total installed solar capacity (MW) – reaching 7,288 MW in 2022. The SACE forecast now shows the state exceeding 17,000 MW by 2026. In other words, four years from now, Florida will have almost as much installed solar capacity as the entire Southeast region had in 2022.
- Lakeland Electric, Orlando Utilities Commission (OUC), and Florida Power & Light (FPL) each remain on the coveted SunRiser list.
- Tampa Electric again tops the Florida utilities on solar ratio (W/C).
- Seminole Electric has emerged from the SunBlocker list. Its forecast for 600 W/C in 2026 is slightly above last year's region average (580 W/C).
- Gulf Power is now fully integrated into Florida Power & Light (FPL).
- Florida Power & Light retired the 75 MW solar thermal unit at plant Martin in early 2023.

	UTILITY-SCALE SOLAR, MW		DISTRIBUTED SOLAR, MW	
UTILITY	2022	2026	2022	2026
Florida Power & Light	3,810	9,737	410	663
Duke Energy Florida	740	2,091	524	823
Tampa Electric	904	1,486	143	229
Orlando (OUC)	123	422	55	94
Seminole	2	381	70	115
Jacksonville (JEA)	35	334	26	42
Lakeland	15	180	14	20
Tallahassee	62	62	13	19
Gainesville (GRU)	3	86	27	31
PowerSouth	0	0	11	18

GEORGIA: A SOLAR PARADOX

GEORGIA SOLAR WATTS PER CUSTOMER

UTILITY	2022	2026
Georgia Power	945	1,915
Georgia Average	704	1,393
Southeast Average	580	1,217
Oglethorpe	560	995
MEAG	36	271
TVA	133	261

- Utility-scale solar continues to advance in Georgia. Projects that were halted by last year's supply chain disruption have resumed.
- Georgia is projected to surpass North Carolina in total installed solar (MW) by 2025. *Page 10.*
- Walton EMC and Georgia Power both remain on the SunRiser list. *Page 9.*
- The final order in the Georgia Power Integrated Resource Plan (IRP) includes 2.3 gigawatts (GW) or 2,300 MW of solar.
- However, the Georgia Public Service Commission (PSC) failed to reinstate "monthly netting" – a form of net metering – during both the IRP and subsequent rate case last year.
    - The PSC instead imposed a temporary increase in compensation of 4 cents per kWh above Georgia Power's wholesale avoided cost.
    - Consequently, rooftop solar will remain a very small element of distributed solar in Georgia and the market will continue to struggle.

	UTILITY-SCALE SOLAR, MW		DISTRIBUTED SOLAR, MW	
UTILITY	2022	2026	2022	2026
Georgia Power	2,314	4,837	222	347
Oglethorpe	1,133	2,316	66	112
MEAG	0	80	6	10
TVA	13	30	8	13

MISSISSIPPI: SOLAR RESOURCE FOR *OTHER* STATES

MISSISSIPPI SOLAR WATTS PER CUSTOMER

UTILITY	2022	2026
Mississippi Power	844	1,702
Southeast Average	580	1,217
Mississippi Average	357	878
TVA	243	765

- 2022 was a pivotal year for solar in Mississippi. Prior to that, the state had been a net importer of solar energy. Solar from elsewhere in the TVA region was serving load in Mississippi. But now, the reverse is true. TVA solar installed in Mississippi is proportionally serving load outside the state.

- Mississippi Power lost its slot on the SunRiser list (*page 8*). The 858 W/C increase (from 844 W/C in 2022 to 1,702 W/C in 2026) fell just shy of earning that designation in this year's report.

- The Mississippi Public Service Commission (PSC) updated its prior program for self-generation. That is now known as Mississippi Distributed Generation Rule (MDGR) and contains specific provisions to make solar affordable for lower–income households.

    - Utilities will continue to pay avoided cost plus 2.5 cents per kWh for energy delivered to the grid by customer-generators.

    - A Low-to-Moderate Income (LMI) Benefits Adder of 2 cents per kWh will apply for customers up to 225% of the Federal poverty level.

    - Those LMI customers can also take advantage of a $3,000 "Energy Independence Incentive" to help defray the initial cost of a solar installation.

    - A $2,000 incentive is available to non-LMI customers who install battery storage with their solar system.

    - A new Solar for Schools program will pay avoided cost plus 4.5 cents per kWh.

	UTILITY-SCALE SOLAR, MW		DISTRIBUTED SOLAR, MW	
UTILITY	2022	2026	2022	2026
Mississippi Power	159	318	6	9
TVA	104	314	4	7

NORTH CAROLINA: NEXT RESOURCE PLANS TO REFLECT CARBON PLAN

NORTH CAROLINA SOLAR WATTS PER CUSTOMER

UTILITY	2022	2026
Duke Energy Progress	1,646	2,348
Southeast Average	580	1,217
NC Average	793	1,181
Duke Energy Carolinas	714	1,151
TVA	486	743
NC Eastern Municipal	308	325
NC Electric Co-ops	133	197
NC Municipal Power	15	23

- North Carolina has the second-most solar in the Southeast.
- The initial Carbon Plan adopted by the North Carolina Utilities Commission (NCUC) at the end of 2022 raises solar ambition for the state in 2030 and 2035, but Duke's prior Integrated Resource Plans (IRP) reflect more solar in the near-term through 2026.
- Duke Energy Progress (DEP) has been atop the leaderboard for both current and future forecasts since the inception of this annual Solar in the Southeast report, six years ago.
- The NC Electric Cooperatives should take advantage of New ERA (Empowering Rural America) funding to adopt more solar. *See page 11.* Until then, the SunBlocker designation applies.
- The NCUC has recently approved a Solar Choice Metering program that represents the next evolution of solar net metering that will start October 1, 2023. The key feature will be a time-of-use design that nets a solar customer's generation and consumption within those time-of-use periods.
- Disappointingly, the companion Smart$aver Solar Incentives were denied, but the NCUC did order a comparable pilot program that is currently under development.

	UTILITY-SCALE SOLAR, MW		DISTRIBUTED SOLAR, MW	
UTILITY	2022	2026	2022	2026
Duke Energy Progress	2,288	3,263	156	245
Duke Energy Carolinas	1,364	2,226	224	352
NC Electric Co-ops	118	173	37	59
NC Eastern Municipal	72	75	4	6
TVA	3	4	20	33
NC Municipal Power	0	0	2	3

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

SOUTH CAROLINA: HOME TO THE NEWEST SUNRISER

SOUTH CAROLINA SOLAR WATTS PER CUSTOMER

UTILITY	2022	2026
Duke Energy Progress	2,201	3,135
Dominion Energy SC	1,315	1,941
SC Average	820	1,573
Santee Cooper	229	1,327
Duke Energy Carolinas	823	1,328
Southeast Average	580	1,217

- Santee Cooper is reflected as a SunRiser for the first time. *See page 8*. This includes both solar in Santee Cooper's own plan and also the solar that Central Electric Cooperative has commissioned directly.
- The New ERA (Empowering Rural America) funding may help sustain that newfound ambition for the rural co-ops in the state.
- Our primary metric, watts per customer solar ratio, continues to rank South Carolina as the top state in the Southeast. *See page 11*.
- SACE apportions utility-scale solar generation to loads served across multi-state utility service territories. Approximately 488 MW of solar serving load in South Carolina is physically installed in North Carolina.
- Solar Choice metering, the time-of-use netting recently approved in North Carolina, is already offered in South Carolina. A companion demand-response incentive is still necessary to further sustain distributed solar growth in the Palmetto State.

	UTILITY-SCALE SOLAR, MW		DISTRIBUTED SOLAR, MW	
UTILITY	2022	2026	2022	2026
Dominion Energy SC	893	1,285	154	236
Santee Cooper	191	1,280	43	69
Duke Energy Carolinas	479	782	67	105
Duke Energy Progress	364	519	18	29

TENNESSEE: IRA AND IRP OPPORTUNITIES

TENNESSEE SOLAR WATTS PER CUSTOMER

UTILITY	2022	2026
Knoxville Utilities Board	386	1,950
Southeast Average	580	1,217
Nashville (NES)	231	731
Memphis (MLGW)	253	569
Chattanooga (EPB)	244	548
TN (TVA) Average	165	473
Middle Tennessee EMC	211	472
Volunteer Electric Co-op	168	372

- The TVA Board has returned to full capacity as a new cohort of six nominees received Senate confirmation in late December 2022 and officially joined the TVA Board on January 4, 2023. This new Board should bring TVA into better alignment with the Biden Administration's priorities and goal of decarbonizing the power sector by 2035.
- The Inflation Reduction Act (IRA) contains multiple opportunities for the Tennessee Valley. Notable among those are the "direct pay" option which makes the solar Investment Tax Credit (ITC) and Production Tax Credit (PTC) available to non-profit utilities, and the New ERA (Empowering Rural America) funding through the Rural Utility Service that can help co-fund the transition to clean energy for cooperative utilities in the region.
- Preparations are beginning for the next TVA IRP. This is another tremendous opportunity for TVA to exhibit the kind of leadership that the nation's largest public power entity should.
- Knoxville Utilities Board (KUB) reduced its "Green Invest" commitment from 502 MW to 325 MW, yet that still earned KUB the number two slot on the SunRiser list. *See page 8.*
- TVA issued a Request for Proposals (RFP) in 2020 for up to 5,000 MW (5 GW) of carbon free resources – including, but not limited to, solar. Those new resources would need to be online by 2029 and it is unclear if any will be available by 2026.
- "Project Phoenix" is an interesting project that could lead to 1,000 MW of solar on top of closed coal ash storage sites. An initial 100 MW pilot project is underway near Paducah, Kentucky.

	UTILITY-SCALE SOLAR, MW		DISTRIBUTED SOLAR, MW	
UTILITY	2022	2026	2022	2026
TVA	518	1,643	78	119

DATA SOURCES, METHODS, AND ASSUMPTIONS

Compiling data from publicly-available reports as well as proprietary forecasts, the Southern Alliance for Clean Energy (SACE) has curated a system of information about electric power generation in the southeast United States. For the *Solar in the Southeast* Annual Report, primary datasets derive from the Energy Information Administration (EIA) and the Federal Energy Regulatory Commission (FERC) – particularly, EIA 860 (Annual Electric Generator Data), EIA 861 (Annual Electric Power Industry Report), EIA 923 (Annual Electric Utility Data), and FERC 714 (Annual Electric Balancing Authority Area and Planning Area Report).

Future projections are informed by additional datasets including Wood Mackenzie Power & Renewables (formerly GTM Research), the EIA Annual Energy Outlook, utility Integrated Resource Plans (IRPs), interconnection queues, identified projects as well as utility announcements of ongoing and future plans, along with information gathered from solar developers and professional judgment of staff experts.

Solar data are reported as $MW_{(ac)}$ – alternating current. Where applicable, data identifiable as $MW_{(dc)}$ is derated to $MW_{(ac)}$ equivalent. *AC reporting is becoming increasingly more common, particularly for utility-scale solar projects.*

SACE tracks both capacity as well as generation, $MW_{(ac)}$ and MWh, respectively. Consequently, the capacity of solar projects that begin operation late in the year are only partially attributable in the first year. Tracking solar data in this manner enables a correlation between capacity and generation statistics.

In some cases, the utility that receives the generation from planned or existing solar projects is not known. In such cases, the capacity and generation are allocated to utilities based on proximity and the degree to which utilities needs are met by generation owned or contracted for**.** The amount of solar capacity allocated to utilities in this manner is a small fraction of all Southeastern generation, but it can make up a substantial portion of the solar generation reported for utilities with small solar portfolios.

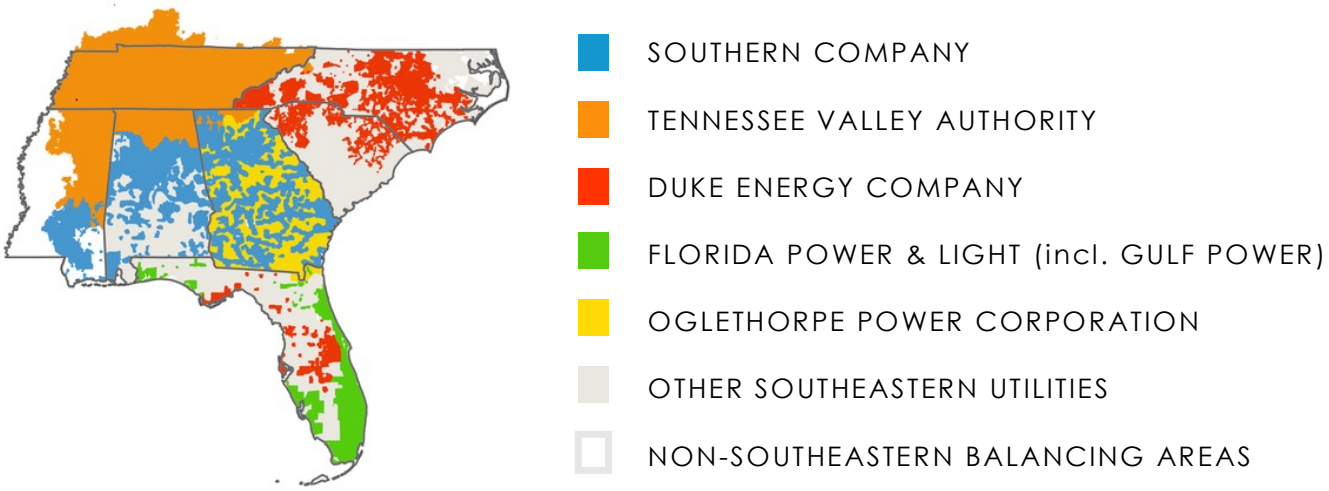
SACE projects distributed generation solar (e.g., residential and commercial rooftop solar) independently for large utility systems. Smaller municipal and cooperative systems are projected at an aggregate level based on the averages for those systems.

State-level reports are aggregated using two, complementary methods. The "Forecast for Southeast States" reflects total solar capacity (MW) in the state where the generation originates. *See page 10.* Other results correlate to the watts per customer calculation and are allocated to the state where the load is served. SACE apportions utility-scale solar generation to loads served across multi-state utility service territories. Smaller, distributed generation systems are assumed to serve their local load. This method establishes a close relationship with the retail sales and customers served by the respective utilities. *For example, a solar project in Alabama contracted to the Tennessee Valley Authority (TVA) will proportionally serve customers in multiple states across TVA service territory.*

APPENDICES

APPENDIX A: GEOGRAPHIC COVERAGE

The geographic coverage of 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 (thus while statewide reports for these states are relatively comprehensive, they may not align exactly with other data sources); only portions of Mississippi and Kentucky that are parts of TVA or the Southern Planning Area are included.



APPENDIX B: SOUTHEAST UTILITY RESULTS

Appendix B is accessible on our website and contains results from more than 400 utilities in the Southeast.

ADDITIONAL RESOURCES FROM SACE

The Southern Alliance for Clean Energy (SACE) releases annual reports covering clean energy and transportation topics in the Southeast. We invite you to view all of our reports, white papers, and other technical resources and select reports below.

Energy Efficiency in the Southeast, *Fifth Annual Report. (2023)*

Tracking Decarbonization in the Southeast, *Fourth Annual Report. (2022)*

Transportation Electrification in the Southeast, *Third Annual Report. (2022)*