

2020

# EEI ESG/Sustainability Reporting Template



## Introduction

As Southern Company works to achieve a net zero carbon future, we remain committed to our core principles of providing clean, safe, reliable and affordable energy to our customers and communities. Southern Company's commitment to delivering energy and energy solutions includes conserving and protecting the environment today and for future generations. We actively engage all our stakeholders – including customers and stockholders – in a productive, transparent conversation about how we are strategically planning for the future while delivering value and growth.

*Southern Company is a holding company that conducts its business through its subsidiaries. Accordingly, unless the context otherwise requires, references in this document to Southern Company's operations, such as generating activities, greenhouse gas (GHG) emissions, customers and employment practices, refer to those operations conducted through its subsidiaries.*

## Our Net-Zero Goal

In May 2020, we updated our long-term GHG emissions reduction goal for our electric and gas operations to net zero emissions by 2050, and we already have made significant progress towards our 2030 goal of reducing emissions by 50%. Since setting our decarbonization goals in 2018, we have continued to evaluate various pathways to achieve our goals and have engaged in the evolving dialogue regarding the global need to achieve net zero emissions by midcentury. We currently expect to achieve our interim 50% reduction goal as early as 2025. We are committed to providing programs to our customers to help accelerate our path to net zero.

We believe our path to net zero by 2050 will be achieved through:

- » Using natural gas to support the transition to a lower emitting generating fleet
- » Expanding zero-carbon resources, including renewables and nuclear
- » Enhancing energy efficiency programs
- » Including negative carbon strategies

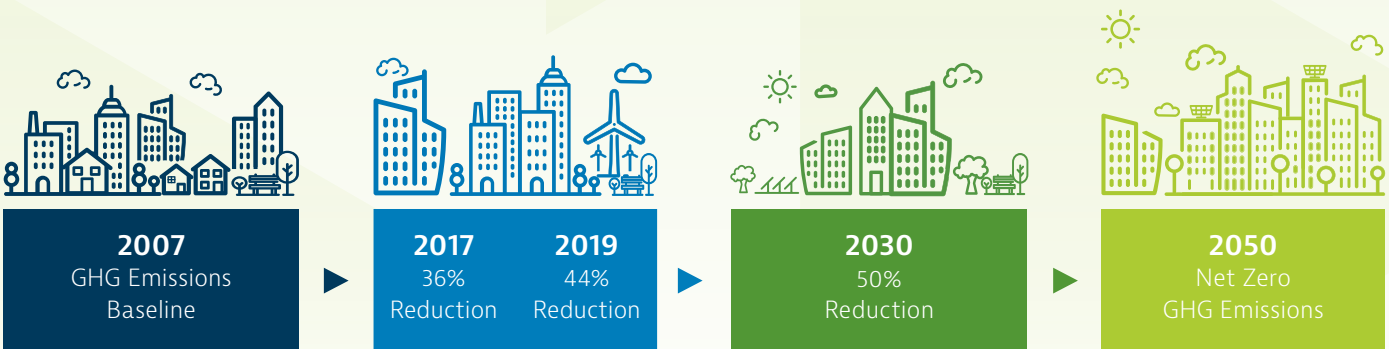
## ESG Strategy

### Investing in the future

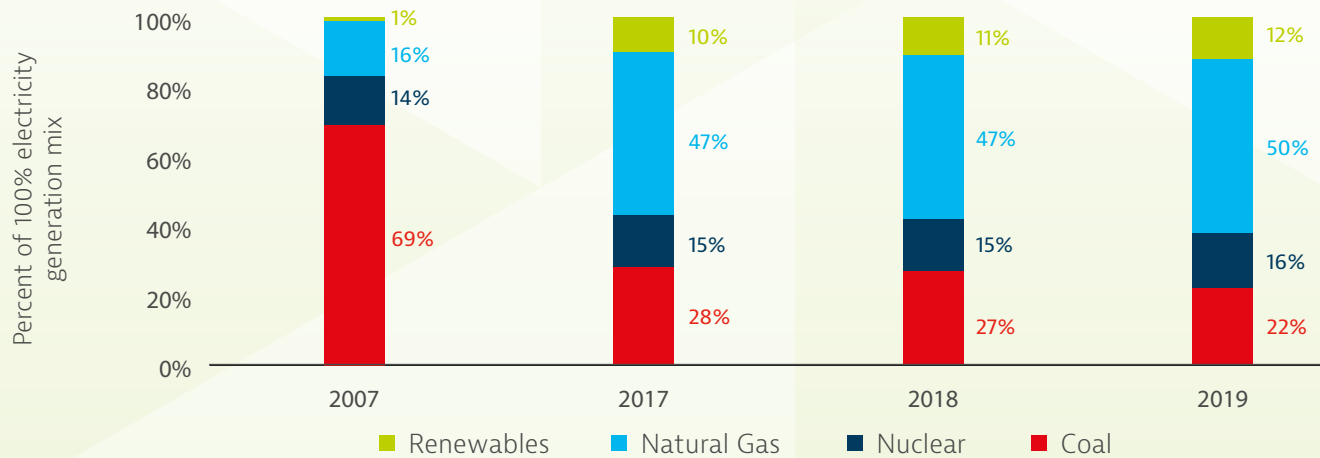
We are one of the only U.S. utilities pursuing an “all of the above” net zero energy strategy. Developing and maintaining a diversified energy portfolio is essential to successfully reducing emissions while also maintaining reliability and affordability for our customers. Since 2007, we have significantly transformed the Southern Company system's electricity generation mix, with coal decreasing from 69% to 22% and renewables increasing from 1% to 12% of our annual energy mix in 2019.

In our state-regulated service territories, we work with Public Service Commissions to ensure that we can continue to provide clean, safe, reliable and affordable energy. As described in our 2018 report, we use a scenario planning process to inform electricity resource planning decisions. There are multiple options evaluated to meet any energy and reliability needs, which could include asset retirements, power purchase agreements, the acquisition of existing generation assets or the construction of new generation units. By utilizing our

### Making progress toward our decarbonization goals



## Annual energy mix\*



\* Annual energy mix represents all of the energy the Southern Company system uses to serve its retail and wholesale customers during the year. It is not meant to represent delivered energy mix to any particular retail customer or class of customers. Annual energy mix percentages include non-affiliate power purchase agreements.

scenario planning process and working through our regulators to make decisions in the best interest of our customers, we help to minimize risk in our investment decisions. For more than 10 years, the Southern Company retail electric utilities have utilized a wide set of fuel and carbon price scenarios to inform resource planning decisions. We are developing an additional carbon price scenario to include in our planning process that starts at \$50/metric ton and escalates annually.

The scenario planning process has been instrumental in our decisions to economically retire coal units, add zero-carbon capacity in the form of renewables and nuclear and add more efficient natural gas capacity to our portfolio. In employing this robust and analytical approach, GHG emissions have dropped by 44% since 2007, and electricity remains affordable and reliable in our service territories.

### Just Transition

Southern Company has, in the best interest of customers, retired or converted to natural gas 73% of its coal units since 2010, and we expect to continue reducing coal capacity as market forces enable replacement with more economic low-carbon and zero-carbon resources. It has always been an imperative for Southern Company to prioritize the well-being of our employees, customers and communities.

During a time of transition and transformation, the importance of this philosophy is magnified. Our goals are to keep employees through retraining or reassignment, to minimize economic disruption in the communities through the attraction of new businesses and redevelopment of retirement sites and to maintain clean, safe and reliable electricity for our customers.

### Carbon Reduction Solutions

Southern Company remains committed to finding technology solutions for a carbon-constrained future. As an industry leader in research and development (R&D) for over 50 years, Southern Company is well-positioned to facilitate the transition to a net zero future. The commitment to a net zero future will demand the development of transformational technology solutions and their integration throughout our business. Our focus is to deliver technologies that eliminate carbon emissions while also increasing customer value and providing affordable energy.

Conserving natural resources is important to Southern Company, which is why we have managed land for natural water filtration, flood buffering, soil health, biodiversity and climate resilience benefits for many years. Paired with our other carbon-reducing efforts, natural sequestration can serve as a sink to reduce

atmospheric carbon dioxide concentrations. Southern Company is evaluating deploying natural carbon sequestration solutions to meet a net zero carbon future including: afforestation, avoided deforestation and land management practices.

Our reports *Planning for a low-carbon future* and *Implementation and action towards net zero* detail Southern Company's efforts in the development of solutions to reduce GHG emissions.

## Natural Gas

### Putting Safety First

Safety begins with setting rigorous operating standards, providing our neighbors with natural gas safety guidelines and following the latest public health protocols. This helps ensure a safe and secure environment for our employees who continue to serve on the frontlines, those working remotely and for the customers they all serve. By equipping our team members with safety training, tools and the resources necessary to keep our communities safe, they can respond when called upon.

Our employees, including our CEO, are held accountable for leak response performance and pipeline replacement projects, among other safety measures, as part of our annual Performance Pay Program.

We also continually monitor and perform regular inspections of our systems to ensure safety, security, reliability and resiliency. We perform leakage surveys of our pipelines in accordance with Federal Pipeline Safety Regulations. That means our transmission lines and business districts are surveyed annually and the remaining distribution pipelines are surveyed on either a three- or five-year schedule according to the regulation. Leakage surveys are conducted using a combination of aerial, vehicular, and foot surveys with electronic leak detection equipment.

Concerning leak repair protocols, leaks are monitored and repaired in accordance with federal and state regulatory requirements. Repairs on hazardous leaks are started immediately upon discovery. Non-hazardous leaks that have the potential to become hazardous are repaired within 12-15 months of discovery.

Our two largest natural gas distribution companies, Nicor Gas and Atlanta Gas Light, also participate in the American Gas Association (AGA) Peer Review program, a voluntary safety and operation practices program that allows participants to be reviewed by their peers, share leading practices and receive valuable feedback to help enhance safety and efficiencies.

Southern Company Gas leverages best-in-class technology to help ensure the safety of its system. For example, working with the state's Public Service





Commission, Atlanta Gas Light was one of the first in the nation to proactively replace infrastructure that was at a higher risk for leaks or was no longer fit for service with modern materials. We completed replacement of all cast iron and unprotected steel pipe in 2013 and all pre-1974 vintage plastic pipe in 2017. Since then we completed retirement of all cast iron pipes in the remainder of our system and replaced more than 800 miles of vintage plastic pipe. These infrastructure modernization programs significantly decreased Southern Company Gas' emissions.

Our safety training, operating standards and monitoring meet and exceed all state and federal regulations. That's because putting safety first is not just a top priority, it's our number one value. This commitment to safety earned us the American Gas Association's 2019 Accident Prevention Certificate, acknowledging our achievement in having one of the lowest DART (Days Away, Restricted or Transferred) incident rates in the country.

**Reducing Our Environmental Footprint**

Our efforts to maintain safe, reliable service has also enabled us to minimize our environmental impact. Between 1998 and 2018, Southern Company Gas worked closely with state commissioners to strategically invest more than \$2.2 billion in infrastructure replacements and improvements

that reduced annual methane emissions from our natural gas distribution companies by 50%. This accomplishment was achieved while experiencing 20% growth in the distribution system. In addition to providing tremendous reliability and safety benefits, this infrastructure improvement program allows Southern Company Gas distribution to deliver natural gas at almost 99.9% efficiency.

As a founding member of Our Nation's Energy (ONE) Future, we support reducing fugitive methane emissions across the entire natural gas supply chain (from production through consumption) to 1% or less. In October of 2019, our local distribution company Virginia Natural Gas announced plans to be the first natural gas utility in America to provide customers with natural gas that is 100% sourced, transported and distributed by companies that have pledged to reduce GHG emissions to less than 1% across the natural gas value chain. Based on ONE Future's methodology, our natural gas distribution operations' fugitive methane intensity for 2019 is only 0.135%, well below ONE Future's 2025 goal of 0.44% for local distribution companies.

For nearly three decades, Southern Company Gas has reported natural gas methane emissions through Environmental Protection Agency's (EPA) Gas STAR voluntary reporting program.

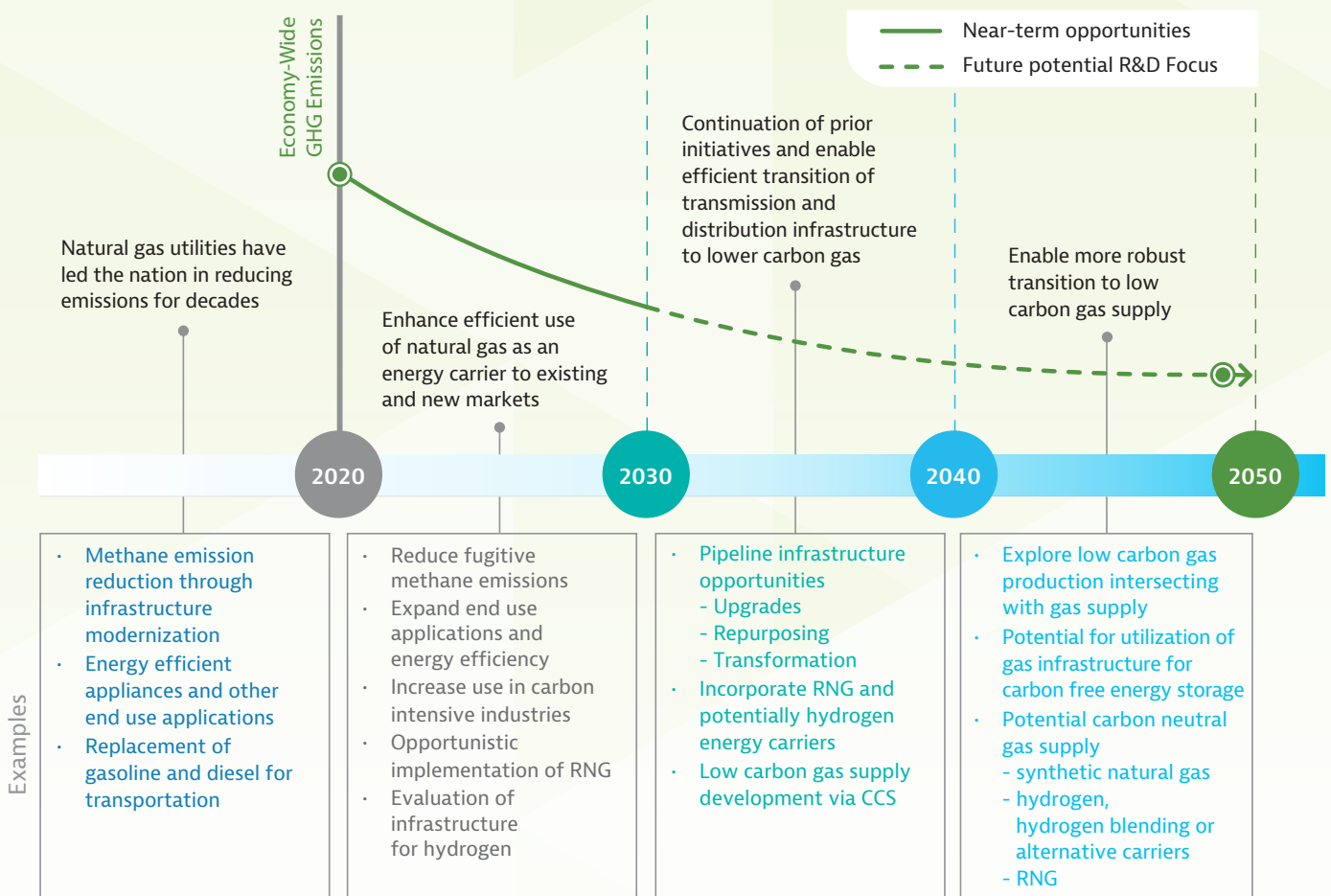


To help us develop and execute an effective strategy for growing Southern Company Gas' renewable natural gas (RNG) capabilities, we developed in 2020 a new department dedicated to our RNG strategy. RNG is a sustainable and interchangeable substitute for geologic natural gas. It is a carbon neutral energy source, that can be derived from existing waste streams, such as those at farms, landfills and water resources recovery facilities, or produced with renewable electricity. RNG sources from agriculture and waste management provide cross-sector environmental benefits.

Along with our electric sector businesses, Southern Company Gas is committed to emissions reductions through customer energy efficiency programs, alternative fuels for transportation and other customer sustainability programs.

We are committed to transparency in our natural gas operations and provide a robust discussion of the role of natural gas in the recently published *Implementation and action towards net zero* report.

This graphic illustrates potential ways natural gas distribution companies can help facilitate an economy-wide net zero carbon future. The extent of the timing and application of each of these examples is uncertain, but we believe it is critical to invest in R&D and recognize the benefits of natural gas and the potential opportunities for natural gas infrastructure to support GHG emission reduction goals across the value chain and economy-wide.



**Governance**

Southern Company’s Chairman/CEO has direct responsibility for climate-related issues including setting strategy and oversight of carbon emission reductions. Key elements of this responsibility include, for example, leading strategic resource planning and associated capital allocation, setting annual budgets, evaluating unregulated low-carbon and zero-carbon investments, leading climate-related risk assessments, investing in R&D and innovation and assessing climate-related controls and compliance. The CEO leads a team of the most senior officers across the Southern Company system, called the Southern Company Management Council (SCMC). Members of the SCMC include Southern Company’s CEO; Executive Vice President (EVP) and Chief Financial Officer (CFO); EVP of operations; EVP and president of external affairs; EVP, chief legal officer and chief compliance officer; EVP and chief information officer; and the CEOs of each operating company and Southern Company Services. The SCMC meets monthly to discuss major business decisions with respect to operations, employees and customers. At SCMC meetings, there are regular discussions of

climate-related issues, such as resource planning across the system. Federal and state environmental regulation and policy, and engagement with regulators, customers, stakeholders and stockholders on carbon emission risks and opportunities are also regularly discussed.

**Board of Directors**

The Company’s independent Directors provide substantive oversight to our management team on strategy and risk issues across the environmental, social and governance spectrum, including carbon reduction efforts. Each committee of the Board has responsibility for key elements of risk oversight including future capital investments, stranded and physical asset risk, climate issues, human capital impacts, cybersecurity and policy advocacy.

Importantly, these matters are discussed regularly by our full Board of Directors and at Management Council meetings. In addition, our independent Directors are actively engaged in direct dialogue with key investors and other stakeholders on a variety of topics, including carbon strategy, policy engagement, human capital and executive compensation.

<p><b>Audit Committee</b></p>	<ul style="list-style-type: none"> <li>» The Audit Committee oversees Southern Company’s financial reporting, audit process, internal controls and legal, regulatory and ethical compliance, which encompasses climate-related controls and compliance issues.</li> <li>» In this role, the Audit Committee reviews and guides risk management policies that include climate-related risks.</li> </ul>
<p><b>Business Security and Resiliency</b></p>	<ul style="list-style-type: none"> <li>» Reviews and evaluates cyber and physical risks posed to the Southern Company system’s facilities and operations, including risks posed by severe weather events and the Southern Company system’s ability to withstand, mitigate and recover from the effects of any such events.</li> </ul>
<p><b>Compensation and Management Succession</b></p>	<ul style="list-style-type: none"> <li>» Is responsible for reviewing and approving compensation plans and programs, including performance-based compensation awards that incorporate carbon reduction and other environmental-related metrics.</li> </ul>
<p><b>Finance Committee</b></p>	<ul style="list-style-type: none"> <li>» Reviews the financial strategy of and the strategic deployment of capital by Southern Company, which includes the company’s carbon emissions reduction strategy and the associated use of capital to accomplish the 2030 and 2050 GHG emission reduction goals. In this role, the Finance Committee reviews and guides annual budgets and business plans and oversees major capital expenditures with respect to climate-related issues.</li> </ul>

<p><b>Operations, Environmental and Safety</b></p>	<p>» Oversees strategy on climate-related and environmental and safety policy and planning issues, including business strategies designed to reduce carbon emissions, as well as programs and policies to protect the environment for employees, customers, contractors, and the public. The Committee receives regular reports on a range of climate-related topics at each Committee meeting.</p>
<p><b>Nominating, Governance, and Corporate Responsibility</b></p>	<p>» Oversees and reports to the full Board on the composition and competencies of the Board and its corporate governance policies. The Committee ensures directors have appropriate climate-related expertise.</p>

**Cyber Security Governance**

Southern Company is committed to fully complying with all government regulations and industry standards for cybersecurity, including the Critical Infrastructure Protection cybersecurity reliability standards, but to help ensure the reliability and resiliency of its critical infrastructure, Southern Company regularly goes above and beyond those mandatory requirements with an industry-leading commitment to cybersecurity. The U.S. Department of Homeland Security (DHS) has granted Certification for Southern Company’s cybersecurity risk management program under the Support Anti-terrorism by Fostering Effective Technologies Act of 2002 (SAFETY Act). Certification is the highest level of protection recognized under the SAFETY Act and is awarded after significant scrutiny of the covered technology along with evidence of proven effectiveness. This was the first such Certification granted by DHS for any company’s internal cybersecurity risk management program.

Strong cybersecurity governance establishes oversight and accountability at every level of the Southern Company enterprise. Senior management has high-level security clearances to ensure access to critical information, and the company participates in pilot programs with industry and government to share additional information and strengthen cybersecurity and business resiliency. Southern Company’s CEO chairs the Electricity Subsector Coordinating Council, which coordinates industry and federal government preparation for and response to potential national disasters and cyber attacks. Southern Company’s Board of Directors has established its Business Security and Resiliency (BSR) Committee that meets at every regular Board meeting and is charged with oversight of risks related to cybersecurity and operational resiliency. The BSR Committee includes directors with an understanding of cyber issues and with high-level security clearances.

Southern Company protects its networks through a risk-based, “all threats” and “defense in depth” approach to identify, protect, detect, respond, and recover from cyber threats. Overall network security is a centralized “shared service” across the Southern Company system and its segmented networks, led by the Technology Security Organization and the Chief Information Security Officer. Recognizing that no single technology, process or business control can effectively prevent or mitigate all risks, Southern Company employs multiple technologies, processes, and controls, all working independently but as part of a cohesive strategy to minimize risk. This strategy is regularly tested through auditing, penetration testing, and other exercises designed to assess effectiveness.

Southern Company emphasizes both security and resiliency through business assurance capabilities and incident response plans designed to identify, evaluate, and remediate incidents when they occur. Southern Company utilizes a 24/7 Security Operations Center, which facilitates real-time situational awareness across the cyber-threat environment, and a robust Insider Threat Protection Program and Fusion Center that leverages cross-function information sharing to assess insider threat activity. Southern Company regularly reviews and updates its plans, policies, and technologies, and conducts regular training exercises and crisis management preparedness activities to test their effectiveness. These activities supplement the company’s security awareness program designed to educate and train employees about risks inherent to human interaction with information and operational technology.

Southern Company’s cybersecurity program is increasingly leveraging intelligence sharing capabilities about emerging threats – within the energy industry, across other industries, with specialized vendors, and through public-private partnerships with government intelligence



agencies. Such intelligence allows Southern Company to better detect and prevent emerging cyber threats before they materialize. Just as it tests its policies and plans internally, Southern Company also engages in external exercises such as GridEx to evaluate and address the preparedness of the industry as a whole.

## Compensation

In response to the stockholder feedback, the Compensation and Management Succession Committee, working collaboratively with the Operations, Environmental and Safety Committee, implemented a CEO compensation metric beginning in 2019 that is aligned with the goals. The metric supports Southern Company's comprehensive decarbonization strategy, rewards the successful

execution of key actions that transition the portfolio and recognizes the role and responsibility of the CEO in successful execution across the enterprise. The Committees shared a desire to implement a measurable, quantitative component that is aligned with our 2030 goal of 50% reduction in GHG emissions, as well as a qualitative component that incentivizes behaviors to get us to our 2050 goal. For details on the compensation program, see *Implementation and action towards net zero*, pg. 33. In addition, employees are incentivized to meet operational goals related to generation availability, transmission and distribution reliability, and natural gas leak response performance through the Performance Pay Program which all facilitate reduction in greenhouse gas emissions through efficient operation of units and direct reduction of emissions.

## Additional Resources:

### Investor Fact Sheet

[https://s2.q4cdn.com/471677839/files/doc\\_downloads/fact\\_sheet/2018/04/Company-Overview-One-Pager.pdf](https://s2.q4cdn.com/471677839/files/doc_downloads/fact_sheet/2018/04/Company-Overview-One-Pager.pdf)

### Building the Future of Energy

<http://southerncompany.info/future/>

### Implementation and action toward net zero

<https://www.southerncompany.com/content/dam/southern-company/pdf/public/Net-zero-report.pdf>

### Planning for a Low-Carbon Future Report

<https://www.southerncompany.com/content/dam/southern-company/pdf/corpresponsibility/Planning-for-a-low-carbon-future.pdf>

### 2018 Corporate Responsibility Report

[https://www.southerncompany.com/content/dam/southern-company/pdf/corpresponsibility/2018\\_Corporate\\_Responsibility\\_Report.pdf](https://www.southerncompany.com/content/dam/southern-company/pdf/corpresponsibility/2018_Corporate_Responsibility_Report.pdf)

### 2020 Proxy Statement

[https://s2.q4cdn.com/471677839/files/doc\\_financials/2019/annual/2020-Southern-Company-Proxy.pdf](https://s2.q4cdn.com/471677839/files/doc_financials/2019/annual/2020-Southern-Company-Proxy.pdf)

### FAQs: Asset Strategy, Planning and Risks

[https://www.southerncompany.com/content/dam/southern-company/pdf/corpresponsibility/2017\\_161\\_FAQs\\_Asset\\_Strategy\\_Planning\\_and\\_Risks\\_handout\\_v6\\_REV.pdf](https://www.southerncompany.com/content/dam/southern-company/pdf/corpresponsibility/2017_161_FAQs_Asset_Strategy_Planning_and_Risks_handout_v6_REV.pdf)

### FAQs: Methane Emissions

[https://www.southerncompany.com/content/dam/southern-company/pdf/corpresponsibility/2017\\_162\\_FAQs\\_Methane\\_Emissions\\_handout\\_v6\\_REV.pdf](https://www.southerncompany.com/content/dam/southern-company/pdf/corpresponsibility/2017_162_FAQs_Methane_Emissions_handout_v6_REV.pdf)

### Environmental Principles

[https://www.southerncompany.com/content/dam/southern-company/pdf/corpresponsibility/SO\\_Environmental\\_Principles.pdf](https://www.southerncompany.com/content/dam/southern-company/pdf/corpresponsibility/SO_Environmental_Principles.pdf)

## Quantitative Information - Portfolio

**Parent Company:** Southern Company

**Operating Company(s):** Alabama Power, Georgia Power, Mississippi Power, Southern Power, Southern Nuclear, Southern Company Gas, PowerSecure

**Business Type(s):** Vertically Integrated

**State(s) of Operation:** Retail Electric Provider: Alabama, Georgia, and Mississippi; Wholesale Electric Provider: Alabama, California, Georgia, Maine, Minnesota, Nevada, New Mexico, North Carolina, Oklahoma, and Texas; Natural Gas Distribution: California, Georgia, Illinois, Louisiana, Maryland, New Hampshire, New Jersey, Tennessee, Texas, and Virginia

**State(s) with RPS Programs:** California, Illinois, Maine, Maryland, Minnesota, Nevada, New Hampshire, New Mexico, North Carolina, and Texas

**Regulatory Environment:** Both regulated and deregulated

**Report Date:** October 2020

Portfolio				
Ref No.		2007 Baseline	2018 Actual	Current Year 2019 Actual
<b>1</b>	<b>Owned Nameplate Generation Capacity at end of year (MW)<sup>1,2</sup></b>			
1.1	Coal	21,097	13,307	11,779
1.2	Natural Gas/Petroleum	14,410	21,764	22,527
1.3	Nuclear	3,680	3,680	3,680
1.5	Total Renewable Energy Resources			
1.5.1	Biomass/Biogas	-	116	116
1.5.2	Geothermal	-	27	27
1.5.3	Hydroelectric	2,758	2,758	2,758
1.5.4	Solar	-	2,576	2,620
1.5.5	Wind	-	1,622	2,054
1.6	Other	-	-	-
<b>2</b>	<b>Net Generation for the data year (MWh)<sup>2</sup></b>			
2.1	Coal	143,404,887	56,221,842	41,703,352
2.2	Natural Gas/Petroleum	31,812,893	95,396,445	96,071,983
2.3	Nuclear	28,597,842	30,412,864	30,099,204
2.5	Total Renewable Energy Resources			
2.5.1	Biomass/Biogas	-	-	14,556
2.5.2	Geothermal	-	-	-
2.5.3	Hydroelectric	2,915,528	6,466,371	6,546,471
2.5.4	Solar	-	-	5,858,418
2.5.5	Wind	-	-	6,153,898
2.6	Other <sup>3</sup>	-	9,184,200	120,643
<b>2i</b>	<b>Purchased Net Generation for the data year (MWh)<sup>2</sup></b>			
2.1.i	Coal	-	-	-
2.2.i	Natural Gas/Petroleum	-	-	1,151,172
2.3.i	Nuclear	-	-	-
2.5.i	Total Renewable Energy Resources	-	-	-
2.5.1.i	Biomass/Biogas	-	-	1,703,851
2.5.2.i	Geothermal	-	-	-
2.5.3.i	Hydroelectric	-	-	-
2.5.4.i	Solar	-	-	1,215,307
2.5.5.i	Wind	-	-	2,314,385
2.6.i	Other <sup>4</sup>	-	-	5,447,378
<b>3</b>	<b>Investing in the Future: Capital Expenditures, Energy Efficiency (EE), and Smart Meters</b>			
3.1	Total Annual Capital Expenditures (nominal million dollars) <sup>1</sup>	\$3,653	\$8,389	\$7,948
3.2	Incremental Annual Electricity Savings from EE Measures (MWh) <sup>5</sup>	-	431,030	418,347
3.3	Incremental Annual Investment in Electric EE Programs (nominal thousand dollars) <sup>5</sup>	-	\$23,884	\$48,625
3.4	Percent of Total Electric Customers with Smart Meters (at end of year) <sup>5</sup>	-	96%	96%
<b>4</b>	<b>Retail Electric Customer Count (at end of year)</b>			
4.1	Commercial	599,655	603,000	549,000
4.2	Industrial	14,901	17,000	17,000
4.3	Residential	3,756,040	4,053,000	3,688,000

<sup>1</sup> As reported on 10-K Financial Disclosure. <sup>3</sup> This information represents wholesale generation owned or purchased by Southern Company and not generation to serve any particular retail loads. For generation from a renewable source, to the extent Southern Company receives the renewable energy credits (RECs) from those sources, they retain the right to use such energy and RECs to serve their customers with renewable energy or to sell the energy and RECs, bundled or separately, to third parties. The ultimate purchaser or users of the RECs have the exclusive right to claim that the renewable energy associated with the RECs was used to serve their load. <sup>4</sup> For purchased net generation, other represents indeterminate pool purchases. <sup>5</sup> As reported in EIA Form 861.

## Quantitative Information - Emissions

**Parent Company:** Southern Company

**Operating Company(s):** Alabama Power, Georgia Power, Mississippi Power, Southern Power, Southern Nuclear, Southern Company Gas, PowerSecure

**Business Type(s):** Vertically Integrated

**State(s) of Operation:** Retail Electric Provider: Alabama, Georgia, and Mississippi; Wholesale Electric Provider: Alabama, California, Georgia, Maine, Minnesota, Nevada, New Mexico, North Carolina, Oklahoma, and Texas; Natural Gas Distribution: California, Georgia, Illinois, Louisiana, Maryland, New Hampshire, New Jersey, Tennessee, Texas, and Virginia

**State(s) with RPS Programs:** California, Illinois, Maine, Maryland, Minnesota, Nevada, New Hampshire, New Mexico, North Carolina, and Texas

**Regulatory Environment:** Both regulated and deregulated

**Report Date:** October 2020

Emissions				
Ref No.		2007 Baseline	2018 Actual	Current Year 2019 Actual
<b>5</b>	<b>GHG Emissions: Carbon Dioxide (CO<sub>2</sub>) and Carbon Dioxide (CO<sub>2</sub>e)<sup>1</sup></b>			
<b>5.1</b>	<b>Owned Generation</b>			
5.1.1	Carbon Dioxide (CO <sub>2</sub> )			
5.1.1.1	Total Owned Generation CO <sub>2</sub> Emissions (million MT)	151	96.6	82.7
5.1.1.2	Total Owned Generation CO <sub>2</sub> Emissions Intensity (MT/Net MWh)	0.729	0.488	0.443
5.1.2	Carbon Dioxide Equivalent (CO <sub>2</sub> e)			
5.1.2.1	Total Owned Generation CO <sub>2</sub> e Emissions (million MT)	152	97.2	83.1
5.1.2.2	Total Owned Generation CO <sub>2</sub> e Emissions Intensity (MT/Net MWh)	0.736	0.491	0.446
<b>5.2</b>	<b>Purchased Power</b>			
5.2.2	Carbon Dioxide Equivalent (CO <sub>2</sub> e)			
5.2.2.1	Total Purchased Generation CO <sub>2</sub> e Emissions (million MT)	6,322,399	4,974,436	3,423,778
5.2.2.2	Total Purchased Generation CO <sub>2</sub> e Emissions Intensity (MT/Net MWh)	0.582	0.458	0.288
<b>5.3</b>	<b>Owned Generation + Purchased Power</b>			
5.3.2	Carbon Dioxide Equivalent (CO <sub>2</sub> e)			
5.3.2.1	Total Owned + Purchased Generation CO <sub>2</sub> e Emissions (million MT)	102,881,151	102,147,363	86,542,778
5.3.2.2	Total Owned + Purchased Generation CO <sub>2</sub> e Emissions Intensity (MT/Net MWh)	0.481	0.498	0.435
<b>5.4</b>	<b>Non-Generation CO<sub>2</sub>e Emissions</b>			
5.4.1	CO <sub>2</sub> e emissions of sulfur hexafluoride (million MT) (5)	0.093	0.109	0.038
5.4.2	Total CO <sub>2</sub> e emissions from natural gas sector (MT) (6)	-	1.39	1.33
<b>6</b>	<b>Nitrogen Oxide (NO<sub>x</sub>), Sulfur Dioxide (SO<sub>2</sub>), Mercury (Hg)</b>			
6.1	Generation basis for calculation (MWh)	<b>206,731,150</b>	<b>189,724,521</b>	<b>186,567,524</b>
<b>6.2</b>	<b>Nitrogen Oxide (NO<sub>x</sub>)</b>			
6.2.1	Total NO <sub>x</sub> Emissions (thousand MT)	192	42	32
6.2.2	Total NO <sub>x</sub> Emissions Intensity (MT/Net MWh) <sup>2</sup>	0.000927	0.00022	0.000169
<b>6.3</b>	<b>Sulfur Dioxide (SO<sub>2</sub>)</b>			
6.3.1	Total SO <sub>2</sub> Emissions (thousand MT)	920	22	15
6.3.2	Total SO <sub>2</sub> Emissions Intensity (MT/Net MWh) <sup>2</sup>	0.004450	0.00016	0.000099
<b>6.4</b>	<b>Mercury (Hg)</b>			
6.4.1	Total Hg Emissions (kg)	3,995	142	137
6.4.2	Total Hg Emissions Intensity (kg/Net MWh) <sup>2</sup>	0.000019	0.000001	0.000001

<sup>1</sup> See "Implementation and action toward net zero" - <https://www.southerncompany.com/content/dam/southern-company/pdf/public/Net-zero-report.pdf>

<sup>2</sup> Generation values used in intensity calculations may vary based on associated regulatory reporting program requirements.



## Quantitative Information - Resources

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**State(s) of Operation:** Retail Electric Provider: Alabama, Georgia, and Mississippi; Wholesale Electric Provider: Alabama, California, Georgia, Maine, Minnesota, Nevada, New Mexico, North Carolina, Oklahoma, and Texas; Natural Gas Distribution: California, Georgia, Illinois, Louisiana, Maryland, New Hampshire, New Jersey, Tennessee, Texas, and Virginia

**State(s) with RPS Programs:** California, Illinois, Maine, Maryland, Minnesota, Nevada, New Hampshire, New Mexico, North Carolina, and Texas

**Regulatory Environment:** Both regulated and deregulated

**Report Date:** October 2020

Resources				
Ref No.		2007 Baseline	2018 Actual	Current Year 2019 Actual
<b>7</b>	<b>Human Resources</b>			
7.1	Total Number of Employees	26,742	28,383	27,943
7.2	Total Number on Board of Directors/Trustees	12	16	14
7.3	Total Women on Board of Directors/Trustees	2	3	2
7.4	Total Minorities on Board of Directors/Trustees	2	5	3
7.5	Employee Safety Metrics			
7.5.1	Recordable Incident Rate		0.73	1.34
7.5.2	Lost-time Case Rate		0.39	0.26
7.5.3	Days Away, Restricted, and Transfer (DART) Rate		0.84	0.78
7.5.4	Work-related Fatalities		0.00	0.00
<b>8</b>	<b>Fresh Water Resources</b>			
8.1	Water Withdrawals - Consumptive (Millions of Gallons/Net MWh) <sup>1</sup>		0.0005	0.0004
8.2	Water Withdrawals - Non-consumptive (Millions of Gallons/Net MWh) <sup>1</sup>		0.006	0.005
<b>9</b>	<b>Waste Products</b>			
9.1	Percent of Non-hazardous Municipal Solid Waste Diverted		N/A	N/A
9.2	Percent of Coal Combustion Products Beneficially Used		62%	97%

<sup>1</sup> Generation values used in intensity calculations may vary based on associated regulatory reporting program requirements.

## Quantitative Information - Gas Company ESG/Sustainability

**Parent Company:** Southern Company

**Operating Company:** Southern Company Gas

**Business Type(s):** Vertically Integrated

**State(s) of Operation:** Natural Gas Utilities: Georgia, Tennessee, Illinois, Virginia; Wholesale: Texas, Illinois; Midstream: California, Texas, Louisiana; Retail: Illinois, Michigan, Ohio, Pennsylvania, Maryland, Tennessee, North Carolina, South Carolina, Alabama, Georgia, Florida

**Regulatory Environment:** Both regulated and deregulated

**Report Date:** October 2020

Natural Gas Distribution				
Ref No.		2017 Actual	2018 Actual	Current Year 2019 Actual
<b>1</b>	<b>Methane Emissions and Mitigation from Distribution Mains</b>			
1.1	Number of Gas Distribution Customers	-	-	-
1.2	Distribution Mains in Service	-	-	-
1.2.1	Plastic (miles)	38,358	35,361	35,958
1.2.2	Cathodically Protected Steel - Bare & Coated (miles)	40,401	37,389	37,143
1.2.3	Unprotected Steel - Bare & Coated (miles)	202	170	198
1.2.4	Cast Iron / Wrought Iron - without upgrades (miles)	540.70	2.00	1.10
1.3	Plan/Commitment to Replace / Upgrade Remaining Miles of Distribution Mains (# years to complete)	-	-	-
1.3.1	Unprotected Steel (Bare & Coated) (# years to complete)	-	-	-
1.3.2	Cast Iron / Wrought Iron (# years to complete)	3.00	2.00	1.00
<b>2</b>	<b>Distribution CO2e Fugitive Emissions</b>			
2.1	CO2e Fugitive Methane Emissions from Gas Distribution Operations (metric tons)	432,646	338,764	339,871
2.2	CH <sub>4</sub> Fugitive Methane Emissions from Gas Distribution Operations (metric tons) <sup>1</sup>	17,306	13,551	13,595
2.2.1	CH <sub>4</sub> Fugitive Methane Emissions from Gas Distribution Operations (MMSCF/year)	901.346	706	708
2.3	Annual Natural Gas Throughput from Gas Distribution Operations in thousands of standard cubic feet (Mscf/year)	812,913,189	831,840,175	825,287,255
2.3.1	Annual Methane Gas Throughput from Gas Distribution Operations in millions of standard cubic feet (MMscf/year)	772,268	790,248	770,818
2.4	Fugitive Methane Emissions Rate (Percent MMscf of Methane Emissions per MMscf of Methane Throughput) <sup>1</sup>	0.12%	0.09%	0.09%

<sup>1</sup> The methane emissions data provided represents only the sources that GHGRP requires.

Southern Company Gas also calculates total emissions using additional methane fugitive sources and is providing that data below for consistency with other reporting (i.e. CDP, ONE Future, etc.)

CH <sub>4</sub> Fugitive Methane Emissions from Gas Distribution Operations (metric tons)	20,032
Fugitive Methane Emissions Rate (Percent MMscf of Methane Emissions per MMscf of Methane Throughput)	0.135%

## Cautionary Statement Regarding Forward-Looking Information

Certain information contained in this report is forward-looking information based on current expectations and plans that involve risks and uncertainties. Forward-looking information includes, among other things, GHG reduction goals, including expected timing of achievement, and costs related to carbon. Southern Company cautions that there are certain factors that can cause actual results to differ materially from the forward-looking information that has been provided. The reader is cautioned not to put undue reliance on this forward-looking information, which is not a guarantee of future performance and is subject to a number of uncertainties and other factors, many of which are outside the control of Southern Company; accordingly, there can be no assurance that such suggested results will be realized. The following factors, in addition to those discussed in Southern Company's Annual Report on Form 10-K for the year ended December 31, 2019, Quarterly Reports on Form 10-Q for the quarters ended March 31, 2020 and June 30, 2020, and subsequent securities filings, could cause actual results to differ materially from management expectations as suggested by such forward-looking information: the impact of recent and future federal and state regulatory changes; the extent and timing of costs and legal requirements related to coal combustion residuals; current and future litigation or regulatory investigations, proceedings, or inquiries; variations in demand for electricity and natural gas; available sources and costs of natural gas and other fuels; the ability to complete necessary or desirable pipeline expansion or infrastructure projects, limits on pipeline capacity, and operational interruptions to natural gas distribution and transmission activities; transmission constraints; the ability to control costs and avoid cost and schedule overruns during the development, construction, and operation of facilities or other projects; legal proceedings and regulatory approvals and actions related to construction projects, such as Plant Vogtle Units 3 and 4 and pipeline projects; the ability to construct facilities in accordance with the requirements of permits and licenses, to satisfy any environmental performance standards and the requirements of tax credits and other incentives and to integrate facilities into the Southern Company system upon completion of construction; advances in technology; performance of counterparties under ongoing renewable energy partnerships and development agreements; state and federal rate regulations and the impact of pending and future rate cases and negotiations; the inherent risks involved in operating and constructing nuclear generating facilities; the inherent risks involved in transporting and storing natural gas; potential business strategies, including acquisitions or dispositions of assets or businesses, which cannot be assured to be completed or beneficial to Southern Company or its subsidiaries; the ability of counterparties of Southern Company and its subsidiaries to make payments as and when due and to perform as required; the direct or indirect effect on the Southern Company system's business resulting from cyber intrusion or physical attack and the threat of physical attacks; catastrophic events such as fires, earthquakes, explosions, floods, tornadoes, hurricanes and other storms, droughts, pandemic health events or other similar occurrences; and the direct or indirect effects on the Southern Company system's business resulting from incidents affecting the U.S. electric grid, natural gas pipeline infrastructure or operation of generating or storage resources. Southern Company expressly disclaims any obligation to update any forward-looking information.