



2021 Climate Disclosure



**2021 Score: A-
Leadership Level**

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 for today and for future generations. In May 2020, we updated our long-term emissions reduction goal to net zero emissions by 2050, with an interim goal of reducing emissions by 50% by 2030 (as compared to 2007).

In 2020, we achieved a 52% reduction in GHG emissions driven by a combination of reduced demand due to the pandemic, mild weather and the continued deployment of zero-carbon resources. We expect to reach a sustainable reduction of 50% by 2025, or possibly earlier.

We endeavor to 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. We also appreciate that investors are focused on company disclosures that align with the framework recommended by the Task Force on Climate-related Financial Disclosure. In that spirit of engagement and transparency, and in response to investor feedback, Southern Company has continued its participation in the CDP Climate Disclosure survey for the 2020 reporting year.

We are pleased to announce our 2021 score of A- which once again places Southern Company within the Leadership level among the companies utilizing current practices in climate disclosure.

We encourage you to use the following survey response as well as the resources on our website to learn more about our business and Southern Company's plans for achieving a net zero future.

[Key ESG Data and Reports](#)

Welcome to your CDP Climate Change Questionnaire 2021

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Southern Company is a leading energy company, which, through its subsidiaries, has 42,000 megawatts (MW) of generating capacity and 1,500 billion cubic feet of combined natural gas consumption and throughput volume serving 9 million customers. We provide clean, safe, reliable and affordable energy through electric operating companies in three states, natural gas distribution companies in four states and complementary natural gas businesses, a competitive generation company serving wholesale customers across America, a leading distributed energy infrastructure company, a fiber optics network and telecommunications service business. For more than a century, Southern Company has been building the future of energy, delivering the energy resources and solutions our customers and communities need to drive growth and prosperity.

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 refer to those operations conducted through its subsidiaries. In this document, the terms we, us, our, Southern, SO and the Company all refer to the Southern Company system.

Southern Company is committed to meeting customers' current and future energy needs, with setting a long-term goal to transition to net-zero greenhouse gas (GHG) emissions from enterprise-wide operations by 2050 and an intermediate goal to reduce GHG emissions from 2007 levels by 50% by 2030. In 2020, we have reduced Scope 1 GHG emissions 52% from 2007. Our reduced GHG emissions are indicative of the accelerating pace of decarbonization across the system that will lead to sustainable GHG reductions of 50% by 2030. Our decarbonization plans have rapidly changed our GHG emissions, from a 34% reduction in 2018, to a 44% reduction in 2019, to our current 52% reduction for 2020.

Three key pillars support our approach to reducing GHG emissions:

- A diverse energy resource portfolio to include low-carbon and carbon-free resources, negative carbon solutions and energy efficiency resources
- Industry-leading R&D, focusing on technologies that benefit customers and lower GHG emissions
- Constructive engagement with policymakers and others to support outcomes that lead to a net zero future

We have already made progress with a full portfolio approach to electric generation resource diversity, focused on maintaining reliability, resilience and affordability while reducing GHG emissions. Since 2007, we have transformed the Southern Company system's electricity generation mix, with coal

decreasing from 69% to 17% and renewables/other increasing from 1% to 15% of our 2020 annual energy mix.

Our subsidiary, Southern Company Gas, is committed to supporting Southern Company's net-zero goal in its operations. Southern Company Gas is a founding member in Our Nation's Energy (ONE) Future and for our natural gas distribution operations, we aspire to remain aligned with ONE Future's 2025 goal. Our natural gas distribution operation's fugitive methane intensity for 2020 using the ONE Future methodology is 0.181%, well below ONE Future's 2025 goal of 0.44% for local distribution companies. In addition, Southern Company Gas is deploying a wide range of initiatives like infrastructure modernization, evaluation of opportunities to deploy renewable natural gas and hydrogen, and programs that empower customers to reduce their own emissions.

Our dedicated R&D organization leverages a diverse research portfolio and collaborates with the U.S. government, other utilities, academia and industry in development of new technologies for energy production, delivery and use for a net-zero energy future.

We are engaging with policymakers, investors, customers and other stakeholders to help shape an energy policy that enhances optionality across the entire energy value chain and supports the development and deployment of more carbon-free energy sources, while ensuring that each state we serve retains the ability to adequately plan and deploy resources that meet the needs of its citizens and communities.

We are fixed on the idea of “yes, and....” Yes, we acknowledge the challenge of net zero, and we are committed to finding solutions. Our path toward net zero includes continued coal transition, utilization of natural gas to enable fleet transition, aggressively growing our investment in renewable energy, modernizing the grid, completing construction and bringing online the first new nuclear generating units in a generation, solving energy challenges through robust R&D, incorporating negative carbon solutions, and investing in energy efficiency for savings on both sides of the meter.

As we work 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.

Our responses contain forward-looking information. For cautionary statements regarding forward-looking information, please go to Section 15, (C-FI).

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years
Reporting year	January 1, 2020	December 31, 2020	No

C0.3

(C0.3) Select the countries/areas for which you will be supplying data.

United States of America

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

USD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Equity share

C-EU0.7

(C-EU0.7) Which part of the electric utilities value chain does your organization operate in? Select all that apply.

Row 1

Electric utilities value chain

Electricity generation

Transmission

Distribution

Other divisions

Gas storage, transmission and distribution

Smart grids / demand response

Battery storage

Micro grids

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Board Chair	<p>The Board Chair, who also serves as Chief Executive Officer (CEO) of the Company, has direct responsibility for oversight of climate change issues. Key elements of this responsibility include setting the strategy to decarbonize the system, leading strategic resource planning and associated capital allocation, setting annual budgets, evaluating unregulated low-carbon investments, leading climate-related risk assessments, making decisions about investing in R&D, and assessing climate-related controls and compliance. The Chair/CEO engages with investors and stakeholders on climate-related topics, including the Climate Action 100+ investor initiative, which provides valuable insight into investors' climate-related priorities and positions. The Chair/CEO takes this input into consideration in evaluating strategic priorities. For example, in 2018 the Chair/CEO, in conjunction with senior executives and in consultation with the Board, led the analysis, recommendation and decision to set initial GHG reduction goals for our electric and gas operations. During 2019 and into 2020, the Chair/CEO, in conjunction with senior executives and in consultation with the Board, led a continuing discussion on our decarbonization efforts that evolved to incorporate concepts related to negative carbon solutions. In May 2020, we updated our long-term GHG emissions reduction goal to net zero emissions by 2050 and stated that we expected to meet our 2030 goal ahead of schedule, and possibly as early as 2025. In September 2020, under the Chair/CEO's leadership, we released our Implementation and Action Toward Net Zero report to update investors on our decarbonization progress. The Chair/CEO also leads our three-pronged strategy to achieve our goals: (1) pursue a diverse energy resource portfolio to include low-carbon and carbon-free resources, negative carbon solutions and energy efficiency resources; (2) continue our industry leading R&D, focusing on technologies that lower GHG emissions; and (3) constructively engage with policymakers, regulators, investors, stakeholders, customers and communities to support outcomes that lead to a net zero future. The Chair/CEO, senior management, and the Board, continue to assess the Company's GHG reduction strategy and will likely set an even more ambitious GHG emissions reduction goal as federal policy advances.</p>
Director on board	<p>The Board's Lead Independent Director (LID) also served as a member of the Operations, Environmental and Safety (OES) Committee in 2020. Throughout 2020 and continuing into 2021, the LID (and other members of the Board) received reports on a broad range of climate-related topics at each Board meeting. Quarterly reports on progress in achieving our GHG emission reduction goals are provided and discussed. There is quarterly reporting on Plant Vogtle Units 3 and 4 construction progress (new carbon-free nuclear generation) and robust discussions around integrated resource planning, scenario planning and analysis and its underlying assumptions. During 2019, 2020 and 2021, the LID directly engaged with a number of our investors on climate-related topics, including investors representing the Climate Action 100+ initiative, which provides valuable insight into climate-related priorities and positions. The LID takes this input into consideration in evaluating and overseeing climate-related strategic priorities. In addition, starting in 2019 and continuing into 2020, the LID was involved in leading Board discussions on incorporating concepts related to negative carbon solutions into Southern's decarbonization efforts, as well as understanding investor and stakeholder interests in net zero. These discussions ultimately resulted in the May 2020 announcement that Southern</p>

	<p>has updated its long-term GHG emissions reduction goal to net zero emissions by 2050. The LID played a leadership role in developing the updated target of net zero emissions by 2050. In addition, the LID provided input and oversight in the development of Southern's Implementation and Action Toward Net Zero report, released in September 2020.</p>
<p>Chief Executive Officer (CEO)</p>	<p>The CEO, who also serves as Board Chair, has direct responsibility for oversight of climate change issues. Key elements of this responsibility include setting the strategy to decarbonize the system, leading strategic resource planning and associated capital allocation, setting annual budgets, evaluating unregulated low-carbon investments, leading climate-related risk assessments, making decisions about investing in R&D, and assessing climate-related controls and compliance. The CEO/Chair engages with investors and stakeholders on climate-related topics, including the Climate Action 100+ investor initiative, which provides valuable insight into investors' climate-related priorities and positions. The CEO/Chair takes this input into consideration in evaluating strategic priorities. For example, in 2018 the CEO/Chair, in conjunction with senior executives and in consultation with the Board, led the analysis, recommendation and decision to set initial GHG reduction goals for our electric and gas operations. The CEO/Chair developed a three-pronged strategy to achieve the goals: (1) pursue a diverse energy resource portfolio that includes low-carbon and carbon-free resources and energy efficiency resources; (2) continue our industry-leading R&D, focusing on technologies that lower GHG emissions; and (3) constructively engage with policymakers, regulators, investors, stakeholders and customers to support outcomes that lead to a low-carbon future. Further, during 2020 and into 2021, the CEO/Chair, in conjunction with senior executives and in consultation with the Board, led a continuing discussion on Southern's decarbonization efforts that evolved to incorporate concepts related to negative carbon solutions. In May 2020, the CEO/Chair formally announced that Southern has updated its long-term GHG emissions reduction goal to net zero emissions by 2050 and stated that Southern is expected to meet its 2030 reduction goal ahead of schedule, and possibly as early as 2025. In addition, the CEO has made fleet transition and decarbonization strategy a key agenda item at his executive forums, meetings that occur at least two times per year with company officers across the system.</p>
<p>Board-level committee</p>	<p>The OES Committee 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. The Committee receives regular reports on operating units' safety and environmental activities and engages in robust discussions about carbon emissions, carbon risks and strategic planning. There is quarterly reporting on Plant Vogtle Units 3 and 4 construction progress (new carbon-free nuclear generation) and robust discussions around integrated resource planning, scenario planning and analysis and its underlying assumptions. Quarterly reports on progress in achieving our GHG emission reduction goals are provided and discussed. In addition, starting in 2019 and continuing into 2020, the OES Committee began regular discussions on incorporating concepts related to negative carbon solutions into Southern's decarbonization efforts, as well as understanding investor and stakeholder interests in net zero. These discussions ultimately resulted in the May 2020 announcement that Southern has updated its long-term GHG emissions reduction goal to net zero emissions by 2050.</p>

	<p>As part of its oversight of Southern's GHG reduction goals, the OES Committee played a leadership role in developing the updated target of net zero emissions by 2050. In addition, the OES Committee provided input and oversight in the development of Southern's Implementation and Action Toward Net Zero report, released in September 2020.</p>
Board-level committee	<p>The Audit Committee oversees the Company's financial reporting, audit process, internal controls and legal, regulatory and ethical compliance, which encompasses climate-related controls and compliance issues. In this role, the Audit Committee reviews and guides risk management policies that include climate-related risks.</p>
Board-level committee	<p>The Finance Committee reviews the financial strategy of and the strategic deployment of capital by the 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 long-term business plans and oversees major capital expenditures with respect to climate-related issues.</p>
Board-level committee	<p>The Compensation and Management Succession (CMS) Committee is responsible for reviewing and approving compensation plans and programs, including performance-based compensation awards that incorporate carbon reduction and other environmental-related metrics. In response to stockholder feedback, the CMS Committee worked directly with the OES Committee to develop a GHG reduction goal metric as part of the CEO's long-term incentive compensation award for the three-year performance period from 2019-2021 that ties 10% of the CEO's long-term equity incentive compensation to progress towards the achievement of the Company's 2030 and 2050 GHG emission reduction goals using quantitative and qualitative metrics. The long-term equity incentive compensation award was continued for the 2020-2022 and for the 2021-2023 performance periods. Through the award, the CMS Committee has set performance objectives and monitors implementation and achievement of those objectives to execute our business strategy related to reducing GHG emissions. The CMS Committee regularly assesses goal rigor as Southern continues to decarbonize its system. In 2020, the CMS Committee raised the stretch goal for the 2020-2022 performance period, meaning that it is more challenging to achieve maximum payout for the award.</p>
Board-level committee	<p>The Nominating, Governance, and Corporate Responsibility (NGCR) Committee oversees and reports to the full Board on the composition and competencies of the Board and its corporate governance policies. The Committee evaluates the range of qualifications, attributes, skills and experience that directors bring to the Board with the aim of facilitating a climate-competent Board. For example, the Board includes independent directors with skills, qualifications, attributes and experience in climate change, energy science, low- and no-carbon technologies, negative carbon technologies and energy policy, as well as experience in overseeing the transition to a lower-carbon fleet. In addition, the Committee oversees the Company's practices and positions to advance its corporate citizenship, including environmental, sustainability and corporate social responsibility initiatives. The Committee receives quarterly updates on Southern Company's ongoing stockholder engagement program and feedback received from stockholders on Environmental, Social, and Governance (ESG) topics, including climate-related risks and disclosures.</p>

Board-level committee	The Business Security and Resiliency (BSR) Committee oversees cybersecurity, physical security and operational resiliency, including issues and policies relating to climate change and adaptation and its potential impact on business resilience. For example, the Committee reviews and evaluates physical risks posed to the Southern Company system’s facilities and operations by severe weather events and the system’s ability to withstand, mitigate and recover from the effects of any such events. In this role the Committee oversees efforts to secure the grid and maintain safe and reliable delivery of energy to customers in multiple risk scenarios, including climate-related risks.
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C1.1b

(C1.1b) Provide further details on the board’s oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – all meetings	<ul style="list-style-type: none"> Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues 	<p>Climate-related issues are integrated into all of the governance mechanisms listed. The OES Committee oversees, reviews and guides strategy on climate-related issues and significant environmental and safety policy and planning issues relevant to Southern Company, including but not limited to business strategies designed to address the long-term reduction of GHG emissions and related risks and opportunities across the system, as well as programs, policies, and procedures to protect the environment and provide a healthy and safe environment for employees, customers, contractors, and the public. The OES Committee was responsible for overseeing the setting of performance objectives with respect to the initial 2030 and 2050 GHG emission reduction goals set in 2018 and similarly played an instrumental role in updating the long-term goal to net zero by 2050, as announced in May 2020. In order to monitor the implementation of performance objectives and progress against goals and targets for addressing climate-related issues, the OES Committee receives regular reports on and engages in robust discussion on a range of climate-related topics at each board meeting. For example, regular quarterly reports are provided to and discussed with the OES Committee on the Company’s progress in achieving its GHG emission reduction goals for 2030 and 2050. Regular quarterly reporting and robust discussions on progress with respect to the construction of Plant Vogtle Units 3 and 4 (new carbon-free nuclear generation) are also undertaken, as are regular robust discussions around integrated resource planning, scenario planning and analysis and the</p>

		<p>underlying assumptions for the scenario analysis. In addition, the OES Committee receives regular reports on operating units' safety and environmental activities and engages in robust discussions about carbon emissions and carbon risks and strategic planning. Starting in 2019 and continuing into 2020, the OES Committee began regular discussions on incorporating concepts related to negative carbon solutions into Southern's decarbonization efforts, as well as understanding investor and stakeholder interests in net zero. These discussions ultimately resulted in the May 2020 announcement that Southern has updated its long-term GHG emissions reduction goal to net zero emissions by 2050. In addition, the OES Committee provided input and oversight in the development of Southern's Implementation and Action Toward Net Zero report, released in September 2020. Further, the OES Committee has worked directly with the CMS Committee to establish an incentive compensation award that ties ten percent of the CEO's long-term equity incentive compensation to the achievement of the Company's 2030 and 2050 GHG emission reduction goals and supports execution of the business strategy.</p>
Scheduled – all meetings	<p>Reviewing and guiding strategy</p> <p>Reviewing and guiding risk management policies</p>	<p>The NGCR Committee oversees and reports to the full Board on the composition and competencies of the Board and its committees. Specifically, the Committee considers the qualifications, skills and attributes of the directors and the needs of the full Board to ensure that the skills represented on the Board allow the Board to review and guide strategy and risk management policies. Competencies considered by the Committee include expertise in climate-related matters and environmental policy and regulation, among others. Appropriate climate experience and credibility are specifically considered in this process. The NGCR Committee also oversees corporate governance policies, including but not limited to, reviewing and making recommendations to the Board regarding Southern Company's practices and positions to advance its corporate citizenship, including environmental, sustainability and corporate social responsibility initiatives. The NGCR Committee receives quarterly updates about Southern Company's ongoing stockholder engagement program and feedback received from stockholders on ESG topics, including climate-related risks and disclosures.</p>
Scheduled – all meetings	<p>Reviewing and guiding strategy</p> <p>Reviewing and guiding major plans of action</p>	<p>The Audit Committee oversees the Company's financial reporting, audit process, internal controls and legal, regulatory and ethical compliance, which encompasses climate-related controls and compliance issues. In this role,</p>

	<p>Reviewing and guiding risk management policies</p>	<p>the Audit Committee reviews and guides risk management policies that include climate-related risks.</p>
<p>Scheduled – all meetings</p>	<p>Reviewing and guiding strategy</p> <p>Reviewing and guiding major plans of action</p> <p>Reviewing and guiding risk management policies</p> <p>Reviewing and guiding annual budgets</p> <p>Reviewing and guiding business plans</p> <p>Overseeing major capital expenditures, acquisitions and divestitures</p>	<p>The Finance Committee reviews the financial strategy of and the strategic deployment of capital by the Company, which includes the Company’s carbon emissions reduction strategy and the associated use of capital to accomplish those 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.</p>
<p>Scheduled – all meetings</p>	<p>Reviewing and guiding strategy</p> <p>Reviewing and guiding risk management policies</p> <p>Setting performance objectives</p> <p>Monitoring implementation and performance of objectives</p> <p>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</p>	<p>The CMS Committee is responsible for reviewing and approving compensation plans and programs, including performance-based compensation awards that incorporate carbon reduction and other environmental-related metrics. The CMS Committee worked directly with the OES Committee to establish a new CEO incentive compensation award granted again in 2020 for the three-year performance period from 2020-2021 that ties ten percent of the CEO’s long-term equity incentive compensation to the achievement of the Company’s 2030 and 2050 GHG emission reduction goals using quantitative and qualitative metrics. The long-term equity incentive compensation award concept was again utilized for the 2020-2022 and the 2021-2023 performance periods. Through the award, the CMS Committee has set performance objectives and monitors implementation and achievement of those objectives with respect to execution of our business strategy related to reducing GHG emissions. The CMS Committee regularly assesses the goal rigor of the award metrics as Southern continues to decarbonize its system. In 2020, the CMS Committee raised the stretch goal for 2020, meaning that it is more challenging to reach the maximum payout for the 2020-2022 performance period.</p>
<p>Scheduled – all meetings</p>	<p>Reviewing and guiding strategy</p> <p>Reviewing and guiding risk management policies</p>	<p>The BSR Committee 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 system’s ability to withstand, mitigate and recover from the effects of any such events. In this role the Committee oversees efforts to secure the grid</p>

		and maintain safe and reliable delivery of energy to customers in multiple risk scenarios, including climate-related risks.
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C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Chief Financial Officer (CFO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Other C-Suite Officer, please specify Executive Vice President (EVP) of Operations	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Other, please specify Senior Vice President (SVP) Environmental & System Planning	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Other C-Suite Officer, please specify EVP, Chief Legal Officer & Chief Compliance Officer	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Other C-Suite Officer, please specify EVP and Pres. of External Affairs	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Other committee, please specify Operating Company CEOs	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

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, make decisions regarding investments 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). Other members of the SCMC include the Company's CFO; EVP of operations; EVP and president of external affairs; EVP, chief legal officer and chief compliance 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 and at each operating company. Federal and state environmental regulation and policy, and engagement with regulators, customers, stakeholders and stockholders regarding GHG emission risks and opportunities are also regularly discussed.

For example, in 2019 and into 2020, the Chairman/CEO, in conjunction with the SCMC and in consultation with the Board, led a series of discussions on Southern's decarbonization efforts that evolved to incorporate concepts related to negative carbon solutions. The SCMC began to discuss the potential to revise the long-term goal, reflecting emissions reduction progress to date, expected future resource decisions, and taking into account conversations with a wide variety of external stakeholders. As a result of these discussions, in May 2020, the Chairman/CEO formally announced that Southern has updated its long-term GHG emissions reduction goal to net zero emissions by 2050 and stated that Southern is expected to meet its 2030 reduction goal ahead of schedule, and possibly as early as 2025.

Additional roles and responsibilities in monitoring climate-related issues include the following.

- The CFO also serves as Southern Company's Chief Risk Officer. Responsibilities related to climate change include capital allocation for major projects, enterprise-wide risk assessments and financial disclosures which include environmental risk and carbon-related risks. Officers and senior managers are responsible for working across the business to manage enterprise-level risk, monitor the performance of risk mitigation strategies and identify emerging risks. They meet routinely and engage regularly with the Board and its committees throughout the year.
- The EVP of Operations and his direct report, the SVP of Environmental and System Planning, have primary responsibility for system planning, which includes a regular full-scale assessment of Southern Company's generation fleet, including long-term planning for generation resources. The EVP of Operations and SVP of Environmental and System Planning are responsible for monitoring and reporting on progress against the GHG emissions reduction goals. The SVP, Environmental and System Planning is integral to investor and stakeholder outreach and regularly participates in investor and stakeholder engagement meetings to discuss the Company's decarbonization progress, the Company's integrated resource planning process, scenario planning and environmental policies, and programs. Southern Company's environmental affairs managers are responsible for environmental programs, including carbon policy activities, for the Southern Company system. The environmental affairs director reports to the SVP, Environmental and System Planning.
- The EVP, Chief Legal Officer and Chief Compliance Officer's responsibilities include legal and ethical compliance programs, interaction with state and federal regulators, and engaging with investors and stakeholders to discuss climate-related issues such as the GHG emission reduction goals and the risks and opportunities to the Company in the transition to a net zero future.
- The EVP and President of External Affairs' responsibilities include climate-related outreach at the state and federal levels across regulatory and legislative agencies, oversight of the Company's Corporate Responsibility Report and engaging with investors and stakeholders and

on carbon and climate policy issues, including transparency on political contributions and lobbying efforts.

- Operating Company CEOs (Alabama Power, Georgia Power, Mississippi Power, Southern Company Gas) are a part of the SCMC and are responsible for interfacing at the state level on resource planning proposals, and outreach to state and federal legislators and their regulators, and directly oversee safety, compliance and risk management programs at their individual utilities.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

Provide incentives for the management of climate-related issues		Comment
Row 1	Yes	Details provided below.

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Chief Executive Officer (CEO)	Monetary reward	Emissions reduction target	The CEO’s compensation includes a long-term incentive (LTI) award that ties a significant portion of compensation to achievement of 2030 and 2050 GHG reduction goals. 10% of the CEO’s LTI award is aligned with the goals, equivalent to a potential payout of up to \$2 million based on achieving maximum performance. The CMS and OES Committees designed the award with a measurable, quantitative component aligned with the 2030 goal and a qualitative component to incentivize achievement of the 2050 goal. The quantitative metric is defined in terms of net MW change and is earned by putting new zero-carbon resources into operation and permanently placing coal or gas steam resources in retirement or inactive reserve status during the applicable 3-year period. For a target payout for 2019-2021, the system must achieve a 3,080 net MW change. For a maximum payout (150% of target), the system must achieve a 3,518 net MW change. No payout is received if the system’s net MW change by 2021 is less than 2,204 MW, and a 50% payout is received if the system’s net MW change by 2021 is 2,641 MW. The qualitative metric considers factors including leadership in energy policy, R&D investment, and new business development (e.g., renewables, distributed generation, distributed infrastructure). Achievement is determined by the Board. For maximum qualitative performance, a 30%

			<p>modifier is applied to the payout determined under the quantitative metric. For the 2020-2022 and the 2021-2023 performance periods, the quantitative metric requires performance aligned with a trajectory to our 2030 goal. The maximum payout net MW change goal for 2020-2022 is about 60% higher than the target net MW change goal, meaning it is more challenging to reach the maximum payout for the 2020-2022 performance period. Threshold for 2020-2022 is set to the target level of the 2019-2021 goal, preventing any payout if the target for 2019-2021 is not reached. The target payout net MW change goal for 2021-2023 requires an increase of more than 30% as compared to the target payout for 2020-2022. The maximum payout net MW change goal for 2021-2023 is set at a level to achieve our 2030 50% GHG reduction goal more than five years early with a net MW change more than 20% higher than the target net MW change goal. The qualitative metric goal categories remain the same for all periods.</p>
<p>Other, please specify Most employees, CEO & Senior Management</p>	<p>Monetary reward</p>	<p>Emissions reduction target Energy reduction target Efficiency project</p>	<p>We believe in pay for performance and design our compensation program to attract, engage, competitively compensate and retain employees through a mix of base pay and incentive pay. Nearly all our employees participate in our annual Performance Pay Program (PPP) that includes operational & financial goals.</p> <p>Several operational goals are important to reducing GHG emissions.</p> <p>(1) Nuclear energy is net-zero carbon and one of the cleanest, most reliable & cost-effective fuel sources available. Its importance in our portfolio continues to grow with the new nuclear units being constructed at Plant Vogtle. Annual assessments of nuclear construction progress are part of the operational goals four CEO, CFO, & other C-suite officers. Nuclear plant operations are also part of the operational goals' payout for many senior managers & for thousands of employees at key company subsidiaries. We measure safety, reliability, & availability of the nuclear fleet because those metrics are crucial for delivering clean, zero-carbon energy at a reasonable price.</p> <p>(2) Customer satisfaction is a key performance metric. It includes customer feedback on local perceptions of utility service, including the balance between maintaining affordable prices & minimizing environmental impact. Local</p>

			<p>customer preferences also drive the regulatory process & implementation of renewable resources and energy efficiency programs that reduce the environmental impact.</p> <p>(3) Generation availability and reliability is a key performance metric. It allows us to track efficient usage of our entire fleet, which includes a mix of lower emission fuel alternatives.</p> <p>(4) Energy efficiency, both within our fleet and system and as programs for customers, has the benefit of lowering costs for customers and reducing GHG emissions. These benefits attract economic development resulting in job growth for local economies. This development also helps grow EPS and thereby benefits employee participants in the PPP.</p> <p>(5) Achieving annual financial goals, including EPS and business unit net income goals, is crucial to executing on our customer-centric business model and is a key performance metric . Maintaining this business model provides the opportunity to effectively respond to future carbon regulations & the potential to succeed in an accelerated transition to a low carbon business environment.</p>
<p>Other, please specify</p> <p>Almost all employees of So. Gas</p>	<p>Monetary reward</p>	<p>Emissions reduction project</p> <p>Efficiency project</p>	<p>For employees of our Southern Company Gas subsidiary, including the CEO of Southern Company Gas, operational goals under the annual Performance Pay Program include leak response performance and pipeline replacement projects that reduce methane emissions.</p>
<p>Other, please specify</p> <p>Management group, including CEO</p>	<p>Monetary reward</p>	<p>Emissions reduction project</p> <p>Energy reduction project</p> <p>Efficiency project</p> <p>Behavior change related indicator</p>	<p>Southern Company’s management group, including our CEO, CFO, and other C-suite officers, has a portion of the annual Performance Pay Program incentive tied to the achievement of individual goals. Depending on the individual’s position, individual goals may include environmental matters, energy efficiency, expansion of low- and no-carbon resources, and progress in research and development related to emission reduction efforts, among others. For the CEO, individual performance considered by the CMS Committee of the Board in determining his 2019 annual incentive award (and disclosed in Southern Company’s proxy statement) included</p> <ul style="list-style-type: none"> • Productive long-term strategy of transitioning the fleet, including: 2020 energy mix that was down to 17% coal; reduced GHG emissions by 52% through 2020 as

			<p>compared to 2007 levels; continued investments in renewables;</p> <ul style="list-style-type: none"> • Continued to drive ESG strategy and engage with key stakeholders, including ongoing substantive engagement with environmental stakeholder groups throughout the year; • Reached major milestones in 2020 at Georgia Power's Plant Vogtle Units 3 and 4 construction project.
<p>Other, please specify</p> <p>Senior Management</p>	<p>Monetary reward</p>	<p>Emissions reduction project</p> <p>Energy reduction project</p> <p>Efficiency project</p>	<p>Our strategy is to maximize long-term value to stockholders through a customer, community, and stakeholder focused business model that produces sustainable levels of return on energy infrastructure, and our long-term equity incentive program is intended to further this goal by directly tying a portion of compensation to the interests of stockholders. For senior management, including our CEO, CFO, and other C-suite officers, a substantial portion of their compensation is tied to the long-term equity incentive award, which includes measuring total shareholder return over a three-year period. Crucial to creating long-term stockholder value is the effective management of the risks and opportunities presented by carbon emission reductions and successfully sustaining and evolving our business as we transition to a net zero future. Our strategy for reducing GHG emissions includes aggressively growing our investment in renewable energy generation, modernizing the grid to optimize technological advancements, increasing the use of natural gas, building new nuclear units, continuing our industry-leading R&D efforts and investing in energy efficiency for savings on both sides of the meter. While these monetary awards are not specifically tied to emission reductions, effective implementation of these strategies results in direct Scope 1 emission reductions.</p>
<p>Other, please specify</p> <p>Almost all employees</p>	<p>Monetary reward</p>	<p>Emissions reduction project</p> <p>Energy reduction project</p> <p>Efficiency project</p> <p>Behavior change related indicator</p>	<p>Southern Excellence Awards are given to employees for immediate recognition of superior performance. Employees who work to further climate-related initiatives, including emission reductions, R&D that furthers carbon-free and carbon-neutral energy resources, energy efficiency programs, the electrification of transportation and the promotion of our environmental stewardship and sustainable business practices, are eligible to receive these awards.</p>

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	2	
Medium-term	2	10	
Long-term	10	30	

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

Risks are identified based on potential substantive financial or strategic impact to the business with levels of impact ranging from 10s of millions of dollars to billions of dollars on the high end of the scale.

Enterprise Risk Management (ERM) generally refers to a comprehensive approach to risk management and oversight throughout an organization that is integrated with strategic planning activities (prioritize risks and allocate resources appropriately to better manage the business and mitigate risk). These risks include climate-related risks to the enterprise. While Southern Company has a group of employees designated to facilitate and implement its ERM program, risk management is everyone’s responsibility from the Board of Directors to each employee. The goal of ERM at Southern Company is to provide a clear understanding of the risks facing the Company and to ensure that oversight and accountability are appropriately defined. Risk governance and oversight is largely embedded in existing organization and control structures such as normal management oversight, project review processes, internal auditing, legal and regulatory compliance programs, and Sarbanes Oxley compliance programs. ERM governance provides structure to bring together these efforts to facilitate communications across entities and functions, promote consistency and the use of best practices, create a unified view of risk, and help incorporate risk into strategy considerations. The ERM program includes a risk profile process which is used to identify, assess, and plan for the mitigation of risks, including climate-related risks, throughout the Southern Company system and culminates in formal risk profiles for each participating entity. Southern Company’s risk profile process is a bottom-up approach to risk identification and performed from a business unit and functional area perspective for robustness. This approach utilizes the expertise of our employees in identifying the major risks and promotes a risk-aware culture across the Company. For environmental risks, the process leverages environmental governance teams, made up of subject matter experts across the system, who identify and evaluate risks to the company. The results are provided to the Environmental Management Council for consideration before presentation to the Board through the ERM process. The risk profile process currently includes approximately 18

participating entities (operating companies, business units and functional areas) and 17 risks of materiality, which include climate-related risks such as environmental regulation/legislation and operational performance, which includes grid, generation and pipeline network resiliency.

Additionally, information gathered through non-ERM processes, such as disclosures, auditing, and system and financial planning, are used for insight and monitoring of the ERM program. All risks are categorized and evaluated, and ultimately the top risks are consolidated into a Southern Company profile which requires the focused attention of the Board and the SCMC. Profiles are used as inputs to various business processes at the entity, corporate, and Board of Director levels. A carbon-related risk has been incorporated in Southern's ERM program's risk profile process since the early 2000s and started with an initial focus on the risk of laws and regulations.

The Board of Directors is responsible for oversight of strategy and risk, including risks related to climate-related matters. The Board recognizes the potential impacts on our business and the transitional risks and opportunities the utility industry faces in a net zero GHG future. The Board regularly assesses the company's short- and long-term business strategy, including the long-term sustainability of its business, in light of these climate-related risks and opportunities. Issues that are the subject of active discussions at the Board and Board committee meetings include climate-related risks and opportunities, regulatory compliance, energy efficiency, renewable energy generation and emerging technology.

All Board members are actively involved in our risk oversight function. The Board reviews our risk profile and ensures that oversight of each risk is properly designated to an appropriate Board committee or the full Board. Each Board committee provides ongoing oversight for the risk designated to it, reports to the Board on their oversight activities, and elevates review of risk issues to the Board as appropriate. Independent directors chair each Board committee, and each committee has a designated member of executive management as the primary responsible officer for providing information and updates to the Board committee related to significant risks. There is regular, open communication between management and the Board on these topics throughout the year.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

We have a robust ERM program that facilitates identification, communication and management of the significant potential risks in a formal process. Within this framework, risk governance and oversight are largely embedded in existing organizational and control structures. As part of the governance structure, the Chief Risk Officer is accountable to the CEO and the Board for ensuring that enterprise risk oversight and management processes are established and operating effectively. Officers and senior managers are responsible for working across the business to manage enterprise-level risk, monitor the performance of risk mitigation strategies and identify emerging risks. They meet routinely and engage regularly with the Board and its committees throughout the year in consideration of short, medium, and long-term risks. The OES Committee of the Board is charged with review and oversight of the significant operating segments and significant environmental and safety policies, including addressing long-term reduction of GHG emissions.

For the energy industry, high-capital cost, long-life assets require long-term planning. The current transition in the energy industry along with a net zero GHG future is placing new and different pressures on the traditional energy production and delivery model, creating uncertainty and presenting challenges. The investor community recognizes this as potential risk.

Southern Company aims to minimize our exposure to climate-related risk across the energy value chain as we make, move and sell energy to a wide customer base. Our business model relies heavily on state-regulated electric and natural gas investments as well as long-term contracted energy infrastructure, which differentiates Southern Company from other businesses. We believe that operating a customer-centric business model provides the opportunity to effectively respond to future carbon regulations and the potential to succeed in an accelerated transition to a low carbon business environment.

By continuing to make major energy decisions that are in the best interest of customers, that appropriately consider fuel and carbon risks and that are approved by our state regulators, we expect to continue to receive fair regulatory treatment of our state-regulated investments. We believe that investment risk to these rate-regulated assets is limited.

Distribution network and generation resilience are focus areas for the Southern Company Board, ensuring processes are in place to minimize physical risks to the Southern Company system. Specific to physical risk assessment, Southern Company routinely assesses our infrastructure resiliency in the face of extreme weather events. Much of our electric generation, transmission and distribution footprint is located within an area of the U.S. at higher risk for impacts from severe storms, including tornados and hurricanes. Based on historical experiences with all extreme weather events, structures throughout the system have been evaluated and hardened to better protect against damages from high winds, flooding and extreme low temperatures (e.g., use of concrete poles, weatherization of generating equipment and strengthening of cooling towers for generation units near the coasts). One of the ways Southern Company recognizes

physical risk is annual hurricane preparedness training for all employees responsible for restoration efforts. These programs, conducted throughout the electric service territories at most risk, put employees in the mindset necessary to safely and quickly respond to extreme weather events. Preparedness programs like this allow Southern Company teams to support others during large scale restoration activities such as Hurricane Michael in Georgia, tornados in Alabama and ice storms in the northeast. Southern Company has been recognized by Edison Electric Institute (EEI) with the association’s “Emergency Recovery Award” to Alabama Power, Georgia Power and Mississippi Power for such restoration actions.

We are managing our climate-related transitional risks by growing our investment in renewable energy, modernizing the grid, increasing the use of natural gas, building the first new nuclear generating units in a generation, solving difficult energy challenges through robust R&D and investing in energy efficiency for savings on both sides of the meter.

For our natural gas distribution business, we are exploring opportunities to use or repurpose the natural gas delivery infrastructure to carry renewable natural gas (RNG), hydrogen or another energy carrier, thus continuing to decrease the carbon intensity of the fuel. These opportunities will be developed in consultation with state policymakers and regulators and our customers. Southern Company is one of the anchor sponsors that has committed financial support to the Low-Carbon Resources Initiative (LCRI), a research and development collaboration between EPRI and the Gas Technology Institute (GTI). The LCRI is a worldwide collaborative looking at hydrogen technologies and applications, along with other low-carbon carriers. Over the next five years, the LCRI will focus on developing pathways to advance low-carbon technologies for large-scale deployment, including hydrogen and related low-carbon resources. The goal of the initiative is to enable a risk-informed understanding of options and technologies enabling significant, economy-wide decarbonization, with applications for both our electric and natural gas businesses. Southern Company Gas, along with Southern Company, has also taken on a leadership role in a new R&D initiative known as HyBlend. This project is addressing the technical barriers to blending hydrogen in natural gas infrastructure and studying life cycle emissions of hydrogen blends. The HyBlend project, which will encompass more than \$15 million in hydrogen research, will utilize expertise in Southern Company’s industry-leading R&D organization, along with industry partners, research consortia, academia and national laboratories. This includes six U.S. Department of Energy national laboratories–National Renewable Energy Laboratory, Sandia National Laboratories, Pacific Northwest National Laboratory, Oak Ridge National Laboratory, Argonne National Laboratory and the National Energy Technology Laboratory–and more than 20 participants from industry and academia. The two-year project was selected by the U.S. Department of Energy (DOE) Hydrogen and Fuel Cell Technologies Office in the Office of Energy Efficiency and Renewable Energy through the H2@Scale* 2020 CRADA Call.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
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Current regulation	Relevant, always included	<p>All relevant environmental laws and regulations are incorporated into our climate-related risk assessments and business risk evaluated in the annual risk profile process. One risk to our business from regulation in 2019-2020 was increased costs associated with compliance with unit-specific standards. For example, in 2019, the U.S. Environmental Protection Agency (EPA) published the final Affordable Clean Energy rule (ACE Rule) to repeal and replace the Clean Power Plan (CPP). Because the ACE Rule requires states to develop unit-specific CO₂ emission rate standards for existing coal-fired units, Southern Company subsidiaries reviewed the heat-rate efficiency improvements available at each affected facility, the range of potential unit-level emission rate standards that the states could assign to our units and potential associated compliance options. The potential range of costs associated with ACE Rule compliance were evaluated and incorporated in the annual risk profile process. The ACE rule has been vacated in 2021 and no replacement has yet been proposed.</p> <p>This example shows how the risk profile process includes assessment of potential costs, where applicable. The ultimate impacts of any regulation to the Southern Company system, however, will depend on federal agency actions, state implementation plan requirements, if applicable, and the outcome of associated legal challenges and are therefore regularly reassessed as new information arises.</p>
Emerging regulation	Relevant, always included	<p>All relevant environmental laws and regulations are incorporated into our climate-related risk assessments and business risk evaluated in the annual risk profile process. Southern Company considers emerging regulation in risk assessment by analyzing the potential impacts of proposed regulations. As climate related initiatives remain a focus area of Congress and Federal Agencies, Southern Company relies upon internal and external subject matter experts to understand the risks regulatory changes pose to company operations. A risk from emerging regulation is increased regulation applied to fossil fuels. For example, last year, in reviewing the U.S. House of Representatives Committee on Energy and Commerce’s Climate Leadership and Environmental Action for our Nation’s Future Act (CLEAN Future Act) discussion draft released January 27, 2020, Southern Company identified several risks associated with the discussion draft and provided comments to the Committee on Energy and Commerce. These comments explain our decarbonization objective as well as the specific risks for our operating companies and their customers, nationwide. In addition to engaging with stakeholders and policymakers to develop constructive policy that balances the principles of clean, safe, reliable and affordable energy, Southern Company considers various regulatory scenarios related to CO₂ in its analyses supporting major investment decision-making for the current and future generating plants of all its retail electricity businesses to further account for the risks regulatory changes may pose.</p>

Technology	Relevant, always included	<p>R&D, cybersecurity and generation technology risks are incorporated into our climate-related risk assessments and business risk evaluated in the annual risk profile process. The risk to our business from the incorporation of technology by customers is reduced demand for our primary products, electricity and natural gas. The adoption of technology by customers can have both a positive and negative impacts on sales. Many new technologies utilize less energy than in the past. However, electric and natural gas technologies such as electric and natural gas vehicles can create additional demand. Southern Company uses best available methods and experience to incorporate the effects of changes in customer behavior, state and federal programs, Public Service Commission (PSC) or other applicable state regulatory agency mandates and technology, but Southern Company’s planning processes may not accurately estimate and incorporate these effects. Southern Company recognizes and evaluates the risks associated with technology advancements and utilizes these risks as an opportunity to create innovative partnerships. For example, Southern Company brought online a microgrid project on the campus of Georgia Tech that allows Southern Company subsidiary Georgia Power to gain insight on how smart energy management systems can interact with the grid to achieve resilience and optimal utilization of energy. In 2020, Southern Company was selected by the U.S. DOE to lead a team that will design, construct and operate the Molten Chloride Reactor Experiment – the world’s first critical fast-spectrum salt reactor. The project will advance TerraPower’s Molten Chloride Fast Reactor (MCFR) technology and is expected to significantly reduce the technical, licensing and execution risks associated with development of an MCFR demonstration reactor that is expected to be operational by the early 2030s.</p>
Legal	Relevant, always included	<p>Litigation risks associated with compliance to current and emerging environmental regulations are incorporated into our climate-related risk assessments and business risk evaluated in the annual risk profile process. The risk of litigation exists for the Company if it does not comply with climate-related regulation. One key element in assessing and managing this risk is the Southern Company Audit Committee of its Board. This Committee reviews and guides risk management policies that include environmental compliance and other climate-related risks. In addition, the Company maintains an Environmental Management Council consisting of executives and directors from throughout the enterprise who review risks, communicate compliance options and develop policy. As an example of the Company’s ongoing assessment and management of risk, in 2020, Southern Company reviewed and revised its Environmental Management System to identify and address possible management gaps. Such management gaps could lead to a compliance or litigation risk if left unaddressed.</p>
Market	Relevant, always included	<p>Financial reporting and controls, financial integrity, long-term growth, demand of securities, and industry transformation are incorporated into our climate-related risk assessments and business risk evaluated in the annual risk profile process. Market related risk to our Company includes lower customer demand for our primary products, electricity and natural gas service. Changes in customer behaviors in response to energy efficiency programs, changing</p>

		<p>conditions and preferences, or changes in the adoption of technologies could affect the relationship of economic activity to the consumption of energy. Industry transformation is a climate-related risk with impacts across Southern Company’s enterprise. As one example of how the Company mitigates this risk, in 2016 Southern Company acquired subsidiary, PowerSecure, Inc. (PowerSecure), which is helping customers lower their cost and improve their energy efficiency, delivering clean, safe, reliable and affordable energy solutions. As a proven provider of multi-measure energy efficiency projects, PowerSecure has engineered, installed and commissioned more than \$800 million in innovative energy efficiency projects to better serve our customers and reduce energy consumption on the road to net zero.</p>
Reputation	Relevant, always included	<p>Corporate image, ethics and compliance incidents, safety, and workforce talent and culture are incorporated into our climate-related risk assessments and business risk evaluated in the annual risk profile process. Southern Company recognizes there is reputational risk if a third party incorrectly infers there is inaction or inadequate action on climate issues by the Company. In 2018, we published the Planning for a Low Carbon Future report to outline how we are taking steps to increase disclosure of our preparations for a low-carbon future. In 2020, we published an addendum to the 2018 report titled: Implementation and Action Toward Net Zero. In the recent iteration we provide further insights into how we are tackling these tough issues including setting a net zero carbon goal for our 2050 operations. In our state-regulated utility service territories, we have increased transparency in our regulatory filings over the past 4 or 5 years. Additionally, we work within the regulatory processes in our states to ensure decisions are in the best interest of customers and we are subject to PSC oversight of certain major decisions. In 2019, Georgia Power’s Integrated Resource Planning (IRP) resulted in the PSC approval of an additional 2,260 MW of future renewable generation to be added through 2024. These regulatory processes provide customers and stakeholders opportunities to provide input on the direction of the Company. Georgia Power will have the ability to use the renewable energy to serve their retail customers or sell the renewable energy or the associated renewable energy credits to third parties for the benefit of customers.</p>
Acute physical	Relevant, always included	<p>Infrastructure for generation, transmission and distribution is exposed to physical risks. Preparation includes redundant and flexible operations functions and facilities, as well as coordinating drills for responding to risks such as storms. The BSR Committee of the Board reviews and evaluates physical risks. Acute physical risk could include damage to our generation transmission and distribution systems following a weather-related impact. Southern Company R&D is working on technology options to maintain operational flexibility based on the identified needs of various system conditions. Our long-standing research of unmanned air systems is paving the way for purely automated grid inspections and greatly improving our storm restoration efforts. R&D has demonstrated wide-scale deployment of Edge of Network Grid Optimization (ENGO) devices to flexibly control the voltage profile on the distribution grid, enabling voltage reduction programs and distributed energy</p>

		<p>resource integration. This option reduces distribution peak demand by smoothing the voltage across the grid. We are addressing the geospatial climate impacts of geomagnetic disturbances to the transmission grid by actively monitoring solar storms, building accurate models and simulating various events to ensure system reliability. The Company is committed to continued investment in grid modernization including smart grid technologies for enhanced resilience and the advancement of customers and communities like those implemented at PowerSecure’s own campus Microgrid 360. Microgrid 360 is a state-of-the-art advanced microgrid that showcases ultra-clean and modular Tier 4 Final (ultra low emissions) engines, a solar array, fuel cells and a battery energy storage system. A modern grid and energy storage options allow for minimum disruptions in operations due to acute physical risks. Our gas business actively responds to acute physical demands on its distribution system. In 2019, the Northern Illinois Gas Company (Nicor Gas) territory in Illinois experienced record cold for several consecutive days. January 30, 2019 had an average temperature for the day of around 16 degrees below zero, about 40 degrees colder than normal. With a focus on proactive service appointment scheduling, added staffing for the event and constant monitoring of supply lines and reservoirs, Nicor Gas provided safe and reliable natural gas service to its 2.2 million customers with no major service outages during the event.</p>
Chronic physical	Relevant, always included	<p>Hardening and resiliency efforts are a focus for generation facilities, the transmission system and the distribution system. Preparation may include physical strengthening of structures, enclosing equipment, undergrounding of lines and additional tie lines. Business risks are evaluated in the risk profile process. The BSR Committee of the Board reviews and evaluates physical risks. Chronic physical risk to our facilities and infrastructure includes risks from flooding and hurricane-related damages.</p> <p>As a result of major hurricanes, like Hurricane Katrina in 2005, we have evaluated our facilities for flooding potential and instituted changes that have improved our resilience to recent hurricanes, including moving the Mississippi Power Operations Control Center further inland in 2008. This new operations center is located outside of a flood zone and miles away from the coastline. The facility is constructed to withstand 200 mile per hour winds and operate independently of public utilities for a few days. This results in an operations center that can be staffed 24/7 through the worst impacts of a hurricane.</p>

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation

Carbon pricing mechanisms

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

Costs associated with GHG policies could be significant to the utility industry and the Southern Company system. However, the ultimate impact of these potential policies will depend on various factors, such as the policy approach, framework and stringency, any state-level adoption and implementation requirements, the availability and cost of any deployed compliance strategies and associated technologies, and the outcome of any associated legal proceedings. For example, a hypothetical GHG policy resulting in a fee per metric ton of CO₂ would substantially affect the ways we economically dispatch our generation fleet.

Southern Company uses its CO₂ price paths in electric generation resource planning scenario analyses. The analyses consider both the evolution of the U.S. energy economy and the least-cost evolution of the Southern Company generating portfolio. In different scenarios, different paths for future CO₂ prices are assumed. The price path is assumed to arise from a future CO₂ control policy such as a carbon tax, clean energy standard, cap-and-trade program and/or Clean Air Act regulation.

Time horizon

Long-term

Likelihood

Likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1,500,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

In 2020, the Southern Company system's Scope 1 GHG emissions were 75 million metric tons of CO₂ equivalent (CO₂e), representing the Company's direct and current exposure to future GHG policies, all things held constant. This exposure, however, is dynamic due to numerous factors – e.g. Southern Company's electric generating fleet's ability to dynamically dispatch due to changing generation unit-level economics. Based on the Southern Company system's 2020 Scope 1 GHG emissions, a hypothetical GHG policy resulting in a \$20 per metric ton of CO₂e price would have exposed the Southern Company system's customers to approximately \$1.5 billion in higher operating costs in the single year 2020; however, this cost does not account for any mitigation measures that could have materialized—e.g., dispatching the electric generating fleet to reduce GHG emissions—or any opportunities that might offset the higher operating costs.

[75 million metric tons CO₂e * \$20/metric ton CO₂e = \$1,500,000,000.]

Cost of response to risk

4,766,000,000

Description of response and explanation of cost calculation

The cost of response to this risk is estimated using portions of the Company's capex plan for the next five years. Specifically, the cost listed is the cost of developing new zero-carbon renewable and nuclear generation in these years. This cost includes capex for nuclear (\$3,850,000,000) + hydropower (\$630,000,000) + solar (\$121,000,000) + other renewables (\$165,000,000) = \$4,766,000,000. The investment in carbon-free resources is part of our near-term business strategy to provide affordable energy to our customers. These carbon-free resources serve a dual purpose as they inherently reduce our overall risk to carbon pricing mechanisms.

The provided cost of response only represents a portion of the possible cost. The potential financial impact of GHG policies depends on numerous unknowns – e.g., a policy's approach, framework and stringency, any state-level adoption and implementation requirements, the availability and cost of any deployed compliance strategies and associated control technologies, and the outcome of any associated legal proceedings. Additionally, future GHG policies may present opportunities for Southern Company by incentivizing energy efficiency through electrification and natural gas utilization to reduce GHG emissions across the entire economy. The Southern Company system's financial exposure to future GHG policies will ultimately depend on the policy approach, framework and stringency, any state-level adoption and implementation requirements, the availability and cost of any deployed compliance strategies and associated control technologies, and the outcome of any associated legal proceedings.

Additional management cost would be anticipated; however, without details related to the policy, it is difficult to provide an estimate of the future level of support necessary.

Comment

Southern Company aims to minimize its exposure across the energy value chain as it makes, moves and sells energy to a wide customer base. Southern Company's business model relies heavily on state-regulated electric and natural gas investments as well as long-term, contracted energy infrastructure. Southern Company's wholesale portfolio includes natural gas, coal, nuclear and renewable electric generating assets and energy storage, electric transmission and distribution, local natural gas distribution, midstream natural gas transmission and distributed energy infrastructure. In 2020, the electric generation mix was 17% coal, 51% natural gas, 17% nuclear and 15% renewables/other.

Southern believes that operating a customer-centric business model provides the opportunity to effectively respond to future GHG policies and the potential to succeed in a transition to a net zero business environment. Southern has anticipated and incorporated GHG pressure into its scenario planning and enterprise risk management practices for more than ten years. These practices have allowed Southern Company to evaluate and manage the risk around GHG emissions and make decisions that are in the best interest of customers. Southern Company has also applied substantial resources to the technology necessary to move toward a low-carbon future and is committed to providing clean, safe, reliable and affordable energy, with a goal of transitioning to net zero operations by 2050.

Future GHG policies, depending on the approach and structure, could present a range of risks and opportunities. Since the Southern Company system's current portfolio includes assets that rely upon the utilization of carbon-based fuels, future GHG policies could increase the Southern Company system's costs (e.g., operating costs) and, thus, increase customer prices associated with the ultimate delivery of energy. Opportunities include an increase in energy efficiency through electrification of higher carbon intensive sectors like transportation and investments in renewable natural gas and low carbon fuels utilization to displace higher carbon intensive fuels to reduce GHG emissions across the entire economy.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Downstream

Risk type & Primary climate-related risk driver

Market

Changing customer behavior

Primary potential financial impact

Decreased revenues due to reduced demand for products and services

Company-specific description

The energy sector is rapidly evolving, driven by customer preferences, technology advancements, commodity process, energy security and resiliency efforts, and ESG initiatives. Southern Company is committed to providing clean, safe, reliable and affordable energy, while transitioning to net zero operations by 2050. Customers in our retail service territories are increasingly conscious of their environmental impacts and are actively setting their own GHG

emission reduction goals. For example, there is a risk of reduced demand for retail electric services due to customer implementation of low- or no-carbon distributed generation.

Changes in customer behaviors in response to energy efficiency programs, changing conditions and preferences or changes in the adoption of technologies could affect the relationship of economic activity to the consumption of energy. Both federal and state programs exist to influence how customers use energy, and several of the traditional electric operating companies and Southern Company Gas local distribution companies have PSC or other applicable state regulatory agency mandates to promote energy efficiency. Conservation programs could impact the financial results of the Company in different ways. For example, if any traditional electric operating company or Southern Company Gas local distribution company is required to significantly increase investment in conservation measures that result in additional reduced sales from effective conservation, regulatory lag in adjusting rates for the impact of these measures could have a negative financial impact on the company.

Time horizon

Long-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

329,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Revenue from Southern Company subsidiary, PowerSecure, from energy efficiency services in 2020 = \$31,000,000.

Revenue from Southern Company subsidiary, PowerSecure, from microgrid-related services in 2020 = \$ 298,000,000.

Total impact in 2020: \$329,000,000.

This value was used as a placeholder to demonstrate an estimate of the potential annual financial impact due to deployment of microgrids, or similar technologies, to meet customer demand in the retail electric service territory; actual impacts would be expected to vary from this value. For the regulated utility, customer investment in energy efficiency and/or microgrid facilities might roughly approximate the lost revenues to the regulated utility as a result of reduced purchases of utility energy. Costs associated with a transition to low-emission

technologies could be significant to the utility industry and the Southern Company system along with our customers. The ultimate impact of this transition will depend on the development of new and more cost-effective energy conversion, delivery and use technologies. Since the 1960s, Southern Company has actively engaged in robust R&D that grows the value of energy services to customers.

Cost of response to risk

425,000,000

Description of response and explanation of cost calculation

The number provided, \$425,000,000, is the cost to acquire PowerSecure in 2016. This cost is the full price paid as an investment in a new area of business. PowerSecure provides innovative and advanced energy solutions including distributed generation, energy storage, renewables, energy efficiency and advanced controls to serve customers in a variety of industries. Bringing this subsidiary into the Southern Company system enhances our ability to meet customer demands and provide services within the retail electric footprint and beyond. In addition, retail operating companies continue to work with customers to provide regulated, rate-based solutions that enhance reliability as well as sustainability, such as the solar panels installed by Georgia Power at the Atlanta Falcons stadium. The Southern Company system is continuing to gain expertise and drive down costs of distributed generation through R&D and practical applications.

Comment

At Southern Company, the R&D program, along with PowerSecure, has supported the development of an urban microgrid test bed in conjunction with Georgia Tech to evaluate how diverse distributed energy resources (DERs) can effectively integrate into and operate as part of the electrical grid. This demonstration features multiple DERs, including an energy storage system, fuel cell and diesel and natural gas generators.

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Downstream

Risk type & Primary climate-related risk driver

Market
Changing customer behavior

Primary potential financial impact

Decreased revenues due to reduced demand for products and services

Company-specific description

The energy sector is rapidly evolving, driven by customer preferences, technology advancements, energy security and resiliency efforts, and environmental, social, and governance initiatives. Customers are actively seeking options to decrease their energy usage. This includes making their homes more energy efficient. Building codes are evolving, and new homes are constructed to be more energy efficient, decreasing the demand for electricity and

natural gas. There is potential for continued decreases in electricity and natural gas usage by retail customers in years to come.

Southern Company, through its subsidiaries, provides a substantial portion of the electric service to several cities that have expressed interest in energy efficiency and renewable energy goals. In 2019, Atlanta City Council unanimously passed a resolution to achieve 100 percent clean energy by 2035. Also, in Georgia, the Athens-Clarke County government signed on to a 100% clean energy initiative. In 2018, the mayor of Birmingham, Alabama signed a 100% sustainable energy pledge. These examples of community-wide renewable commitments in our service territory demonstrate the movement to a more energy efficient and renewable-centric customer base.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

4,000,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The ultimate impact of this transition will depend on the level of uptake in the construction arena for new energy efficiency products and techniques that reduce the energy demand for a given home. The estimate provided assumes all existing residential homes in our retail service territory reduce energy use commensurate with the best available energy efficiency technologies overnight. A few additional assumptions were used to develop this high-level estimate: all residential customers are considered single family and all customers have electric heat and electric water heaters. This cost estimate is provided for demonstration purposes and does not reflect actual expected performance. The actual financial impact would be expected to vary greatly from this high-level estimated value.

Total revenue assuming energy efficiency is not implemented widely: \$7,000,000,000

Total revenue assuming energy efficiency is implemented broadly: \$3,000,000,000

Total illustrative impact of energy efficiency: \$4,000,000,000

Cost of response to risk

4,400,000

Description of response and explanation of cost calculation

The cost provided for the response to risk represents the 2020 budget in R&D areas related to end use technologies (approximately \$2,600,000) and distributed generation and storage (approximately \$1,800,000). $\$2,600,000 + \$1,800,000 = \$4,400,000$

R&D budget dollars in 2020 is used as the estimation for the cost of response to risk in 2020. These R&D expenditures are aimed at increasing electrification and utility owned reliability services by understanding and promoting end use products and services, including ones that increase reliability. This is not a comprehensive representation of the cost of our response to this risk. Southern Company's R&D portfolio over the past decade has returned benefits exceeding 10 times our investment. A key focus of this research is to provide a variety of future technology options for commercial, industrial and residential customers. In addition, Southern Company is a founding partner of Energy Impact Partners (EIP), a global investment platform that invests with venture, growth, and credit strategies in technology companies impacting the energy and utility industries. EIP is a means for the Company to further identify and mitigate some of the market risk by gaining insights into emerging technologies and business models. EIP has invested in over 50 portfolio companies since its inception in 2016 and already has achieved 10 successful exits. These successes include Ring, the smart doorbell maker acquired in 2018 by Amazon, and Greenlots, the leading electric vehicle charging infrastructure company acquired by Shell in 2019. Collaborating with the EIP portfolio companies helps Southern Company remain on the cutting edge of disruptive technology while uncovering new revenue opportunities and identifying potential partnerships. This is just one of the ways we are working to shape the future of energy. By leveraging these partnerships and gaining a foothold in new revenue streams, the Southern Company system can then provide products and services to customers that go beyond meeting their electricity needs. Southern is also a key partner for EIP's deep decarbonization initiative, which is focused on identifying new advanced technologies to drive down GHG emissions and meet net-zero goals.

Comment

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical

Increased severity and frequency of extreme weather events such as cyclones and floods

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

Southern Company remains vigilant in its commitment to maintaining robust and resilient energy infrastructure that is capable of reliably delivering energy during unexpected, high-impact events such as natural and man-initiated disruptions.

Much of our electric generation, transmission and distribution footprint is located within the Southeast region, which is at relatively higher risk for impacts from severe storm events, such as tornados and hurricanes. Based on historical experiences with all extreme weather events, structures throughout the system have been evaluated and hardened to better protect against damages from high winds, flooding and extreme low temperatures (e.g., use of concrete poles, weatherization of generating equipment, and strengthening of cooling towers for generation units near the coasts).

As demonstrated by Southern Company's ability to timely respond to catastrophic weather events, the vertically-integrated structure, state-regulated planning processes, diverse generation fleet, and robust transmission grid and pipeline network have all contributed to our ability to maintain resilient electric and natural gas distribution systems. If a high-impact event, such as an extreme weather event, occurs in our footprint, Southern Company can quickly optimize varied scarce resources and efficiently restore service to critical customers and, ultimately, to all customers.

Part of the restoration process is ensuring critical facilities are brought back up quickly. Hurricane Zeta will be remembered as one of the most destructive storms in Alabama history and for its late-season impact – days ahead of the Nov. 3 election. Zeta left many in Alabama and Mississippi without power, with companies executing a significant response to provide service to both those affected and polling locations for voters to safely cast their ballots. In December 2020, the Alabama Secretary of State invited Alabama Power to join other state power providers to accept a National Association of Secretaries of State (NASS) Medallion Award "to recognize outstanding service and dedication to furthering the mission of NASS." Mississippi Power was similarly recognized by the Mississippi Secretary of State in April of 2021.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Unknown

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The financial impact of physical risks is not reported here due to the uncertainty inherent with weather conditions. Southern Company has operations susceptible to a variety of natural disasters and imparts this risk in the company's preparedness procedures as outlined below. The costs associated with any specific event cannot properly quantify future impacts. The Southern Company system works closely with its PSCs to help ensure weather-related risk mitigations are accounted for in our rate making processes.

Cost of response to risk

Description of response and explanation of cost calculation

Southern Company focuses on the following key elements to strengthen resilience and reliability:

- Resource adequacy and diversity, including baseload and other dispatchable generation for electric system and a high quality system planning and capacity model for natural gas system;
- Fuel assurance, such as firm transportation for natural gas, onsite fuel reserves, natural gas storage capabilities, dual-fuel capability, and the resilience of the natural gas supply chain;
- Structural hardening, where appropriate, to protect against damages from high winds, flooding and extreme low temperatures (e.g., use of concrete poles, weatherization of generating equipment and strengthening of cooling towers for generation units near the coasts);
- Operational readiness, including training, drills, threat analysis, and communication throughout the Southern Company system;
- Recognition of the role of state regulators who have jurisdiction over resource planning and other critical aspects of system resilience; and
- Accommodation of regional approaches to resilience—a one-size fits all approach is counterproductive due to regional differences in the availability of wind, geothermal, hydro and other natural energy resources.

The Southern Company system is continuously evaluating its facilities and procedures to better prepare for extreme weather events. Our regulated electric utilities have enhanced storm response programs across the system through mutual assistance agreements and spare equipment inventory for crucial equipment.

Critical infrastructure protection is another focus of our resiliency efforts. Operations uses a multifaceted approach including specific emergency action plans, trainings, and event learning events. The company commits to spending operations and maintenance budget towards equipment maintenance and vegetation management to help reduce the impact when severe weather enters the service territory.

Increasing winter electrical and natural gas energy demands on the Southern Company system have challenged operations. The fleet protection program addresses all aspects of winter weather operations and is structured to prepare the company's generating operations for approaching weather, including freezing and sub-freezing temps.

Comment

In 2020, a year of extreme weather, PowerSecure solutions delivered top-notch resiliency performance and tangible customer benefits in 2020: 566 PowerSecure systems in 19 states provided resiliency during storms and fires, with an impressive 99.5% successful run rate. Not only did these systems achieve valuable outage cost savings, they also avoided business disruption when their customers and communities needed them the most.

Our retail electric utility subsidiaries' restoration abilities have been nationally recognized dozens of times through the EEI's Emergency Recovery Award. Most recently, in 2021, Georgia Power accepted the award for help provided to First Energy following Hurricane Isaias, a destructive Category 1 hurricane that caused extensive damage across the Caribbean and the East Coast of the United States.

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development of new products or services through R&D and innovation

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

The transportation sector accounted for 29% of the total U.S. CO₂ emissions in 2017 according to EPA. Transitioning this sector from the heavy use of fossil fuels presents the largest opportunity in realizing a net-zero future. We are exploring opportunities for carbon reductions from the transportation sector through our electric vehicle (EV) and hydrogen research efforts.

In the Southern Company retail electric service territory, there are estimated to be over 3.2 million vehicles based on state vehicle registrations from 2017. To encourage EV adoption, Alabama Power provides EV charging for employees and visitors at more than 154 charging

stations at 47 company locations in the state. Georgia Power has installed 50 public community chargers across Georgia and 113 chargers for employees across 22 company locations. Mississippi Power has installed 27 electric vehicle chargers at company locations in Mississippi.

In 2020, Southern Company announced an internal fleet electrification goal of converting 50% of its electric company's fleet vehicles in the auto/SUV/minivan, forklift and ATV/cart/miscellaneous equipment segments to electric by 2030.

In early 2021, Southern Company announced a partnership with five other energy companies to ensure EV drivers have access to a seamless network of charging stations connecting major highway system across the Southeast. This network is designed to take advantage of the estimated 18 million EVs the EEI estimated will be on U.S. roads by 2030.

It is important to note that natural gas infrastructure can be used to not only reduce the carbon footprint for energy delivery, but to also reduce GHG emissions from other economic activity, like transportation. Compressed natural gas (CNG) vehicles reduce GHG emissions on a wellhead-to-wheel basis by 13-17% compared to gasoline and diesel. When CNG vehicles are fueled with RNG sourced from landfills, water treatment facilities, agricultural waste, etc., this reduction of GHG emissions increases up to 70 – 90%, or even carbon negative in the case of certain animal waste digesters. Since 2012, Atlanta Gas Light (AGL) has built \$30 million worth of public and private CNG fueling stations for customers in Georgia through its tariff programs and turnkey construction contracts. There are 55 total CNG stations in Georgia, and 40 of these are on AGL's system. These stations range from large transit size stations to smaller installations for a handful of light duty vehicles.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

1,200,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The ultimate impact of electrifying the transportation sector and implementing additional CNG infrastructure will depend on various factors, such as state adoption and implementation of

requirements, tax incentives, vehicle cost and the advancement of electric and alternative fuel vehicles and/or battery technology. To demonstrate the potential financial impact, we considered the impact of converting truck fleets in our electric service territories to fully electric trucks. The figure provided is based on the assumption that our electric power customers electrify their truck fleets at the same rate as the U.S. truck fleet at large, resulting in \$1.2 billion in cumulative revenue through 2040. The assumed rate of U.S. truck fleet electrification was determined based solely on vehicle economics. This estimation considered only one type of fleet truck and did not consider passenger vehicles.

Cost to realize opportunity

1,000,000

Strategy to realize opportunity and explanation of cost calculation

Cost is reflective only of annual dedicated R&D budget including funding of projects within EPRI. This cost includes more than \$600,000 for manpower and project expenses and nearly \$400,000 towards EPRI funding. There would be additional costs associated with realizing this opportunity that are not estimated here.

We are also actively engaged in advancing the electrification of transportation and supporting CNG, hydrogen and LNG for road, maritime and high horsepower vehicles, which will reduce transportation costs for customers while reducing GHG emissions. This includes: promoting customer education and awareness; working with vehicle manufacturers and EPRI to bring viable on-road EV technologies to market; helping develop charging infrastructure and improve vehicle/grid integration plans for efficient distribution; and offering lower electricity rates and programs for off-peak usage, which helps commercial and industrial customers reduce their operating costs and environmental impact.

As an example of implementation, Georgia Power has established the Make-Ready Program to invest a total \$18 million dollars in EV infrastructure over the next three years. This program, which is available to public and private entities, will upgrade infrastructure equipment, including wires, transformers, and panels, for new customer-owned charging stations. Because Georgia Power will install, operate, and maintain the electrical infrastructure and can arrange customer-owned charging station installations, electric transportation in Georgia should become more accessible and diversified for all customers through expansion of geographic availability of charging stations and the variety of applications.

The Alabama Department of Economic and Community Affairs (ADECA) has announced plans to expand EV fast charging infrastructure along portions of Interstates 20 and 459. To further promote the growth of EVs, Alabama Power will support ADECA by matching up to 20% of the cost to install DCFCs (direct current fast charger). This advanced technology can charge many types of EV batteries in 20 to 30 minutes. Alabama Power intends to support the ADECA awards for DCFC infrastructure to be built along corridors within Alabama Power's territory with up to \$1 million in funding for qualifying customers.

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Primary potential financial impact

Other, please specify

Reduced exposure to GHG emissions and therefore less sensitivity to changes in cost of carbon

Company-specific description

The subsidiaries of Southern Company are engaged in developing energy delivery opportunities to reduce GHG emissions for customers. Southern Company subsidiary, Southern Power, is a leading U.S. wholesale energy provider meeting the needs of municipalities, electric cooperatives, investor-owned utilities and commercial and industrial customers. These partnerships have created a company that has 2,533 MW of wind generation and 2,395 of solar generation in 14 states. In February 2021, the company announced its fourteenth wind facility, the first in South Dakota, the 300-MW Deuel Harvest Wind Farm. Southern Power announced the acquisition of its fifteenth wind project and fifth in the state of Oklahoma — the 118-MW Glass Sands Wind Facility from Steelhead Americas in April 2021.

PowerSecure, another Southern Company subsidiary, is the nation's leading distributed energy innovation company. PowerSecure's team of experts has developed, installed, managed and serviced 2.0+ GW of microgrid capacity over the past 20 years across more than 2,100 sites. PowerSecure continues to be the market leader in U.S. microgrid solutions deployment as reported by Wood Mackenzie in January 2021.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

329,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Revenue from Southern Company subsidiary, PowerSecure, from energy efficiency services in 2020 = \$31,000,000.

Revenue from Southern Company subsidiary, PowerSecure, from microgrid-related services in 2020 = \$298,000,000.

Total impact in 2020: \$329,000,000.

This financial figure representing 100% of 2020 annual revenue for energy efficiency and microgrid services for PowerSecure is used here as a placeholder to demonstrate the potential financial impact from increased distributed generation in Southern Company. The opportunity for capital investment in low-emitting energy sources could be significant to the utility industry and the Southern Company system. The ultimate impact of low- to no-emission resources will depend on various factors, such as technology development and availability, cost and regulatory and tax drivers.

Cost to realize opportunity

1,800,000

Strategy to realize opportunity and explanation of cost calculation

Cost shown is reflective of the 2020 annual R&D budget dedicated to renewables, energy storage and distributed generation, which is \$1.8 million. There would be additional costs associated with realizing this opportunity that are not estimated here.

The energy sector is rapidly evolving, driven by customer preferences, technology advancements, commodity process, energy security and resiliency efforts, and ESG initiatives. Southern Company is committed to providing clean, safe, reliable and affordable energy, with a goal of transitioning to net zero carbon operations by 2050. We have partnered with the U.S. Army, Navy, Marine Corps and Air Force to develop innovative renewable energy generation projects on 33 Federal sites. Southern Company and its subsidiaries Alabama Power, Georgia Power and Mississippi Power have military solar projects online or under contract totaling more than 400 MW as of 2020. This partnership with the Department of Defense helps meet the military's goals to improve mission resilience and support the development of new renewable generation resources nationwide while the operating companies, generally, receive the energy and RECs from the projects which they may use to serve customers or sell to third parties for the benefit of customers. In 2021, Southern Power was awarded two 20-year power purchase agreements by Southern California Edison and is adding 160 MW and 640 MWh of energy storage at two sites in California to improve grid reliability with flexible resources capacity. Another demonstration of how Southern Power is able to meet customers' needs at the energy industry continues to evolve. Through our planning process and customer partnerships, Southern Company and its subsidiaries will continue to evaluate and develop program designs to meet customers' goals. We also have numerous R&D projects underway to determine the potential of emerging cost-effective renewable resources and technologies.

Comment

Overall, Southern Company's wholesale generation portfolio included more than 10,500 MW of renewable resources online in 2020 and that number will continue to grow as the Company's generating fleet is expected to have more than 14,000 MW of renewable resources by 2024. It should be noted when the Southern Company system's retail electric utility subsidiaries purchase energy from or build renewable generation sources, if they have the right to the RECs associated with these resources, they retain the ability to use the RECs to serve their customers with renewable energy or sell the RECs, either bundled with energy or separately, to third parties for the benefit of customers.

One way solar is growing is through our customer renewable programs, such as the Customer Renewable Supply Procurement (CRSP) program. The CRSP program will support commercial and industrial (C&I) customer's sustainability goals through renewable energy subscriptions. This service is designed to help large energy consumers reduce their electric carbon footprint, while maintaining low costs and high reliability. Additionally, in January 2019, Georgia Power filed its 2019 Integrated Resource Plan (IRP) with the Georgia PSC. As included in the IRP order, 1,000 MW of renewable energy was designated for renewable subscriptions by C&I customers through the CRSP program by 2024. Participating customers may purchase a monthly subscription and receive hourly credits based on the actual production of the portfolio of renewable facilities procured to supply the program. Georgia Power will retire the RECs generated by the renewable portfolio on behalf of the participating customers. This innovative program design allows individual customers to support significant growth of renewable resources as part of the evolution of Georgia Power's reliable and diverse resource mix. Georgia Power purchases only the net energy output from some renewable generating facilities that have contracted to sell that energy to Georgia Power. Ownership of the associated RECs is specified in each respective power purchase agreement. The party that owns the RECs retains the right to use them.

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development of new products or services through R&D and innovation

Primary potential financial impact

Other, please specify

Better competitive position to reflect shifting consumer preferences, resulting in increased revenues.

Company-specific description

Our long history of incorporating distributed generation into our energy mix began in the late 1970s and continues today. The integration of cost-effective energy storage with intermittent renewable generation is one of the key options that can help lower GHG emissions and provide an opportunity for growth through the sale of additional products and services. Alabama Power and Georgia Power, in partnership with Southern Company R&D, have developed Smart Neighborhoods in Birmingham, Alabama and Atlanta, Georgia respectively, to evaluate how high-performance homes operate and benefit both customers and the utility. These Smart Neighborhood projects will help to develop new methods to integrate solar, battery storage and controllable electrical end-uses, such as water heaters, thermostats and electric vehicle chargers. These projects could provide a model for developing similar communities throughout the Southeast U.S. Alabama Power's new Smart Neighborhood Builder Program partners with homebuilders to build energy-efficient homes that feature advanced energy products and home automation.

Over the past 10 years, we have made major investments in smart grid technologies including deploying approximately 4.6 million smart meters, or advanced metering infrastructure, helping customers better manage their energy use and save money. We are also conducting collaborative, industry-wide research with EPRI, for the ongoing development of transmission system monitoring, diagnostics and visualization tools that will facilitate decisions and mitigation measures to enhance system performance, efficiency and reliability. We have numerous research and development projects underway across our system to develop technologies associated with renewable resources, energy storage and distributed generation. Research areas include solar photovoltaic (PV) deployment, operation and maintenance, solar resource forecasting, tall tower wind generation, and bulk-power system integration of variable generation sources.

These investments in new products and services, smart grid technologies and renewables help both position us to be able to integrate higher penetrations of intermittent renewables and grow earnings for our investors, while maintaining grid stability and reliability.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

329,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Revenue from Southern Company subsidiary, PowerSecure, from energy efficiency services in 2020 = \$31,000,000.

Revenue from Southern Company subsidiary, PowerSecure, from microgrid-related services in 2020 = \$298,000,000.

Total impact in 2020: \$329,000,000.

The financial impact captured here is reflective of the 2020 revenues for energy efficiency and microgrid services from PowerSecure. The opportunity for capital investment in new products and services that meet customer preferences could be significant to the utility industry and the Southern Company system. Cost of capital investments is dependent on the speed of new low-to no- emission resource development, installation costs and customer preferences.

Cost to realize opportunity

2,600,000

Strategy to realize opportunity and explanation of cost calculation

Cost shown is only reflective of 100% of the 2020 R&D budget related to end-use technologies. The number is calculated by summing the R&D budgets for each end-use technology research program. There would be additional costs associated with realizing this opportunity that are not estimated here. Southern Company subsidiary, PowerSecure, has cemented its reputation as a market leader in the distributed infrastructure market. PowerSecure customizes advanced energy solutions that provide commercial, industrial and institutional customers with a variety of benefits, including resiliency, reduced energy consumption and economic efficiencies. PowerSecure solutions are designed to improve resiliency and redundancy, and provide higher power quality for customers that can be impacted by unanticipated power disruptions. In addition, PowerSecure solutions also are designed to reduce energy consumption and provide clean energy options and the flexibility to reduce carbon footprint. Southern Company will also continue our industry-leading R&D, as well as active participation in the EPRI, with particular focus on technologies that lower GHG emissions.

Comment

In 2019, Southern Power announced a partnership with esVolta, a prominent developer and owner of lithium-ion battery storage projects. The partnership includes up to four utility-scale energy storage projects located in California totaling more than 86 MWs and 345-megawatt hours.

In 2020, Alabama Power's Smart Neighborhood was awarded the 2020 Smart Grid award by POWER Magazine for its blend of modern technology and energy efficiency in the project.

And most recently, Mississippi Power and Southern Company R&D also received approval from the Mississippi PSC to proceed with the Walnut Grove microgrid, a project that will study next-generation PV (bifacial panel at high DC:AC ratios) coupled with energy storage.

C3. Business Strategy

C3.1

(C3.1) Have climate-related risks and opportunities influenced your organization’s strategy and/or financial planning?

Yes, and we have developed a low-carbon transition plan

C3.1a

(C3.1a) Is your organization’s low-carbon transition plan a scheduled resolution item at Annual General Meetings (AGMs)?

Is your low-carbon transition plan a scheduled resolution item at AGMs?		Comment
Row 1	No, and we do not intend it to become a scheduled resolution item within the next two years	

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

Yes, qualitative and quantitative

C3.2a

(C3.2a) Provide details of your organization’s use of climate-related scenario analysis.

Climate-related scenarios and models applied	Details
Other, please specify Internal Scenario Planning	Our state-regulated electric operating companies’ integrated resource planning processes allow updates to the scenarios, which look out over a 30-year horizon, as well as incorporation of recent commodity and economic indicators and policy trends, including pressure on CO2 emissions. We use a robust scenario planning process that has two primary components: energy economy modeling and integrated resource planning. We continue to evaluate this process on an annual basis, and it is therefore subject to change. The time horizon for this process is at least 30 years, which is appropriate for our industry considering the life of assets, which exceed 60 years in many cases. Each year Southern Company develops about ten scenarios. These scenarios consider views of the future that vary with respect to degree of pressure on CO2 emissions, price of fuels, cost and performance of generating technologies and load growth. This scenario format also serves as a basis for integrated resource planning at the state-regulated electric operating companies – Georgia Power, Alabama Power and Mississippi Power – and ultimately informs major generation retirement and capital investment decisions. These scenarios include a set of views on the potential price of CO2 emissions. In 2020, these included \$0, \$10, \$20, and \$50 per metric ton of CO2 emitted. This range of potential requirements is informed by and aligned with national climate policy discussion, including potential legislation and EPA regulation.

	<p>Integrated resource planning provides an orderly and reasoned framework where generation supply and demand-side options are analyzed across the state-regulated electric operating companies with the objective of providing reliable and affordable energy that meets customers' needs over the planning horizon. In the last decade, Southern Company's state-regulated electric operating companies have developed a carbon-free generation mix of approximately 14,000 MW while retiring 6,300 MW of coal- and oil-fired generation as part of the integrated resource planning process.</p> <p>In 2019, Georgia Power filed its 2019 IRP. The plan is a result of the in-depth integrated resource plan process, which includes projections of future fuel costs, load and energy forecasts, an analysis of available generation technologies, the 10-year transmission plan and an economic assessment of potential and proposed energy efficiency and demand response programs. The Company also evaluates the cost-effectiveness of its generating resources given changing environmental regulations and emerging technologies and discusses the growing importance of resilience to the electric system. This planning process resulted in the regulatory approval of an IRP for Georgia Power which includes 80 MW of battery storage and over 2,210 MW of renewable energy resources by 2024. Similar IRP processes at each of our state-regulated electric operating companies build into our overarching strategy process. Georgia Power purchases only the net energy output from some renewable generating facilities that have contracted to sell that energy to Georgia Power. Ownership of the associated RECs is specified in each respective power purchase agreement. The party that owns the RECs retains the right to use them.</p>
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C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Beyond providing clean, safe, reliable, and affordable energy to customers, we are seeking new ways that our customers can efficiently use our products. Southern Company is a primary partner in Energy Impact Partners (EIP). EIP is a global investment platform leading the transition to a sustainable energy future. EIP brings together entrepreneurs and the world's most forward-looking energy and industrial companies to advance innovation. Through collaboration with its investor base, EIP seeks to bring the best companies' buying power and vision in the industry to bear on the emerging energy landscape. We are a leader in offering innovative electric and natural gas efficiency programs that help our customers use energy more wisely. These programs have been successful across our state-regulated

		<p>electric utilities and, since 2007, Southern Company has invested approximately \$1.2 billion in energy efficiency and demand response. The result of this investment is the ability to reduce peak demands by over 5,600 MW. In 2011, Nicor Gas, a subsidiary of Southern Company Gas, set a goal to work with its customers to save more than 16 million therms annually through the energy efficiency program. That equates to a reduction of more than 840,000 metric tons of CO2 emissions. Looking forward, we are on a path to help our customers save even more and further reduce GHG emissions through our electric and natural gas energy efficiency offerings.</p>
<p>Supply chain and/or value chain</p>	<p>Yes</p>	<p>Southern Company's OES Board Committee reviews significant operations which include fuel cost and availability. In the short term, both Southern Company Gas and Southern Company have updated their natural gas bid selection process to offer a competitive edge to natural gas suppliers committed to GHG reductions in their own businesses. Southern Company Gas has been actively investing in infrastructure modernization and improvements to replace aging natural gas pipelines. Southern Company Gas is a founding member of ONE Future, which has members with a geographically diverse and material share of the U.S. natural gas supply chain, with a goal to collectively achieve a science-based rate of fugitive methane emissions across the entire natural gas supply chain (from production through consumption) equivalent to 1% or less of total natural gas production. Southern Company Gas is engaging in the ONE Future program to also promote the production of natural gas in a more sustainable way from its upstream suppliers. For example, Virginia Natural Gas (VNG), a subsidiary of Southern Company Gas, announced that it aspires to provide its customers with natural gas that is sourced, transported and distributed by companies that have pledged to reduce GHG emissions to less than 1% across the natural gas value chain. This announcement provides an example of the significant importance of supply chain in our business strategy. As a down payment on that pledge, in October 2019 the company began purchasing 20% of its customers' annual natural gas supply from select low-fugitive emission wells — making a "wellhead to burner tip" supply chain of low-emission gas for customers. In early 2021, VNG sourced another 5% of next generation natural gas supply, bringing the purchase total up to 25%. In 2020, Southern Company Gas joined the Natural Gas Supply Collaborative, a voluntary organization of natural gas energy companies that are promoting safe and responsible practices for natural gas supply.</p> <p>In addition, wholesale subsidiary, Southern Power, has attempted</p>

		to insulate itself from significant fuel supply, fuel transportation, and electric transmission risks by generally making such risks the responsibility of the counterparties to its power purchase agreements (PPAs).
Investment in R&D	Yes	<p>Since the 1960s, Southern Company has actively engaged in robust, proprietary R&D that grows the value of energy services to customers. As part of our approach to reducing carbon emissions, nearly all our current R&D spend is focused on lower carbon-emitting technologies and is a significant portion of our business strategy. Southern Power participates in the industry-advocate partnership American Wind Wildlife Institute (AWWI) which is conducting research to better understand wind energy's risks to wildlife and develop solutions to avoid, minimize, and offset those impacts. We are also an active participant and a significant funder of EPRI, whose membership includes utilities throughout the world, as well as other R&D organizations like GTI. Southern Company R&D has identified critical technology pathways necessary to achieve this outcome, and is further refining its strategy for a net zero future to focus on the following objectives:</p> <ul style="list-style-type: none"> > Deliver an affordable, reliable, net zero energy system > Optimize energy delivery systems to support sector transformation > Serve customer energy needs holistically.
Operations	Yes	<p>No one in the U.S. is doing more in pursuing a full portfolio energy strategy. We believe developing and maintaining a diversified energy portfolio is essential to successfully reducing carbon emissions while maintaining reliability and affordability. As with R&D, diversification of our energy portfolio is a significant portion of our business strategy around reducing GHG emissions. Our portfolio was initially founded on zero-carbon hydroelectric generation and has grown to include nuclear, landfill gas, solar, wind, energy efficiency programs, demand response, coal, natural gas, and distributed resources. Over the last decade, we have significantly transformed our electricity generation mix. Recent generation decisions and environmental compliance strategies have led to the following:</p> <ul style="list-style-type: none"> • Since 2007, we have retired or converted to gas approximately 9,600 MW of coal and oil generating capacity representing more than 73% of our coal generation units and more than 50% of our coal generation capacity. The trends of additional coal generation retirements and renewable generation additions are projected to continue. • We invest in a diverse portfolio of low-carbon and carbon-free generation assets to serve customers and communities with a focus on maintaining reliability and affordability while reducing carbon emissions. Our current portfolio of more than 14,000 MW

		<p>of carbon-free resource capacity has established a foundation enabling us to continue our carbon reduction efforts. We anticipate adding approximately 3,500 MW of additional renewable generation sources by 2024.</p> <ul style="list-style-type: none"> • Along with our partners, we are building the first new nuclear units in the U.S. in more than 30 years. The units will add 1,000 MW to our existing 3,700 MW portfolio of carbon-free nuclear generation. • Investing \$13 billion in capital improvements for our transmission and delivery system to ensure resilient, fully integrated, self-healing energy delivery grids for unrestricted creation and use of low and no carbon energy sources.
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C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Indirect costs Capital expenditures Acquisitions and divestments Access to capital Assets	<p>The following financial planning elements are considered over the short-, medium-, and long-term time horizons, depending on the financial planning element.</p> <p>Revenues: Our energy infrastructure portfolio of primarily rate-regulated assets and assets under long-term contracts is designed to produce regular, predictable and sustainable earnings. The Southern Company system has made significant investment over the past decade in low- and no-carbon resources. We expect that if our subsidiaries continue to make major energy decisions that are in the best interest of customers that consider fuel and carbon risks and that are approved by the state regulators, each subsidiary will receive fair regulatory treatment regarding its regulated assets. We will continue to seek out opportunities outside of our rate-regulated assets to grow our renewable and energy storage portfolio.</p> <p>Operating costs / Indirect Costs: Our R&D spend, which is more than \$40 million per year, including the EPRI applied dollars, continues to significantly increase its focus on low, zero and negative carbon technologies.</p> <p>Capital expenditures: Through our subsidiaries, we are investing in developing low-carbon and carbon-free resources as evidenced by the addition of approximately 350 MW of new solar and nearly 500 MW of wind generation in 2020. Our current portfolio of more than 14,000 MW of carbon-free resource capacity has established a foundation upon which to continue our carbon reduction efforts. In addition to spending more on lower or zero carbon generation options, we do not intend to invest further in our existing thermal</p>

		<p>coal fleet, unless the investment ensures safety, affordability or reliability to serve customers or to comply with federal or state laws. Any such investments in the coal fleet would be expected to allow the Company to achieve its net zero goal by 2050. Over more than 20 years, Southern Company Gas invested greater than \$2 billion in pipeline and infrastructure replacements, and these improvements have reduced fugitive methane emissions.</p> <p>Acquisitions and divestments: As mentioned previously, we are helping to ensure that our customers can reliably and efficiently use our product. In May 2016, we acquired PowerSecure, which provides energy solutions to customers in the areas of distributed generation, energy storage and renewables and energy efficiency. With over 1.73 GW of distributed energy resources under management, PowerSecure continues to grow its national footprint as the nation’s leading distributed energy innovation company. Over the last decade, we have significantly transformed our electricity generation mix. As of December 2020, generation decisions and environmental compliance strategies have led to approximately 9,600 MW of coal- and oil-related generation retirements or conversions since 2007 and approximately 3,300 MW of coal capacity switched to use lower-carbon natural gas as a primary fuel since 2015.</p> <p>Access to capital: Impacted investors and credit rating agencies are increasingly focused on ESG issues, including climate-related issues. In 2018, we published our “Planning for a Low Carbon Future” report to enhance the information for investors related to the risks and opportunities in a low-carbon transition. We continue to communicate through disclosures like the CDP, “Planning for a Low Carbon Future” report, and the addendum “Implementation and Action Toward Net Zero” report that we published in 2020 to transparently convey our progress and forward-looking strategy. Loss of access to short-term money markets and long-term capital markets would significantly impact our business by reducing project funding options or increasing the cost of borrowing.</p> <p>Assets: We have seen a positive impact to our assets. We invest in a diverse portfolio of low-carbon and carbon-free generation assets to serve customers and communities.</p> <p>Liabilities: Not impacted. While each electric utility company in the Southern Company system owns and operates its generating resources, Southern Company’s retail electric generating fleet is economically dispatched to serve customer needs regardless of the location or company ownership of any specific generation unit. A range of planning scenarios is established, developed and modeled through the work of a coordinated planning team consisting of internal subject matter experts, company planning managers, and external experts that provide input on key parts of the analysis. A major goal of the resource planning process and environmental compliance strategy process</p>
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		is to make fully informed, risk adjusted decisions that are in the best interest of our customers.
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C3.4a

(C3.4a) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).

Climate change is real and we are committed to finding and implementing solutions that meet the needs of the customers and communities we serve. On February 19, 2021, the U.S. officially rejoined the Paris Agreement. On April 21, 2021, the U.S. submitted its nationally determined contribution (NDC) to the U.N., setting an economy-wide target of reducing its GHG emissions by 50-52% below 2005 levels in 2030.

The Paris Agreement is an opportunity for the U.S. to engage on a coordinated, global strategy to address the threat of climate change. Southern Company supports this objective by actively advancing a net zero goal in direct alignment with the commitments of this landmark accord. We look forward to advancing our clean energy agenda, both independently as a publicly-held utility working closely with our customers and regulators, and with other policymakers as details and associated policies are developed to achieve the updated U.S. nationally determined contribution (NDC) within the Paris Agreement.

Southern Company is committed to providing clean, safe, reliable and affordable energy and reducing GHG emissions by developing the full portfolio of energy resources. Southern Company understands that operating in a CO2-constrained future will be a reality, and for more than a decade we have been planning and making business decisions with the expectation of a CO2-constrained future.

In April 2018, we set emission reduction goals that were aligned with strategies designed to address the long-term reduction of carbon emissions and our commitment to a leadership role in developing solutions that make technological and economic sense. The goals established in 2018 were to reduce GHG emissions by 50% (from 2007 levels) by 2030 and to achieve low-to-no GHG emissions by 2050. These were enterprise-wide goals that encompass the Scope 1 emissions from our electric and natural gas operations. In 2020, we revised our long-term goal to Net Zero by 2050. Our strategy to achieve these goals includes the continued development and deployment of a diverse portfolio of energy resources to reliably and affordably serve our customers and communities with a focus on reducing GHG emissions. To do this, we are aggressively growing our investment in renewable energy, modernizing the grid to optimize technology advancements, increasing the use of natural gas, building new nuclear generating units, continuing our industry-leading, robust R&D efforts, incorporating negative carbon solutions into our R&D and business plans, investing in reliability and resilience and investing in energy efficiency for savings on both sides of the meter. Transitioning to a net zero future will require continued advancement in technology. We also see potential to invest appropriately in new technologies that may emerge, mature and come to market through our PowerSecure subsidiary. We are also engaging with policymakers, customers and other stakeholders to help shape an energy policy that enhances optionality across the entire energy value chain and supports the development and deployment of more carbon-free energy sources, while ensuring that each state that we serve retains the ability to adequately plan and deploy resources that meet the needs of its citizens and communities. In 2020, we began to incorporate negative carbon concepts into our strategy to facilitate the transition to a net zero future.

As we plan for a cleaner energy future, we recognize that our current electric generation portfolio consists of high-capital, long-life assets. Efforts to further diversify our portfolio should be achieved through an orderly transition that accounts for the economic value of our existing assets. Our robust scenario based integrated resource planning process occurs annually and is a key component that we use to ensure that the right resources are deployed at the right time to maintain safety, reliability and affordability for customers. The planning process allows for updates to a number of assumptions, inputs and alternatives, including potential CO₂, fuel and other commodity prices, as well as economic or other policy indicators. The annual process allows each of our state-regulated utilities to actively work within its regulatory framework to ensure that emissions reduction efforts are in customers' best interests over time.

Nobody in the U.S. is doing more than Southern Company to pursue a full portfolio energy strategy. We believe developing and maintaining a diversified energy portfolio is essential to successfully reducing GHG while maintaining reliability and affordability.

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Absolute target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number

Abs 1

Year target was set

2018

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 1

Base year

2007

Covered emissions in base year (metric tons CO₂e)

156,650,363

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

100

Target year

2050

Targeted reduction from base year (%)

100

Covered emissions in target year (metric tons CO2e) [auto-calculated]

0

Covered emissions in reporting year (metric tons CO2e)

74,942,855

% of target achieved [auto-calculated]

52.1591565032

Target status in reporting year

Underway

Is this a science-based target?

Yes, we consider this a science-based target, but it has not been approved by the Science-Based Targets initiative

Target ambition

1.5°C aligned

Please explain (including target coverage)

In 2018, we set emission reduction goals that were aligned with strategies designed to address the long-term reduction of GHG emissions and our commitment to a leadership role in developing solutions that make technological and economic sense. The goals established in 2018 were to reduce GHG emissions by 50% (from 2007 levels) by 2030 and to achieve low-to-no GHG emissions by 2050.

These are enterprise-wide goals that encompass the Scope 1 emissions from our electric and natural gas operations. In 2020, we revised our long-term goal to achieve net zero GHG emissions by 2050. The goals are informed by the results of our integrated resource plans, which are designed to plan for an appropriate mix of generation resources to meet energy and capacity needs at a reasonable cost for our customers. These goals are also consistent with actions needed to potentially limit the global average temperature rise to less than 1.5 degrees Celsius above pre-industrial times--see EPRI's "Grounding Decisions: A scientific foundation for companies considering global climate scenarios and greenhouse gas goals" and "Review of 1.5°C and Other Newer Global Emissions Scenarios: Insights for Company and Financial Climate Low-Carbon Transition Risk Assessment and Greenhouse Goal Setting" reports.

Southern Company will continue to use a portfolio approach as we seek to decarbonize. We expect our path to net zero to be comprised of several key elements: continued coal transition, utilization of natural gas to enable the fleet transition, further growth in our portfolio of zero-

carbon resources, negative carbon solutions, enhanced energy efficiency initiatives, and continued investment in R&D focused on clean energy technologies. Our approach is driven by thoughtful scenario planning, long-term integrated resource plans, and constructive regulatory decision-making. We are also engaging with policymakers, customers, and other stakeholders to support outcomes that lead to a net zero future.

Target reference number

Abs 2

Year target was set

2018

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 1

Base year

2007

Covered emissions in base year (metric tons CO2e)

156,650,363

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

100

Target year

2030

Targeted reduction from base year (%)

50

Covered emissions in target year (metric tons CO2e) [auto-calculated]

78,325,181.5

Covered emissions in reporting year (metric tons CO2e)

74,942,855

% of target achieved [auto-calculated]

104.3183130064

Target status in reporting year

Underway

Is this a science-based target?

Yes, we consider this a science-based target, but it has not been approved by the Science-Based Targets initiative

Target ambition

1.5°C aligned

Please explain (including target coverage)

In 2018, we set emission reduction goals that were aligned with strategies designed to address the long-term reduction of GHG emissions and our commitment to a leadership role in developing solutions that make technological and economic sense. The goals established in 2018 were to reduce GHG emissions by 50% (from 2007 levels) by 2030 and to achieve low-to-no GHG emissions by 2050.

These are enterprise-wide goals that encompass the Scope 1 emissions from our electric and natural gas operations. In 2020, we revised our long-term goal to achieve net zero GHG emissions by 2050. The goals are informed by the results of our integrated resource plans, which are designed to plan for an appropriate mix of generation resources to meet energy and capacity needs at a reasonable cost for our customers. These goals are also consistent with actions needed to potentially limit the global average temperature rise to less than 1.5 degrees Celsius above pre-industrial times--see EPRI's "Grounding Decisions: A scientific foundation for companies considering global climate scenarios and greenhouse gas goals" and "Review of 1.5°C and Other Newer Global Emissions Scenarios: Insights for Company and Financial Climate Low-Carbon Transition Risk Assessment and Greenhouse Goal Setting" reports.

Southern Company will continue to use a portfolio approach as we seek to decarbonize. We expect our path to net zero to be comprised of several key elements: continued coal transition, utilization of natural gas to enable the fleet transition, further growth in our portfolio of zero-carbon resources, negative carbon solutions, enhanced energy efficiency initiatives, and continued investment in R&D focused on clean energy technologies. Our approach is driven by thoughtful scenario planning, long-term integrated resource plans, and constructive regulatory decision-making. We are also engaging with policymakers, customers, and other stakeholders to support outcomes that lead to a net zero future.

C4.2**(C4.2) Did you have any other climate-related targets that were active in the reporting year?**

Target(s) to increase low-carbon energy consumption or production

Target(s) to reduce methane emissions

Net-zero target(s)

Other climate-related target(s)

C4.2a**(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.**

Target reference number

Low 1

Year target was set

2020

Target coverage

Business division

Target type: absolute or intensity

Absolute

Target type: energy carrier

Electricity

Target type: activity

Consumption

Target type: energy source

Low-carbon energy source(s)

Metric (target numerator if reporting an intensity target)

Percentage

Target denominator (intensity targets only)

Base year

2020

Figure or percentage in base year

22

Target year

2030

Figure or percentage in target year

50

Figure or percentage in reporting year

22

% of target achieved [auto-calculated]

0

Target status in reporting year

New

Is this target part of an emissions target?

Fleet electrification within Southern Company's operating footprint does contribute to the overarching target of sustainably achieving 50% reduction in GHG emissions by 2030.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain (including target coverage)

The Southern Company's internal fleet electrification goal includes plans to convert 50 percent of its electric companies' fleet vehicles in the auto/SUV/minivan, forklift and ATV/cart/miscellaneous equipment segments to electric by 2030. This goal is part of a larger focus on electrification of the transportation industry and commitment to sustainability and clean energy.

C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

Target reference number

Oth 1

Year target was set

2014

Target coverage

Business division

Target type: absolute or intensity

Intensity

Target type: category & Metric (target numerator if reporting an intensity target)

Methane reduction target

Other, please specify

Methane leak rate from gas distribution

Target denominator (intensity targets only)

Other, please specify

Throughput of natural gas

Base year

2012

Figure or percentage in base year

0.52

Target year

2025

Figure or percentage in target year

0.44

Figure or percentage in reporting year

0.181

% of target achieved [auto-calculated]

423.75

Target status in reporting year

Underway

Is this target part of an emissions target?

The methane reduction target is part of a larger Distribution Sector target which is a part of the overall One Future goal of a natural gas value chain methane intensity that is 1% or less.

Is this target part of an overarching initiative?

Other, please specify

ONE Future Program

Please explain (including target coverage)

Southern Company Gas is a founding member of the ONE Future program, a coalition of companies across the natural gas value chain focused on identifying policy and technical solutions that yield continuous improvement in the management of methane emissions associated with the production, processing, transmission, and distribution of natural gas. If adopted widely, their system of emissions management could lower total methane emissions to less than one percent of gross production and delivery – the point of which the use of natural gas for any purpose provides a clean and immediate GHG-reduction benefit as compared to any other fossil fuel in any other application.

C4.2c

(C4.2c) Provide details of your net-zero target(s).

Target reference number

NZ1

Target coverage

Company-wide

Absolute/intensity emission target(s) linked to this net-zero target

Abs1

Target year for achieving net zero

2050

Is this a science-based target?

Yes, but we have not committed to seek validation of this target by the Science Based Targets initiative in the next 2 years

Please explain (including target coverage)

Southern Company has set a GHG emissions reduction goal of net zero emissions by 2050. The company also has reaffirmed its intermediate goal of a 50% reduction of GHG emissions from 2007 levels by 2030. These are enterprise-wide goals that encompass the Scope 1 emissions from our electric and natural gas operations. All of Southern Company's operations are within

the United States.

Based on our research and planning, stockholder and stakeholder dialogues, we believe our path to net zero by 2050 will be achieved through using natural gas to enable transition to lower emitting generating fleet, expanding zero-carbon resources, including renewables and nuclear, energy storage, enhancing energy efficiency programs, and including negative carbon strategies. Additionally, we will continue to invest in reliability and resilience. We continue to evaluate ways to achieve our goals and have engaged in the evolving dialogue regarding the global need to reach net zero emissions by 2050.

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	0	0
To be implemented*	0	0
Implementation commenced*	4	0
Implemented*	4	294,532
Not to be implemented	0	0

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Low-carbon energy generation
Solar PV

Estimated annual CO2e savings (metric tonnes CO2e)

294,532

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

0

Investment required (unit currency – as specified in C0.4)

198,000,000

Payback period

No payback

Estimated lifetime of the initiative

>30 years

Comment

Southern Company subsidiary, Southern Power, is a leading U.S. wholesale energy provider that has been acquiring and developing renewable generating facilities for over a decade, with investments totaling more than \$11 billion. In 2020, Southern Company subsidiaries completed 4 solar projects across the country. In 2020, Georgia Power also added over 77 MW of solar resources to their existing REDI distributed generation program.

It should be noted that, generally, with respect to renewable energy generated or purchased by the state-regulated electric operating companies, the state-regulated electric operating companies retain the right to use the renewable energy to serve customers or to sell the energy and associated renewable energy credits, together or separately, to third parties for the benefit of customers. Southern Company receives regulatory and program approvals through PSCs in respective retail operating company states prior to entering into any agreements to build or purchase renewable energy. While “voluntary” was selected, it should be noted that in some cases builds and purchases were developed as projects in conjunction with regulatory orders and approvals from the respective PSCs. Retail operating companies continue to pursue the development of zero carbon, solar PV installations.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	Decisions made by an electric and gas operating company regarding its assets, including those requiring specific state regulatory (i.e., PSC) approval, must be made in the best interest of its customers, taking into consideration a wide variety of factors, and based on the best information available at the time of the decision. EPA regulations governing emissions from existing electric generators could drive investment in the future.
Dedicated budget for energy efficiency	Across our state-regulated electric utilities, since 2000, energy efficiency and demand response programs have helped reduce peak demand for electricity by more than 5,600 MW and avoid more than 3 billion kilowatt hours (kWh) of energy use. Additionally, since 2011, the Nicor Gas Energy Efficiency Program has helped customers save more than 144 million net therms. Looking forward, the Southern Company system will continue to help customers save money and reduce GHG emissions, and they have invested

	<p>more than \$1 billion in energy efficiency for electric customers through 2021. For the last decade, more than \$195 million in energy efficiency rebates and incentives have been delivered to natural gas customers.</p>
Dedicated budget for low-carbon product R&D	<p>Since the 1960s, Southern Company has actively engaged in robust R&D that grows the value of energy services to customers. Nearly all of our current R&D spend is focused on lower carbon-emitting technologies or carbon removal technologies.</p>
Internal price on carbon	<p>Our integrated resource planning process occurs annually – allowing updates to the scenarios and associated CO2 prices, as well as incorporation of recent commodity, economic or policy indicators. We use a robust scenario planning process that has two primary components: energy economy modelling and integrated resource planning. We continue to evaluate this process on an annual basis, and it is therefore subject to change.</p>
Internal incentives/recognition programs	<p>To demonstrate its commitment to the reduction goals and facilitate the execution of our business strategy to address the long-term reduction of carbon emissions, in 2019 and again in 2020, the Board decided that it would tie a portion of the CEO’s LTI award for 2019 and for 2020 to the achievement of the goals. Ten percent of the CEO’s 2019 and 2020 LTI awards are aligned with the GHG reduction goals, equivalent to a potential payout of up to \$2 million of incentive compensation.</p>
Partnering with governments on technology development	<p>Southern Company R&D has worked for almost 50 years to develop new technologies across the production, delivery and end-use of energy. Since its formation, the DOE has been a major research partner with Southern Company in defining R&D needs, leveraging public-private funding and understanding and implementing results. In addition to DOE and its national laboratories, Southern Company R&D actively collaborates with other utilities, universities, technology developers and industry organizations, highly leveraging both funding and expertise. These long-standing partnerships address the industry’s most significant challenges – including the reduction of carbon emissions – and advance the most promising technology options for the energy sector. Furthermore, this collaborative model allows the matching of internal research investments- on average, dollar for dollar – through public-private partnerships and other forms of external cost-sharing. As a result, Southern Company’s R&D organization has delivered significant benefits across the enterprise that, over the last 10 years, have averaged at least 10 times its investment.</p>

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.

Level of aggregation

Group of products

Description of product/Group of products

Residential and commercial energy efficiency programs offered by the retail electric operating companies and gas distribution company reduce electricity and natural gas usage and therefore reduce emissions. These services include incentives to increase use of high efficiency appliances, home improvement incentives, energy check-up services and many other programs.

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

Reduction in peak and overall demand

% revenue from low carbon product(s) in the reporting year

Comment

These programs have helped avoid more than 3 billion kWh of energy use since 2010.

Level of aggregation

Company-wide

Description of product/Group of products

Our primary product is electricity sold to customers. Our GHG emission reduction strategy includes pursuing a diverse portfolio of energy resources. Our retail electric subsidiaries provide low carbon generation to customers through hydropower, nuclear, and other carbon-free generation. These operating companies are also adding solar capacity as approved by state PSCs. Our subsidiary, Southern Power develops, constructs, acquires, owns, and manages power generation assets, including renewable energy and battery energy storage projects, and sells electricity at market-based rates in the wholesale market. Southern Power's strategy is to provide no- and lower-GHG emission generation resources through long-term contracts with strong credit counterparties. Southern Power currently owns nearly 5,000 MW of commercial wind and solar capacity. By selling the electricity and the associated RECs, Southern Power enables its renewable energy customers to avoid GHG emissions.

Are these low-carbon product(s) or do they enable avoided emissions?

Low-carbon product and avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

Reduction in economy wide carbon emissions

% revenue from low carbon product(s) in the reporting year

0

Comment

Southern Company's retail operating companies have built, own, and operate a fleet of low- and zero-carbon facilities and also purchase energy and RECs from zero-carbon facilities owned by third parties. The retail operating companies are generally able to use the RECs from these facilities to offer their customers the option to match some or all of their retail load with RECs, a low-carbon product. The retail operating companies can also sell the unused RECs to third parties for the benefit of customers. Because these resources (both owned and purchased) are part of each company's wholesale portfolio and the sale of energy and RECs (both to retail customers and wholesale customers) are comingled with all other wholesale sales, our subsidiaries do not have a percentage of revenues that can be claimed for these activities for any specific set of customers. These activities are not, however, pursuant or implemented to satisfy any regulatory or other reporting requirements but rather as a means to satisfy customer demand and as an added benefit to achieve Company-wide goals to reduce GHG emissions and diversify fuel sources to the benefit of customers.

Level of aggregation

Product

Description of product/Group of products

Our primary product is electricity sold to customers. To the extent that we lower our total system emissions and emission rate, our customers may also directly lower their total emissions. We also supply natural gas to customers, and we are focused on opportunities to lead the industry in the use of renewable natural gas, minimize fugitive methane emissions across the natural gas supply chain, and reduce GHG emission by end use customers, including electric generation.

Our R&D programs work in conjunction with New Ventures and Marketing organizations to identify solutions for customers to reach their own GHG reduction goals. From switching energy sources to energy efficiency investigations, Southern Company is partnering with customers to reach an economy-wide reduction in GHG emissions.

Are these low-carbon product(s) or do they enable avoided emissions?

Low-carbon product

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

Reduction in economy wide carbon emissions

% revenue from low carbon product(s) in the reporting year

0

Comment

By supporting technologies that help to decarbonize other sectors of the economy, we are able to reduce net carbon emissions. Focus areas of our R&D include technologies related to efficient use of electric and natural gas for transportation, building, industrial processes, and food production.

Level of aggregation

Product

Description of product/Group of products

Southern Company and its subsidiaries offer specific customer programs in states where there is interest to support development of renewable generation assets including wind and solar generation.

Are these low-carbon product(s) or do they enable avoided emissions?

Low-carbon product

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

Carbon Free/Distributed Generation Programs

% revenue from low carbon product(s) in the reporting year

0

Comment

Southern Company's electric operating companies each have programs and services available to all customers related to renewable generation, including but not limited to programs such as Community Solar and Simple Solar programs offered by Georgia Power. Due to multiple program offerings, Georgia Power, for example, offers solar education and analysis to assist all customers in determining which solar option is best for them. Alabama Power is also working to implement renewable energy programs to provide solar energy to customers who want to drive development of new resources without requiring subsidies from other customers. Alabama Power's residents and businesses have the opportunity to purchase renewable energy credits. Since 2017, over 35,000,000 kilowatt hours of clean energy have been used by participants through Alabama Power's renewable energy programs.

Level of aggregation

Group of products

Description of product/Group of products

PowerSecure offers lighting solutions to customers to reduce overall energy consumption. These programs are designed to avoid emissions by third-parties through partnerships to identify the lowest energy consumption lighting options feasible for customer use.

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

WRI protocol for Estimating and Reporting the Comparative Emissions Impacts of Products, Reduction in economy-wide GHG emissions, Reduction in Scope 3 emissions

% revenue from low carbon product(s) in the reporting year

0

Comment

These programs helped to avoid approximately an average of 16 thousand metric tons/year over the past 5 years. The five-year cumulative energy savings (2016 – 2020) helped to avoid a total of approximately 343 thousand metric tons.

C-EU4.6

(C-EU4.6) Describe your organization’s efforts to reduce methane emissions from your activities.

Southern Company Gas has led the natural gas industry in fostering significant progress to minimize fugitive methane emissions. Its distribution system operates at almost 99.9% efficiency in its delivery of natural gas. Intensity is derived from the ONE Future Methane Intensity Protocol (2018). Over a 20-year timeframe, from 1998 to 2018, Southern Company Gas invested more than \$2.2 billion in pipeline and infrastructure replacements, and these improvements have reduced its annual methane emissions for its distribution systems by 50% while accommodating a 20% growth in its distribution system. We continue to invest in methane detection and reduction across the Southern Company Gas footprint.

Southern Company Gas also demonstrates leadership across the value chain as a founding member of ONE Future. The ONE Future Coalition is a group of natural gas companies working together to voluntarily reduce methane emissions across the natural gas supply chain. With operations across every part of the natural gas value chain, ONE Future is focused on identifying policy and technical solutions that yield continuous improvement in the management of methane emissions associated with the production, processing, transmission and distribution of natural gas. Since its formation, it has grown from 8 companies to 28 companies accounting for the some of the largest natural gas producers, transmission and distribution companies in the U.S. ONE Future members operate in many of the production basins and other segments of the value chain operate in multiple regions of the country, hence ONE Future’s data represent a geographically diverse and material share of the U.S. natural gas supply chain. By increasing suppliers involved in the initiative, Southern Company can increase availability of ONE Future suppliers in our service territory.

For example, in October 2019, Virginia Natural Gas (VNG), a subsidiary of Southern Company Gas, announced its plan to be the first natural gas utility in America to provide its customers with natural gas that is 100% sourced, transported and distributed by companies that have pledged to reduce methane emissions to less than 1% across the natural gas value chain. As a down payment on that pledge, the company began purchasing 20% of its customers’ annual natural gas supply from select, low fugitive emission wells operated by gas producers in the ONE Future program, making a “well head to burner

tip” supply chain of low fugitive emission gas for customers. Both Southern Company Gas and Southern Company’s electric operations have updated their natural gas bid selection process to offer a competitive edge to natural gas suppliers committed to reducing fugitive methane emissions.

The improvements put into place across the whole value chain will positively influence the supply side for our electric and gas utilities. To achieve ONE Future’s collective 1% target, ONE Future has identified sectoral performance targets for each of the four major industry sectors (Exploration & Production; Gathering & Processing; Transmission & Storage, and Distribution & Retail) that would cumulatively add up to the overall one percent goal. ONE Future has worked to set these performance targets in rough proportion to each industry sectors’ respective share of current emissions, considering reduction potentials given current regulatory barriers. These sectoral targets serve both to benchmark company progress toward goals, but also to facilitate comparisons amongst diverse companies as each strives for optimal performance.

C5. Emissions methodology

C5.1

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope 1

Base year start

January 1, 2007

Base year end

December 31, 2007

Base year emissions (metric tons CO2e)

156,650,363

Comment

Baseline emissions include equity owned assets for electric operations (including transmission and distribution). Gas operations baseline emissions are not yet available.

Scope 2 (location-based)

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO2e)

207,136

Comment

Southern Company’s Scope 2 emissions are calculated using the equity share approach presented in the WRI/WBCSD GHG Protocol Scope 2 Guidance for its owned facilities. The

GHG emissions included in Scope 2 are emissions from electricity purchased for Company consumption at Company-owned locations that are located outside of Southern Company's retail electric service territory and line losses from Southern Company's transmission and distribution system for purchased power. This value has been adjusted from previous reports to include the line losses.

The location-based calculations use regional 2018 EPA eGRID emission factors.

Scope 2 (market-based)

Base year start

January 1, 2019

Base year end

December 31, 2019

Base year emissions (metric tons CO₂e)

187,584

Comment

Southern Company's Scope 2 emissions are calculated using the equity share approach presented in the WRI/WBCSD GHG Protocol Scope 2 Guidance for its owned facilities. The GHG emissions included in Scope 2 are emissions from electricity purchased for Company consumption at Company-owned locations that are located outside of Southern Company's retail electric service territory and line losses from Southern Company's transmission and distribution system for purchased power.

This value has been adjusted from previous reports to include the line losses. The market-based calculations use a combination of supplier provided emissions factors, where available, and regional 2019 EPA eGRID emission factors.

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

- IPCC Guidelines for National Greenhouse Gas Inventories, 2006
- The Climate Registry: Electric Power Sector (EPS) Protocol
- The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
- The Greenhouse Gas Protocol: Public Sector Standard
- The Greenhouse Gas Protocol: Scope 2 Guidance
- US EPA Center for Corporate Climate Leadership: Direct Emissions from Mobile Combustion Sources
- US EPA Mandatory Greenhouse Gas Reporting Rule
- US EPA Emissions & Generation Resource Integrated Database (eGRID)
- Other, please specify
- ONE Future Methane Intensity Protocol (2020) is used for Southern Company Gas methane intensity numbers provided in section 4. Southern Company Gas non-GHGRP methane sources are calculated consistent with the EPA Greenhouse Gas Inventory

C5.2a

(C5.2a) Provide details of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

ONE Future Methane Intensity Protocol (2020) is used for Southern Company Gas methane intensity numbers provided in section 4. Southern Company Gas non-GHGRP methane sources are calculated consistent with the EPA Greenhouse Gas Inventory; 2019 non-GHGRP data was used as a proxy for 2020 non-GHGRP data which was not yet available.

C6. Emissions data

C6.1

(C6.1) What were your organization’s gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

75,111,982

Comment

Southern Company’s GHG emission goals are calculated using the equity share approach presented in the WRI/WBCSD GHG Protocol for all of its owned facilities. The GHG emissions included are Scope 1 direct facility emissions that are required to be tracked by EPA’s Greenhouse Gas Reporting Program (GHGRP) and calculated using methods required by the GHGRP. Additional emissions sources for the gas distribution sector are also included consistent with EPA’s GHG Inventory and ONE Future; 2019 non-GHGRP data was used as a proxy for 2020 non-GHGRP data where 2020 data was not yet available. Company owned mobile vehicle emissions, coal pile fugitive methane emissions, and fuel cell emissions are also included in Scope 1.

C6.2

(C6.2) Describe your organization’s approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

Southern Company’s Scope 2 emissions are calculated using the equity share approach presented in the WRI/WBCSD GHG Protocol Scope 2 Guidance for its owned facilities. The GHG emissions included in Scope 2 are emissions from electricity purchases for company use at company-owned locations that are located outside of Southern Company’s retail electric

service territory, and emissions from line losses on Southern Company's T&D system from power purchased for resale to Southern Company's customers. The location-based calculations use regional 2019 EPA eGRID emission factors. The market-based calculations use a combination of supplier provided emissions factors, where available, and regional 2019 EPA eGRID emission factors.

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO₂e?

Reporting year

Scope 2, location-based

204,605

Scope 2, market-based (if applicable)

167,875

Comment

Southern Company's Scope 2 emissions are calculated using the equity share approach presented in the WRI/WBCSD GHG Protocol Scope 2 Guidance for its owned facilities. The GHG emissions included in Scope 2 are emissions from electricity purchases for company use at company-owned locations that are located outside of Southern Company's retail electric service territory, and emissions from line losses on Southern Company's T&D system from power purchased for resale to Southern Company's customers. The location-based calculations use regional 2019 EPA eGRID emission factors. The market-based calculations use a combination of supplier provided emissions factors, where available, and regional 2019 EPA eGRID emission factors.

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

Yes

C6.4a

(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.

Source

Scope 1 de minimis sources

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

No emissions from this source

Relevance of market-based Scope 2 emissions from this source (if applicable)

No emissions from this source

Explain why this source is excluded

Per The Climate Registry General Reporting Protocol (TCR GRP) and Electric Power Sector Protocols, there are a number of de-minimis sources for the electric utility industry that are not included in our Scope 1 inventory.

Source

Scope 1 natural gas purchases for comfort heating

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

No emissions from this source

Relevance of market-based Scope 2 emissions from this source (if applicable)

No emissions from this source

Explain why this source is excluded

Southern Company does not currently have processes in place to collect data associated with natural gas purchases for comfort heating at our facilities. In addition, these emissions are expected to be insignificant compared to our total Scope 1 emissions.

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Not relevant, explanation provided

Please explain

Scope 1 and Scope 2 emissions have been reported. No material emissions from other purchased goods and services.

Capital goods

Evaluation status

Not relevant, explanation provided

Please explain

Scope 1 and Scope 2 emissions have been reported. Any relevant emissions related to capital goods is reflected by those emissions or is otherwise not material.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

4,310,932

Emissions calculation methodology

Emissions calculated from the generation of purchased electricity that is sold to end users including spot and market purchases, power purchase agreements and interchange purchases. Market-based emission factors are applied where available, EPA eGRID emission factors are applied for spot and market purchases when the generating source is unknown or where market-based emission factors are not available.

Upstream emissions associated with coal purchases are calculated using supplier data where available. EPA or WRI emission factors for coal mining and transportation are applied where supplier data are not available.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

71

Please explain

Includes emissions from purchased electricity that is sold to end users and upstream emissions associated with coal purchases.

Upstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Please explain

Scope 1 and Scope 2 emissions have been reported. No material emissions from other upstream transportation and distribution.

Waste generated in operations

Evaluation status

Not relevant, calculated

Metric tonnes CO₂e

11,689

Emissions calculation methodology

Average-data method outlined in the WRI/WBCSD GHG Protocol Technical Guidance for Calculating Scope 3 Emissions was used to calculate emissions for the following waste categories: mixed MSW, mixed paper, mixed metals, mixed recyclables. Emissions factors were sourced from EPA's Emission Factor Hub.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Business travel

Evaluation status

Not relevant, calculated

Metric tonnes CO₂e

4,344

Emissions calculation methodology

Southern Company's air travel emissions were provided by Southern Company's travel agent AdTrav. Rental car emissions were provided by rental agencies (Avis, Enterprise). Emissions associated with hotel stays were calculated using EPA's emission factor hub and eGRID factors.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

92

Please explain

Includes air travel, rental car travel, and hotel stays associated with Southern Company's business travel.

Employee commuting

Evaluation status

Not relevant, calculated

Metric tonnes CO₂e

28,013

Emissions calculation methodology

Emissions from employee commuting were calculated using average employee commuting mileage and average passenger vehicle fuel economy, with EPA emission factors applied. Employee commuting data was collected based on the number of individuals badging into company locations.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Upstream leased assets

Evaluation status

Not relevant, calculated

Metric tonnes CO₂e

15,229

Emissions calculation methodology

Includes leased vehicle and aircraft emissions calculated using EPA emission factors and electricity purchases for leased assets outside of Southern Company's retail electric service territory calculated using the WRI/WBCSD Scope 2 Protocol.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Includes emissions from leased mobile vehicles and aircraft and electricity purchases for leased assets outside of Southern Company's retail electric service territory.

Downstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Please explain

Scope 1 and Scope 2 emissions have been reported. No material emissions from downstream transportation and distribution.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Please explain

Electricity is not processed by customers, and emissions from gas distribution are included below in Use of Sold Products.

Use of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

32,244,494

Emissions calculation methodology

This value is determined in accordance with the requirements of 40 CFR Part 98 Subpart NN and therefore does not include emissions from deliveries to customers whose meters register an annual volume greater than 460,000 Mscf of natural gas deliveries.

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Emissions reported as required by 40 CFR Part 98 Subpart NN (Suppliers of Natural Gas and Natural Gas Liquids).

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Please explain

Electricity and natural gas require no end of life treatment.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

There are no downstream emissions from Southern Company's leased assets.

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

Southern Company does not own any franchises.

Investments

Evaluation status

Not relevant, explanation provided

Please explain

Investments are included in Scope 1 emissions as leveraged leases.

Other (upstream)

Evaluation status

Not relevant, explanation provided

Please explain

No other relevant upstream emissions as compared to Scope 1 emissions.

Other (downstream)

Evaluation status

Not relevant, explanation provided

Please explain

There are no downstream emissions resulting from the use of electricity. Gas emissions are provided above.

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

Yes

C6.7a

(C6.7a) Provide the emissions from biogenic carbon relevant to your organization in metric tons CO₂.

	CO ₂ emissions from biogenic carbon (metric tons CO ₂)	Comment
Row 1	15,034	Biogenic carbon emissions associated with landfill gas generation.

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO₂e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0.004

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO₂e)

75,279,857

Metric denominator

unit total revenue

Metric denominator: Unit total

20,375,000,000

Scope 2 figure used

Market-based

% change from previous year

10

Direction of change

Decreased

Reason for change

Revenue and emissions both decreased; however, emissions decreased at a greater rate than revenue, resulting in a decrease in intensity. This is reflective of the Southern Company system's transition to low-carbon and renewable generation resources.

Intensity figure

0.42

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

75,279,857

Metric denominator

megawatt hour generated (MWh)

Metric denominator: Unit total

180,363,000

Scope 2 figure used

Market-based

% change from previous year

9

Direction of change

Decreased

Reason for change

Scope 1 emissions decreased due to a shift from coal to natural gas and the addition of lower emitting generation. Generation also decreased. Overall, the primary reason for the reduction in intensity is that we are meeting generation demand using lower emitting resources.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	73,801,003	Other, please specify Table A-1 to Subpart A of Part 98 - Global Warming Potentials (GWP100yr)
CH4	1,042,839	Other, please specify Table A-1 to Subpart A of Part 98 - Global Warming Potentials (GWP100yr) GWP CH4: 25

N2O	200,229	Other, please specify Table A-1 to Subpart A of Part 98 - Global Warming Potentials (GWP100yr) GWP N2O: 298
SF6	67,910	Other, please specify Table A-1 to Subpart A of Part 98 - Global Warming Potentials (GWP100yr) GWP SF6: 22800

C-EU7.1b

(C-EU7.1b) Break down your total gross global Scope 1 emissions from electric utilities value chain activities by greenhouse gas type.

	Gross Scope 1 CO2 emissions (metric tons CO2)	Gross Scope 1 methane emissions (metric tons CH4)	Gross Scope 1 SF6 emissions (metric tons SF6)	Total gross Scope 1 emissions (metric tons CO2e)	Comment
Fugitives	0	560	3	81,904	Fugitive SF6 emissions from Southern Company's transmission and distribution system and fugitive methane emissions from Southern Company's coal piles
Combustion (Electric utilities)	73,194,676	4,801	0	73,513,399	Includes emissions from Southern Company's electric sector (excludes gas sector and mobile emissions)
Combustion (Gas utilities)	0	0	0	0	Not applicable to electric sector or already included in electric utility combustion
Combustion (Other)	0	0	0	0	Not applicable to electric sector or already included in electric utility combustion
Emissions not elsewhere classified	0	0	0	0	Not applicable to electric sector or already included in electric utility combustion

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
United States of America	75,111,982

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

- By business division
- By facility
- By activity

C7.3a

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO2e)
Alabama Power Company	28,025,776
Georgia Power Company	20,869,380
Mississippi Power Company	8,426,040
SEGCO	830,113
Southern Power Company	12,165,105
Transmission and Distribution	67,910
Power Secure	23,421
Southern Company Gas	1,408,989
Leveraged Leases/Southern Company Finance	3,170,701
Mobile Fleet	107,689
Southern Nuclear Company	2,864
Coal Pile Fugitives	13,994

C7.3b

(C7.3b) Break down your total gross global Scope 1 emissions by business facility.

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
Barry	6,245,015	31.0069	-88.0103
Gaston	2,674,082	33.2442	-86.4567
Gadsden	50,818	34.0128	-85.9708
Central Alabama	608,067	32.69699	-86.73107
Greene Co.	636,892	32.6017	-87.7811
SABIC	333,291	32.3102	-86.5242
Miller	16,529,796	33.6319	-87.0597

Theodore	732,432	30.5248	-88.1289
Washington Co.	450,891	31.2622	-88.0052
SEGCO	830,113	33.2442	-86.4567
Boulevard	20	32.0111	-81.1385
Bowen	7,949,467	34.1256	-84.9192
McDonough	6,887,676	33.8244	-84.475
McIntosh	43,423	32.3558	-81.1683
McIntosh CC	3,278,244	32.3478	-81.1828
McManus	4,838	31.2125	-81.5458
Robins	14,299	32.5806	-83.5831
Scherer	1,172,521	33.0583	-83.8072
Wansley	168,380	33.4124	-85.0345
Yates	1,350,498	33.4622	-84.8986
Daniel	4,457,484	30.5335	-88.5574
Watson	1,289,354	30.4408	-89.0265
Chevron	726,502	30.34	-88.492
Ratcliffe	1,708,182	32.6538	-88.7574
Sweatt	8,782	32.2925	-88.7461
Addison	210,606	32.911	-84.3059
Cleveland	324,173	35.1706	-81.4161
Dahlberg	356,068	34.0386	-83.3972
Franklin	4,718,099	32.6094	-85.0961
Harris	1,660,270	32.3814	-86.5736
Colonnade	17	33.44046	-86.72758
Rowan	1,710,355	35.7325	-80.6019
Wansley CC	3,138,092	33.4063	-85.0373
Reynold's Landing	190	33.39879	-86.88361
Wilson	2,864	33.12602	-81.75476
Ravenswood	580,655	40.759447	-73.945917
RedHills	2,590,046	33.3825	-89.219444
GT Microgrid	16	33.85578	-84.37977
Power Secure	23,421	35.952038	-78.515633
Ancona (NIC-ANC)	39,559	41.040833	-88.918333
Troy Grove (NIC-TG)	29,723	41.457778	-89.143611
NICOR GAS (LDC)	389,968	41.812222	-88.2075

Atlanta Gas Light Company (AGLC)	329,702	33.79	-84.39083
Chattanooga Gas Company (CGC)	19,267	35.050556	-85.185
Cherokee LNG (CHK)	10,635	34.268611	-84.361111
Macon LNG (MAC)	18,759	32.905	-83.523055
Virginia Natural Gas (VNG)	87,554	36.855556	-76.3
Central Valley Gas Storage, L.L.C. (CVGS)	6,794	39.389785	- 122.032304
Jefferson Island Storage & Hub, L.L.C. (JISH)	7,821	29.990252	-91.995893
Golden Triangle Storage (GTS)	15,160	30.023062	-94.077152
Trussville LNG, L.L.C. (TRUSS)	3,654	33.585026	-86.575918
Riverdale LNG (RVD)	5,544	33.542062	-84.416495
Chattanooga (CHATT)	3,089	35.050556	-85.185
Hudson Storage (NHUD)	8,101	40.593889	-88.946666
Bloomington Storage (NBLM)	4,549	40.686667	-88.919722
Lexington Storage (NLEX)	5,395	40.631111	-88.838611
Pontiac Storage (NPON)	4,612	40.866667	-88.5475
Pecatonica Storage (NPEC)	887	42.294209	-89.324395
SNG Station 4020 Bear Creek Storage, LA	7,637	31.736667	-93.062777
SNG Station 4132 Louisville, MS	11,737	33.133889	-89.070277
SNG Station 4140 Reform, AL	8,093	33.366111	-88.018888
SNG Station 4152 Tarrant, AL	25,354	33.600278	-86.772222
SNG Station 4165 DeArmanville, AL	6,789	33.621388	-85.785833
SNG Station 4310 Muldon Storage, MS	16,783	33.753056	-88.668055
SNG Station 5000 Shadyside, LA	7,774	29.736111	-91.416666
SNG Station 5010 White Castle, LA	14,888	30.206389	-91.104722
SNG Station 5110 Toca, LA	7,352	29.867777	-89.839722
SNG Station 5122 Franklinton, LA	9,662	30.817777	-90.186666
SNG Station 5130 Pearl River, MS	509	31.316944	-90.045277
SNG Station 5211 Gwinville, MS	26,568	31.740556	-90.055555
SNG Station 5216 Bay Springs, MS	20,979	31.959722	-89.321944
SNG Station 5222 Enterprise, MS	39,764	32.158333	-88.846944
SNG Station 5230 York, AL	9,718	32.326388	-88.193611
SNG Station 5245 Selma, AL	9,698	32.533611	-86.938611
SNG Station 5259 Auburn, AL	15,863	32.523611	-85.473611
SNG Station 5267 Ellerslie, GA	8,592	32.619167	-84.825555
SNG Station 5272 Thomaston, GA	19,562	32.790555	-84.257222

SNG Station 5277 Ocmulgee, GA	15,142	32.937778	-83.721111
SNG Station 5283 Hall Gate, GA	9,474	33.064167	-83.052222
SNG Station 5288 Wrens, GA	9,005	33.192222	-82.366944
Transmission Pipeline Facility, Southern Natural Gas Company, L.L.C.	23,401	29.75788	-95.36739
Albany CS	4,765	31.451667	-84.1425
TP - Bear Creek	535	32.3746	-92.940367
Bell Mills CS	5,581	33.64025	-85.44957
Bienville CS	9,660	32.304722	-93.057777
Brookman CS	3,815	31.21127	-81.70052
Duncanville CS	21	33.07819	-87.47206
Elmore CS	5,619	32.521944	-86.326666
Fairburn Compressor Station	453	33.55506	-84.5027
Gallion CS	7,420	32.505833	-87.726666
Hilliard Compressor Station	23	30.51163	-81.94442
Holy Trinity CS	5,550	32.21026	-85.00087
Lacombe CS	294	30.3686	-89.934
Logansport CS	153	31.98003	-93.94417
McConnells CS	2,053	33.427	-87.71622
Onward MS	7,380	32.71629	-90.94066
Pavo CS	407	30.98949	-83.65539
Pell City CS	1,330	33.60188	-86.25405
Pickens CS	5,761	32.87817	-89.97167
Providence CS	1,542	33.43905	-87.30378
Rankin CS	5,474	32.28916	-89.91333
Riceboro CS	5,730	31.75279	-81.51601
Rincon Compressor Station	11	32.3575	-81.193611
Rome CS	1,005	34.255556	-85.353888
Cyberdyne	18	33.40624	-86.91465
Transco Station 116	19,291	33.486389	-84.926111
Red Lion	42,978	39.61197	-75.62636
Brookside	4,464	39.65929	-75.74356
Transmission and Distribution	67,910	33.76433	-84.38825
Mobile Fleet	107,689	33.76433	-84.38825
Coal Pile Fugitives	13,994	33.76433	-84.38825

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Electric Stationary Combustion	73,513,399
Electric Transmission & Distribution	67,910
Gas Transmission & Distribution	1,408,989
Mobile Combustion	107,689
Coal Pile Fugitives	13,994

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization’s total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Comment
Electric utility activities	73,595,303	Based on equity share for tracked and reported facilities. Includes Electricity business division only (excludes gas sector and mobile emissions)

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Decreased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	312,339	Decreased	0.4	Southern Company increased renewable energy with the addition of solar and wind facilities. Calculated by applying a 2020 Southern Company emission factor (0.402) to the 2020 renewable net generation (3,581,605) and a 2019 Southern Company

				emission factor (0.446) to the 2019 renewable net generation (2,528,282) to get metric tons CO ₂ e for each year. Then subtracted 2020 metric tons - 2019 metric tons. The delta (312,339) was divided by the total 2019 Scope 1 + 2 emissions (88,381,040) to determine emissions value.
Other emissions reduction activities	5,897,205	Decreased	7	Southern Company is continuing to transition away from coal generation to lower- and non-emitting sources. Calculated by applying a 2020 Southern Company emission factor (0.402) to the 2020 coal net generation (31,585,343) and a 2019 Southern Company emission factor (0.446) to the 2019 coal net generation (41,703,352) to get metric tons CO ₂ e for each year. Then subtracted 2019 metric tons - 2020 metric tons. The delta (5,897,205) was divided by the total 2019 Scope 1 + 2 emissions (88,381,040) to determine emissions value.
Divestment	0	No change	0	Not applicable
Acquisitions	608,067	Increased	1	Southern Company acquired the Central Alabama Generating Station on 9/1/2020. Calculated by dividing the 2020 metric tons CO ₂ e emissions from Central Alabama for 9/1/2020 - 12/31/2020 (608,067) by the total 2019 Scope 1 + 2 emissions (88,381,040) to determine emissions value.
Mergers	0	No change	0	Not applicable
Change in output	6,853,236	Decreased	8	Southern Company generation decreased, primarily due to mild weather and impacts from COVID-19. Calculated by applying a 2020 Southern Company emission factor (0.402) to the 2020 total net generation excluding coal (143,635,760) and a 2019 Southern Company emission factor (0.446) to the 2019 total net generation excluding coal (144,864,172) to get metric tons CO ₂ e for each year. Then subtracted 2019 metric tons - 2020 metric tons. The delta (6,853,236) was divided by the total 2019 Scope 1 + 2 emissions (88,381,040) to determine emissions value.

Change in methodology	0	No change	0	Not applicable
Change in boundary	148,523	Increased	0.2	Southern Company added coal pile fugitive emissions and other small combustion sources to its Scope 1 inventory. Southern Company also added transmission and distribution line losses from power purchased to serve customers to its Scope 2 inventory. Calculated by dividing the sum of total 2020 CO2e emissions from these additional emission sources (148,523) by the total 2019 Scope 1 + 2 emissions (88,381,040) to determine emissions value.
Change in physical operating conditions	0	No change	0	Not applicable
Unidentified	0	No change	0	Not applicable
Other	0	No change	0	Not applicable

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Market-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 50% but less than or equal to 55%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes

Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization’s energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	224,879	134,882,001	135,106,880
Consumption of purchased or acquired electricity		0	83,732	83,732
Consumption of self-generated non-fuel renewable energy		21,323,907		21,323,907
Total energy consumption		21,548,786	134,965,733	156,514,519

C8.2b

(C8.2b) Select the applications of your organization’s consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	No
Consumption of fuel for the generation of steam	Yes
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Fuels (excluding feedstocks)

Coal

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

33,239,273

MWh fuel consumed for self-generation of electricity

33,239,273

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

93.28

Unit

kg CO2 per million Btu

Emissions factor source

40 CFR Appendix Table C-1 to Subpart C of Part 98

Comment

bituminous coal 93.28 kg CO2/MMBtu; subbituminous coal 97.17 kg CO2/mmBtu

Fuels (excluding feedstocks)

Landfill Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

84,619

MWh fuel consumed for self-generation of electricity

84,619

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

52.07

Unit

kg CO2 per million Btu

Emissions factor source

40 CFR Appendix Table C-1 to Subpart C of Part 98

Comment

Fuels (excluding feedstocks)

Light Distillate

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

344,042

MWh fuel consumed for self-generation of electricity

104,871

MWh fuel consumed for self-generation of heat

174,327

MWh fuel consumed for self-generation of steam

64,844

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

73.96

Unit

kg CO2 per million Btu

Emissions factor source

40 CFR Appendix Table C-1 to Subpart C of Part 98

Comment

Fuels (excluding feedstocks)

Natural Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

98,192,226

MWh fuel consumed for self-generation of electricity

95,544,771

MWh fuel consumed for self-generation of heat

79,849

MWh fuel consumed for self-generation of steam

2,567,606

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

53.06

Unit

kg CO2 per million Btu

Emissions factor source

40 CFR Appendix Table C-1 to Subpart C of Part 98

Comment

Fuels (excluding feedstocks)

Other, please specify

Fuel Cells (NG)

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

140,260

MWh fuel consumed for self-generation of electricity

140,260

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

53.06

Unit

kg CO2 per million Btu

Emissions factor source

40 CFR Appendix Table C-1 to Subpart C of Part 98

Comment

Fuels (excluding feedstocks)

Refinery Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

219,686

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

219,686

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

59

Unit

kg CO2 per million Btu

Emissions factor source

40 CFR Appendix Table C-1 to Subpart C of Part 98

Comment

Fuels (excluding feedstocks)

Propane Liquid

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

53

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

53

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

61.46

Unit

kg CO2 per million Btu

Emissions factor source

40 CFR Appendix Table C-1 to Subpart C of Part 98

Comment

Fuels (excluding feedstocks)

Motor Gasoline

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

240,755

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

240,755

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

70.22

Unit

kg CO2 per million Btu

Emissions factor source

40 CFR Appendix Table C-1 to Subpart C of Part 98

Comment

Fuels (excluding feedstocks)

Jet Kerosene

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

183

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

183

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

72.22

Unit

kg CO2 per million Btu

Emissions factor source

40 CFR Appendix Table C-1 to Subpart C of Part 98

Comment

Fuels (excluding feedstocks)

Lignite Coal

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

2,645,781

MWh fuel consumed for self-generation of electricity

2,645,781

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

97.72

Unit

kg CO2 per million Btu

Emissions factor source

40 CFR Appendix Table C-1 to Subpart C of Part 98

Comment

C-EU8.2d

(C-EU8.2d) For your electric utility activities, provide a breakdown of your total power plant capacity, generation, and related emissions during the reporting year by source.

Coal – hard

Nameplate capacity (MW)

11,109

Gross electricity generation (GWh)

33,239

Net electricity generation (GWh)

31,585

Absolute scope 1 emissions (metric tons CO2e)

32,857,105

Scope 1 emissions intensity (metric tons CO2e per GWh)

1,040

Comment

Capacity of units is included based on their primary fuel type. Some units may have dual fuel capability. Generation and emissions include facilities for which Southern Company owns and sells the energy to customers (i.e. excludes purchased power and leveraged leases).

Lignite

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not applicable. Power plant capacity, generation, and related emission data are not provided for lignite fuels because the facilities in our system using lignite are leveraged lease facilities. Southern Company does not actually sell the electricity from these facilities and therefore does not include them in our calculations for electric sector emission intensities.

Oil

Nameplate capacity (MW)

1,867

Gross electricity generation (GWh)

101

Net electricity generation (GWh)

95

Absolute scope 1 emissions (metric tons CO2e)

50,731

Scope 1 emissions intensity (metric tons CO2e per GWh)

534

Comment

Capacity of units is included based on their primary fuel type. Some units may have dual fuel capability. Generation includes facilities for which Southern Company owns and sells the energy to customers (i.e. excludes purchased power and leveraged leases).

Gas

Nameplate capacity (MW)

20,174

Gross electricity generation (GWh)

94,056

Net electricity generation (GWh)

92,090

Absolute scope 1 emissions (metric tons CO2e)

37,387,344

Scope 1 emissions intensity (metric tons CO2e per GWh)

406

Comment

Capacity of units is included based on their primary fuel type. Some units may have dual fuel capability. Generation includes facilities for which Southern Company owns and sells the energy to customers (i.e. excludes purchased power and leveraged leases).

Biomass

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not applicable

Waste (non-biomass)

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not applicable

Nuclear

Nameplate capacity (MW)

3,680

Gross electricity generation (GWh)

31,799

Net electricity generation (GWh)

30,387

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Fossil-fuel plants fitted with CCS

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not applicable

Geothermal

Nameplate capacity (MW)

27

Gross electricity generation (GWh)

225

Net electricity generation (GWh)

225

Absolute scope 1 emissions (metric tons CO2e)

47,519

Scope 1 emissions intensity (metric tons CO2e per GWh)

211

Comment

Capacity of units is included based on their primary fuel type. Some units may have dual fuel capability. Generation includes facilities for which Southern Company owns and sells the energy to customers (i.e. excludes purchased power and leveraged leases). Geothermal includes generation from fuel cells and landfill gas.

Hydropower

Nameplate capacity (MW)

2,758

Gross electricity generation (GWh)

7,874

Net electricity generation (GWh)

7,851

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Generation and emissions include facilities for which Southern Company owns and sells the energy to customers (i.e. excludes purchased power and leveraged leases).

Wind

Nameplate capacity (MW)

2,110

Gross electricity generation (GWh)

7,193

Net electricity generation (GWh)

7,193

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

The information provided in response to this question reflects Southern Company's total generation based upon financial control only, not upon load service by any retail operating companies. To the extent that there are renewable energy credits or other environmental attributes (collectively "RECs") associated with generation reported, the contracted owner of the RECs (whether a Southern Company affiliate or a third party) maintains all rights and ownership including the right to claim the RECs, utilize the RECs for purposes of associating the environmental benefits of such generation with its electric load or sell such RECs to third parties. Generation and emissions include facilities for which Southern Company owns and sells the energy to customers (i.e. excludes purchased power and leveraged leases).

Solar

Nameplate capacity (MW)

2,701

Gross electricity generation (GWh)

5,876

Net electricity generation (GWh)

5,876

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

The information provided in response to this question reflects Southern Company's total generation based upon financial control only, not upon load service by any retail operating companies. To the extent that there are renewable energy credits or other environmental attributes (collectively "RECs") associated with generation reported, the contracted owner of the RECs (whether a Southern Company affiliate or a third party) maintains all rights and ownership including the right to claim the RECs, utilize the RECs for purposes of associating the environmental benefits of such generation with its electric load or sell such RECs to third parties. Generation and emissions include facilities for which Southern Company owns and sells the energy to customers (i.e. excludes purchased power and leveraged leases).

Marine

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not applicable

Other renewable

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not applicable

Other non-renewable

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Not applicable

Total

Nameplate capacity (MW)

44,426

Gross electricity generation (GWh)

180,363

Net electricity generation (GWh)

175,302

Absolute scope 1 emissions (metric tons CO2e)

70,342,699

Scope 1 emissions intensity (metric tons CO2e per GWh)

401

Comment

Generation and emissions include facilities for which Southern Company owns and sells the energy to customers (i.e. excludes purchased power and leveraged leases).

C-EU8.4

(C-EU8.4) Does your electric utility organization have a transmission and distribution business?

Yes

C-EU8.4a

(C-EU8.4a) Disclose the following information about your transmission and distribution business.

Country/Region

United States of America

Voltage level

Transmission (high voltage)

Annual load (GWh)

154,286

Annual energy losses (% of annual load)

2.9

Scope where emissions from energy losses are accounted for

Scope 1

Emissions from energy losses (metric tons CO₂e)

0

Length of network (km)

40,770

Number of connections

68

Area covered (km²)

300,438

Comment

Southern Company does not separately calculate emissions from energy losses from its transmission system because these are already accounted for in Southern's total Scope 1 emissions since it generates and transmits the electricity. Additionally, energy losses associated with the electricity purchased to serve our customers are reported under Scope 2 (location-based and market-based).

Country/Region

United States of America

Voltage level

Distribution (low voltage)

Annual load (GWh)

112,171

Annual energy losses (% of annual load)

2.55

Scope where emissions from energy losses are accounted for

Scope 1

Emissions from energy losses (metric tons CO₂e)

0

Length of network (km)

253,869

Number of connections

4,453,906

Area covered (km²)

214,823

Comment

Southern Company does not separately calculate emissions from energy losses from its distribution system because these are already accounted for in Southern's total Scope 1 emissions since it generates and distributes the electricity. Additionally, energy losses associated with the electricity purchased to serve our customers are reported under Scope 2 (location-based and market-based).

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

C-EU9.5a

(C-EU9.5a) Break down, by source, your total planned CAPEX in your current CAPEX plan for power generation.

Primary power generation source	CAPEX planned for power generation from this source	Percentage of total CAPEX planned for power generation	End year of CAPEX plan	Comment
Coal – hard	1,746,000,000	17.21	2025	We do not intend to invest further in our existing thermal coal fleet, unless the investment ensures safety, affordability or reliability to serve customers or to comply with federal or state laws. Most of the capital expenditure shown here is related to compliance with environmental regulations.
Oil	13,000,000	0.13	2025	
Gas	2,344,000,000	23.1	2025	Southern Company will continue to use a portfolio approach as we seek to decarbonize. We expect our path to net zero to be comprised of several key elements: continued coal transition, utilization of natural gas to enable the fleet transition, further growth in our portfolio of zero-carbon resources, negative carbon solutions, enhanced energy efficiency initiatives and continued investment in R&D focused on clean energy technologies.
Nuclear	3,850,000,000	37.94	2025	Nuclear energy is zero carbon and one of the cleanest, most reliable and cost-effective

				fuel sources available today. Its importance in our portfolio continues to grow with the two new nuclear units being constructed.
Hydropower	1,278,000,000	12.59	2025	Our diverse portfolio was initially founded on zero-carbon hydroelectric generation.
Solar	121,000,000	1.19	2025	From 2010-2019, Southern Power has invested more than \$10.5 billion in capital investments related to its renewable portfolio. Southern is among the largest solar owner-operators in the U.S. Capital expenditures includes maintenance capital and expenditure. Southern Company also serves retail customers with purchases of significant amounts of solar and wind generation from third parties through long-term contracts.
Wind	630,000,000	6.21	2025	From 2010-2019, Southern Power has invested more than \$10.5 billion in capital investments related to its renewable portfolio. Southern Company also serves retail customers with purchases of significant amounts of solar and wind generation from third parties through long-term contracts.
Other, please specify Battery storage and microgrid	166,000,000	1.63	2025	

C-EU9.5b

(C-EU9.5b) Break down your total planned CAPEX in your current CAPEX plan for products and services (e.g. smart grids, digitalization, etc.).

Products and services	Description of product/service	CAPEX planned for product/service	Percentage of total CAPEX planned products and services	End of year CAPEX plan
Distributed generation	Distributed generation such as solar PV	3,000,000	0.23	2025
Home storage systems	Surge protection	3,000,000	0.21	2025
Energy management services	Backup generation projects	92,000,000	6.91	2025

Charging networks	Electric transport initiatives	26,000,000	1.92	2025
Lighting	Outdoor lighting	660,000,000	49.67	2025
Large-scale storage	Battery technology	443,000,000	33.37	2025
Micro-grid	Micro-grid installation	89,000,000	6.73	2025
Other, please specify Cameras and other equipment related to power delivery	Cameras and other equipment related to power delivery	12,000,000	0.87	2025

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

Investment in low-carbon R&D		Comment
Row 1	Yes	For more than five decades, Southern Company's world-class R&D organization has remained at the forefront of innovation. The organization's diverse research portfolio spans technology development for energy production, delivery and use, and is facilitating the transition to an affordable, reliable net-zero energy system by advancing a full spectrum of solutions to address the energy industry's greatest challenges. Our mission is to deliver technologies that reduce GHG emissions while delivering maximum value to customers, the business and shareholders in the optimal technology timeline.

C-CO9.6a/C-EU9.6a/C-OG9.6a

(C-CO9.6a/C-EU9.6a/C-OG9.6a) Provide details of your organization's investments in low-carbon R&D for your sector activities over the last three years.

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (optional)	Comment
Carbon capture and storage/utilisation	Pilot demonstration	≤20%	8,600,000	This program supports the research, development, demonstration and deployment of cost-effective carbon capture, utilization and storage (CCUS) technologies. The focal point of these efforts is the National

			<p>Carbon Capture Center (NCCC), which Southern Company manages and operates for the U.S. Department of Energy (DOE). The facility was created to advance technology development to reduce greenhouse gas emissions from fossil-based power generation. Through pilot testing of more than 60 technologies, the NCCC has reduced the projected cost of carbon capture from fossil-based power generation by more than one-third, and further reductions are expected as a major addition has expanded the center's research to include a greater focus on developing technologies to achieve deep carbon reductions from natural gas-based generation. Under its expanded scope, the NCCC is also evaluating utilization technologies that offer promising ways to transform CO₂ into value-added products – partially offsetting CO₂ capture costs from power generation and providing an alternative to conventional manufacturing processes. The NCCC's mission is further evolving to include technology solutions for CO₂ removal, including direct air capture (DAC) – which could provide complete flexibility in the location of value-driven atmospheric carbon capture – and we're looking at bioenergy with CCUS. We are also performing a Front-End Engineering Design (FEED) study for retrofitting an existing Southern Company natural gas-fired combined-cycle power plant with CO₂ capture. Other projects in Southern Company's CCUS program as well geologic resource assessments for commercial CO₂ storage and fundamental science and pilot</p>
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				<p>demonstrations to support the commercial deployment of CO2 capture across our service territory. The program has demonstrated the ability to safely store large volumes of anthropogenic CO2 in U.S. Environmental Protection Agency-permitted wells.</p>
<p>Other, please specify Power Delivery and Grid Modernization</p>	<p>Applied research and development</p>	<p>≤20%</p>	<p>1,200,000</p>	<p>This research program focuses on power delivery technology issues and improvements for a net-zero future, including next-generation transmission technologies to improve reliability, reduce cost and modernize the grid; innovative substation technology to enable more reliable, secure and cost-effective design, construction, operation and maintenance of transmission substations; and new distribution grid technologies that increase safety, reliability and efficiency. Projects include deploying a sensor suite, tools and devices to monitor power delivery assets; developing technologies to increase transmission and distribution situational awareness; addressing needs for condition-based maintenance; providing greater visualization for grid modernization efforts; and reducing operations and maintenance costs. Examples include development of a 10-year Distribution Modernization Roadmap, edge of network grid optimization (ENGO) and radio frequency identification sensors and the Schatz Grid Visualization and Analytics Center, which serves as a test bed for next-generation control center technologies. This grid operations research is focused on supporting transmission owners in planning and operating the bulk power system reliably and</p>

				economically to provide safe and environmentally responsible sources of electric power.
Other, please specify End Use Technology	Applied research and development	≤20%	2,600,000	The energy end-use R&D program seeks to identify, harden and advance technologies that meet industrial, commercial and residential customers' evolving energy needs, to promote energy efficiency and efficient electrification, and to support overall economic development with Southern Company's service territory. Initiatives in this research program include Connected Communities – including first-of-a-kind projects like the Alabama Power and Georgia Power Smart Neighborhoods – electric transportation, market opportunities for electric alternatives, industrial energy intensity and productivity, advanced space heating and water heating technologies, indoor agriculture evaluations, customer data analytics, and power quality technologies, as well as demand management tools and programs.
Other, please specify Generation Fleet Modernization and Sustainability	Applied research and development	≤20%	700,000	This R&D is focused on improving the reliability and efficiency of Southern Company's existing fossil generation fleet, with primary work in areas that include natural gas turbines, cooling systems, advanced materials, instruments and controls, state-of-the-art plant digitalization and environmental controls. Projects work to maximize fleet flexibility, availability and performance; analyze, develop and demonstrate advanced generation concepts with lower carbon footprints for retrofit or greenfield applications; and provide generation technology assessment for system planning. This program also focuses on advancing emerging

				technologies for wastewater, solid waste and coal combustion residuals. R&D in this area leads to decreased material usage and ensures water and fuel resources are used more efficiently.
Other, please specify Advanced Energy Systems – Next-Generation Nuclear and Alternative Energy Carriers	Applied research and development	≤20%	5,300,000	<p>This program includes a robust initiative to accelerate the commercialization of high-potential, next-generation nuclear technologies on a timescale that addresses climate change benchmarks and supports Southern Company's goal of net-zero greenhouse gas emissions by 2050. Southern Company's primary advanced nuclear R&D project is a collaborative with TerraPower, the U.S. Department of Energy, Electric Power Research Institute and others, which is focused on development of the Molten Chloride Fast Reactor (MCFR), a specific advanced nuclear technology that offers numerous safety, performance and economic benefits, including flexible, highly efficient clean electric power generation as a complement to the increased use of intermittent renewable resources on the grid. The MCFR technology also has the potential to provide carbon-free high-grade process heat and thermal storage for difficult-to-decarbonize industrial markets and ocean transportation sectors. The advanced nuclear program also includes a variety of projects, including the Licensing Modernization Project and Technology Inclusive Content of Application project, to modernize the licensing framework for advanced reactor technologies.</p> <p>In addition to advanced nuclear, this</p>

				<p>Southern Company R&D program is exploring alternative energy carriers and includes technology development associated with the production, distribution and end use of clean hydrogen, as well as the opportunity to derive other energy carriers (ammonia, methanol, etc.) from clean hydrogen. This program is particularly developing the technology associated with infrastructure deployment and how the production and use of hydrogen can work in synergy with electricity generation and end use to lower the overall greenhouse gas emissions and cost of the energy system. Key projects include the development of hydrogen-based energy storage, hydrogen as a flexible resource for customers, and development of hydrogen distribution infrastructure technology.</p>
Other, please specify Renewables, Storage, and Distributed Generation	Pilot demonstration	≤20%	1,800,000	<p>Southern Company's renewables, storage and distributed generation R&D portfolio represents a collaborative effort between the generation and retail marketing business units of the Southern Company system to develop and advance emerging technologies associated with renewable resources (wind, solar, biomass), energy storage and distributed generation. Objectives include providing technical, economic and operational research to evaluate, develop and demonstrate future technology options for the company and its customers. The comprehensive research portfolio includes advanced "tall tower" wind generation; fuel cell, microgrid and battery energy storage demonstrations (including renewables coupled with energy storage); as well as research into</p>

				tools and techniques to optimize solar photovoltaic (PV) generation forecasting and improve operations and maintenance of solar PV facilities.
Other, please specify R&D / Cross-Cutting Technologies	Applied research and development	≤20%	470,000	This program area facilitates enhanced R&D value through internal and external collaboration across strategic areas by leveraging funds, finding and exploiting synergies, and applying common results. R&D is conducted to advance instrumentation, controls, advanced materials, analytics, sensors and unmanned aircraft systems, which can lead to more efficient operation of generating units and the grid and subsequently lower carbon emissions.
Other, please specify R&D Portfolio Management	Applied research and development	≤20%	980,000	Southern Company's R&D organization has worked for more than five decades to develop new technologies across the production, delivery and use of energy, and is facilitating the transition to an affordable, reliable net-zero energy system. The organization manages a diverse research portfolio to ensure that Southern Company, its subsidiaries and the energy industry have the capabilities and knowledge to successfully deploy technologies to meet customers' needs while planning for a net-zero future. Current research areas include carbon capture, utilization and storage (CCUS); renewables, energy storage and distributed generation; advanced nuclear, hydrogen-based energy systems, novel power cycles and generating fleet support; and power delivery (electric and gas), as well as emerging programs in energy end use, cyber security and analytics, decarbonized industrial, and sustainability. Southern

				<p>Company's unique, centralized R&D organization has a record of developing technology solutions that have successfully improved our business, while also increasing customer value and providing affordable energy. Southern Company R&D actively collaborates with other utilities, universities, technology developers and industry organizations, highly leveraging both funding and expertise. By managing public-private partnerships and other forms of external cost-sharing, Southern Company's R&D team magnifies the value of the company's R&D investment for our customers many times over. Results of the R&D program are routinely applied in decision-making for the deployment of new technologies into the Southern Company system and future portfolio.</p>
Other, please specify Industry R&D Collaborations	Applied research and development	21-40%	21,300,000	<p>Southern Company's model for R&D includes active collaboration with the U.S. government, other utilities, academia and technology developers. Through these longstanding partnerships, Southern Company advances the most promising technology options for the energy sector in the transition to a net-zero GHG future. Furthermore, this approach significantly magnifies Southern Company's internal research investments through public-private partnerships and other forms of external cost-sharing. This R&D program primarily consists of Southern Company's membership in the Electric Power Research Institute (EPRI). Through EPRI, Southern Company actively collaborates with the entire electricity sector and its stakeholders to solve significant industry issues. Southern Company</p>

				<p>is a founding member of EPRI, with hundreds of employees from across the Southern Company system engaged at all levels, including advisory, council and board positions. Southern Company's annual membership in EPRI gains access to the institute's entire research portfolio, and membership benefits include best practices, access to white papers, and better operations, reliability and customer service, as well as independent third-party scientific and technology information. In addition to its ongoing EPRI membership activities, Southern Company, with its Southern Company Gas subsidiary, is one of the anchor sponsors that have committed financial support to the Low-Carbon Resources Initiative (LCRI), a research and development collaboration between EPRI and the Gas Technology Institute. Over the next five years, the LCRI will focus on developing pathways to advance low-carbon technologies for large-scale deployment, including hydrogen and related low-carbon resources.</p>
<p>Other, please specify Industry R&D Collaborations</p>	<p>Applied research and development</p>	<p>61-80%</p>	<p>1,586,500</p>	<p>In addition, Southern Company Gas, through Nicor Gas, is a member of two industry-led not-for-profit 501(c)(6) organizations: Utilization Technology Development; and Operation Technology Development Programs. Nicor Gas also partners with Gas Technology Institute (GTI) in the Emerging Technology Program, all of which create collaborations with gas utilities in North America, leading researchers, government agencies, manufacturers and distributors to create and advance new technologies and products to save</p>

				<p>consumers money, enable efficient fuel choices and minimize environmental impacts, further integrating natural gas with renewable energy. Nicor Gas allocates funding to the Carbon Management Information Center that GTI operates on behalf of the utilities. Employees from Nicor Gas hold GTI board and advisory positions. GTI's R&D impacts and benefits ratepayers, utilities, other stakeholders and our planet. Southern Company Gas is a member of the NYSEARCH organization. Similar to the GTI, NYSEARCH collaborates across gas utilities to develop new products and technologies for the betterment of the natural gas industry and consumers. Southern Company Gas employees hold board position and serve as technical industry leaders within the organization. Southern Company Gas also collaborates with several national labs and additional research organizations on an ad-hoc basis for technical research projects related to developing the utility infrastructure of the future.</p>
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C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	No third-party verification or assurance

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance

Limited assurance

Attach the statement

Page/ section reference

Relevant standard

Proportion of reported emissions verified (%)

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach

Scope 2 market-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Underway but not complete for current reporting year – first year it has taken place

Type of verification or assurance

Limited assurance

Attach the statement

Page/ section reference

Relevant standard

Proportion of reported emissions verified (%)

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

No, we do not verify any other climate-related information reported in our CDP disclosure

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

No, and we do not anticipate being regulated in the next three years

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

No

C11.3

(C11.3) Does your organization use an internal price on carbon?

Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Objective for implementing an internal carbon price

- Navigate GHG regulations
- Stakeholder expectations
- Change internal behavior
- Drive low-carbon investment
- Stress test investments
- Identify and seize low-carbon opportunities

GHG Scope

Scope 1

Application

Southern Company applies its CO₂ price paths in its analyses to support resource planning and associated major investment decision-making for current and future generating plants of all its retail electricity businesses.

Actual price(s) used (Currency /metric ton)

50

Variance of price(s) used

The Southern Company regulated electric system considers a range of future CO2 price paths that evolve over time. In scenarios considered in 2020, a \$0, \$10, \$20, and \$50 price per metric ton of CO2 were considered. All prices considered escalate annually at a rate above inflation. CO2 price assumptions may change from one year to the next due to a variety of factors including but not limited to shifts at the federal policy level.

Type of internal carbon price

Shadow price

☞ Southern Company uses its CO2 price paths in resource planning scenario analyses and to inform all major generation decisions in our retail electric utilities. The analyses consider both the evolution of the US energy economy and the least-cost evolution of the Southern Company generating portfolio. In different scenarios, different paths for future CO2 prices are assumed. The price path is assumed to arise from a future CO2 control policy such as a carbon tax, clean energy standard, cap-and-trade program, or Clean Air Act regulation .

Impact & implication

Southern Company uses its CO2 price paths as a tool in resource planning scenario analyses to reveal risks and opportunities. As such, it aids in informing all major generation decisions in our retail electric utilities. The analyses consider the least-cost evolution of the Southern Company generating portfolio. In different scenarios, different paths for future CO2 prices are assumed. The price path is assumed to arise from a future CO2 control policy such as a carbon tax, clean energy standard, cap-and-trade program, or Clean Air Act regulation. Southern Company's integrated resource planning process provides for an understanding of the impacts of resource decisions across a range of scenarios which provides significant insight to informing and identifying broad industry risks and potential business strategies. This scenario format also serves as a basis for integrated resource planning at the state regulated electric operating companies – and ultimately informs major generation retirement and capital investment decisions.

The comprehensive scenario resource planning process has resulted in 6,300 MW of coal and oil-fired retirements since 2010. In addition, because of the projected energy benefit realized by renewable energy resources, Southern has made commitments to add over 2,300 MW of renewables and energy storage capacity through 2025. Lastly, the scenario planning process resulted in the regulatory approval to construct the nation's first new zero carbon U.S. nuclear generation facilities in 30 years.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers

Yes, our customers

Yes, other partners in the value chain

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Engagement & incentivization (changing supplier behavior)

Details of engagement

Climate change performance is featured in supplier awards scheme

% of suppliers by number

31

% total procurement spend (direct and indirect)

28

% of supplier-related Scope 3 emissions as reported in C6.5

0

Rationale for the coverage of your engagement

Southern Company Gas is a founding member of ONE Future. ONE Future was formed with a focus to collectively achieve a science-based average rate of methane emissions across our facilities equivalent to one percent (or less) of total natural gas production. With operations across nearly every part of the natural gas value chain, we are focused on identifying policy and technical solutions that yield continuous improvement in the management of methane emissions. ONE Future members are a target for engagement as they have all made commitments to reduce methane emissions. Southern Company, along with other ONE Future members, is working to increase membership in ONE Future to include additional natural gas suppliers and producers which would increase reductions across the entire value chain. Additionally, natural gas suppliers committed to GHG reductions from their own operations have a competitive edge in our natural gas procurement process.

Impact of engagement, including measures of success

The 31% of suppliers and 28% of total procurement spend is reflective of 2020 spend by the Southern Company electric operations with companies that are either members of ONE Future or part of companies that are engaged in ONE Future. In some cases, an affiliate company is the participating member, and the supplier itself is not a named member of ONE Future. To achieve ONE Future's collective one percent target, ONE Future has identified sectoral performance targets for each of the four major industry sectors (Exploration and Production; Gathering and Processing; Transmission and Storage, and Distribution and Retail) that would cumulatively add up to its overall one percent goal. ONE Future has worked to set these performance targets in rough proportion to each industry sectors' respective share of current emissions, considering reduction potentials given current regulatory barriers. These sectoral targets serve both to benchmark company progress toward their goals, but also to facilitate comparisons amongst diverse companies as each strives for optimal performance. Success of these engagement efforts will be demonstrated as more companies become a part of ONE

Future and as member companies reach their methane reduction goals. Membership in ONE Future grew from 18 to 32, an increase of 75% between 2019 and 2020.

Comment

ONE Future’s members begin with a focus on the outcome they want to achieve. In the case of methane emissions, our desired outcome is to collectively achieve an average rate of emissions across all facilities that is equivalent to one percent (or less) of total produced and delivered natural gas. With one goal in mind, each member company has the flexibility to deploy their capital where it will be maximally effective in reducing emissions. For one company that may be deploying an innovative technology, for another modifying a work practice or for another retiring an asset. To demonstrate credible and measurable results, ONE Future companies agree to measure their emissions and track their progress over time according to uniform, EPA-approved reporting protocols. This is effective because most studies demonstrate that the majority of methane emissions come from a small fraction of sources. This approach allows companies to focus their resources on identifying and addressing those sources. The amount of total 2020 procurement spend with companies that are either members of ONE Future or part of companies that are engaged in ONE Future is 24%. This procurement spend calculation includes Southern Company Gas’ (direct and indirect, but excluding procurement by its subsidiary SouthStar Energy Services LLC) spend on natural gas commodity, transportation and storage. In some cases, an affiliate company is the participating member, and the supplier itself is not a named member of ONE Future. The percentage of total 2020 procurement spend of SouthStar Energy Services LLC (direct and indirect) on natural gas commodity, transportation and storage with companies that are either members of ONE Future or part of companies that are engaged in ONE Future is 35%. In some cases, an affiliate company is the participating member for a supplying company, and the supplier itself is not a named member of ONE Future. Southern Company does not currently have a way to collect meaningful corporate data related to upstream transportation and distribution to provide a percentage of Scope 3 data.

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement

Education/information sharing

Details of engagement

Share information about your products and relevant certification schemes (i.e. Energy STAR)

% of customers by number

100

% of customer - related Scope 3 emissions as reported in C6.5

0

Please explain the rationale for selecting this group of customers and scope of engagement

Energy efficiency programs and products are made available to all customers served by each of the electric operating companies. There are specific programs and products targeted at residential and commercial customers to increase the efficiencies of their homes and businesses and ultimately decrease energy usage. Programs include appliance incentives for upgrading to new more efficient models, home energy assessments, Home Energy Improvement Programs and behavior analysis programs focused on reducing energy usage. Southern Company Gas natural gas energy efficiency programs offer certain of its LDC customers a wide array of energy-saving products, assessments and incentives. These programs are designed and implemented to help customers conserve energy and save money, without sacrificing comfort, style or convenience.

Impact of engagement, including measures of success

The programs are all facilitated by individual retail operating companies, and success is measured in various ways for each program including but not limited to tracking of rebates for appliance installations and tracking participation in auditing and behavioral programs. In 2021, Mississippi Power announced a partnership with Energy Impact Partners to help achieve an equitable energy transition through a new pilot program. The Smart Thermostat Access Rewards (STAR) pilot includes up to 100 residential single-family home participants within low-income qualified communities. Customers will receive a free internet-connected thermostat and installation and be enrolled to participate in ten automated demand response events during the summer and winter. Participants are compensated for participation.

The most telling measure of success is the reduction in electricity usage of 3 billion kWh of energy from our electric utilities. Additionally, since 2011, Southern Company Gas’s subsidiary, Nicor Gas, has successfully implemented the Nicor Gas Energy Efficiency Program. The Program has helped Nicor Gas customers save more than 144 million net therms.

Type of engagement

Education/information sharing

Details of engagement

Share information about your products and relevant certification schemes (i.e. Energy STAR)

% of customers by number

100

% of customer - related Scope 3 emissions as reported in C6.5

0

Please explain the rationale for selecting this group of customers and scope of engagement

Southern Company electric operating companies each have programs and services available to all customers related to renewable generation including but not limited to programs such as Community Solar and Simple Solar programs offered by Georgia Power. Due to multiple program offerings, Georgia Power, for example, offers solar education and analysis to assist all customers in determining which solar option is best for them. Alabama Power is also working to implement renewable energy programs to provide solar energy to customers who want to drive

development of new resources without requiring subsidies from other customers. Alabama Power's residents and businesses have the opportunity to purchase renewable energy credits through the Greener State Program.

Impact of engagement, including measures of success

The programs are all facilitated by individual retail operating companies, and success is measured in various ways for each program. For example, since 2017, over 35,000,000 kilowatt hours of clean energy have been used by participants through Alabama Power's Greener State Program. Another measure of success is the increased enrollment in such customer engagement programs. For example, Georgia Power recognized an enrollment increase of 29% for the Simple Solar program and 37% in the Community Solar program in 2019.

Type of engagement

Education/information sharing

Details of engagement

Other, please specify

Offer customers deeper analysis around energy use, costs and current state emissions to inform decarbonization strategies.

% of customers by number

1

% of customer - related Scope 3 emissions as reported in C6.5

0

Please explain the rationale for selecting this group of customers and scope of engagement

Customers are engaging consultants to support their sustainability and decarbonization plans and looking for more data to support the effort. Southern Company is exploring how the utility can make data access and analytics accessible and usable and determining if it is a service that should be available to all or an unregulated business offering. In order to inform the approach, a small set of representative customers is being selected to evaluate the solutions viability and impact. Offer customers deeper analysis around energy use, costs and current state emissions to inform decarbonization strategies. We also provide energy efficiency recommendations, DER solutions, resiliency and electrification options across the customers' buildings.

Impact of engagement, including measures of success

The program will be measured through engagement metrics – marketing conversion rates and inbound requests as well as adoption and implementation per customer and per recommendation. The expectation is that energy efficiency, electrification and distributed resource solutions are implemented at engaged customers facilities reducing carbon and increasing reliability. Each customer's implementation will be measured in kWh saved, carbon emission reduction and in cost savings. Total program impact will be tracked across the Southern Company system.

Type of engagement

Education/information sharing

Details of engagement

Share information about your products and relevant certification schemes (i.e. Energy STAR)

% of customers by number

1.1

% of customer - related Scope 3 emissions as reported in C6.5

0

Please explain the rationale for selecting this group of customers and scope of engagement

SouthStar Energy Services (SSE), which does business in Georgia as Georgia Natural Gas® (GNG), in Ohio as Ohio Natural Gas® (ONG), and in Michigan as Grand Rapids Energy® (GRE) utilizes a variety of methods and channels to educate consumers about its Greener Life® program and the benefits of customer participation. For example, GNG representatives provide information about Greener Life to customers who call GNG to enroll or change price plans. GNG also employs television commercials, billboards, references in printed customer materials, community engagement videos on local news stations and an informative video which can be sent to customers who request additional information from our call center agents. And GNG's website (GNG.com/greenerlife) is always available to provide an interactive, informative experience for customers interested in learning more detailed information about carbon offsets and the Greener Life program at their convenience. In April 2021, GNG introduced a new promotional offer whereby customers can enroll in the Greener Life program and get their first six months free.

The Greener Life program provides customers with the option to offset their individual GHG emissions and make their natural gas usage carbon neutral. The program is available to SSE's Georgia (Georgia Natural Gas), Michigan (Grand Rapids Energy®), and Ohio (Ohio Natural Gas®) customers. These markets were selected based on expected market demand and ability to offer the program based on market limitations. The scope of engagement includes voluntary enrollment and an associated monthly or per-therm fee. Once enrolled, a customer's GHG emissions are calculated and SSE purchases and retires carbon offsets to balance the impact of those emissions. The Greener Life program does not include lifecycle emissions that occur during extraction, production, or delivery.

Impact of engagement, including measures of success

The primary measure of success for this program is customer enrollments / participation. As of May 1, 2021, the Greener Life program had 6,582 active customers. In 2020, the GNG Greener Life again received Green-e Climate certification from an independent third party, the Center for Resource Solutions. Green-e Climate is the leading certification program for voluntary carbon offset programs.

C12.1d

(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

For the last decade, Southern Company has held regular environmental stakeholder forums, webinars, calls and meetings to discuss a range of topics including our efforts to reduce GHG emissions, regulatory and policy issues, system risk and planning related to renewables, energy efficiency, and just transition. Members of senior management participate in these events.

In 2020, we hosted two virtual environmental forums and discussed our net zero by 2050 goal, decarbonization efforts, R&D efforts, just transition and advancing energy policy. Our CEO led both virtual forums and other participating senior leaders included the Chief Financial Officer, Chief Legal Officer, Executive Vice President of Operations and Senior Vice President of Environmental and System Planning. Stakeholders participating included regional environmental and socially focused non-governmental organizations, shareholder advocacy groups, and state pension funds.

Another example of how Southern Company engages throughout our community is in our collaborations to enhance renewable options. Georgia Power demonstrates this type of collaboration through the Lagrange Solar project with The Ray. The multi-technology project features right-of-way solar panels operated by Georgia Power through an agreement with the Georgia PSC.

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

- Direct engagement with policy makers
- Trade associations
- Funding research organizations
- Other

C12.3a

(C12.3a) On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Carbon tax	Neutral	Southern Company actively seeks direct, open communication with various policy makers, regulators and stakeholders. Southern Company has a presence in Washington, D.C., that enables constructive dialogue with policymakers and the federal government. The Company attempts to ensure policymakers are provided accurate information that leads to appropriate discussions, debates and	Southern Company will continue to keep customers at the center of everything we do while we support growth in lower-emitting generation and continued development and deployment of a diverse portfolio of energy resources. We strive for low cost, high reliability, high customer satisfaction, and constructive regulation as we advocate for a suite of complementary policies that

		<p>decisions on policy issues that could impact the Southern Company system's business and customers. Regarding a carbon tax, Southern Company has engaged Congressional staff, environmental organizations, environmental think tanks, research organizations, and various associations to assist in developing a well-designed carbon tax.</p>	<p>achieve a net zero GHG emission power sector and economy. A well-designed carbon tax can be an important element of achieving a net zero GHG emission power sector and economy, especially when coupled with complementary policies.</p>
Energy efficiency	Support with minor exceptions	<p>Southern Company actively seeks direct, open communication with various policymakers, regulators and stakeholders. Southern Company has a presence in Washington, D.C., that enables a constructive dialogue with policymakers in the federal government. The Company attempts to ensure policymakers are provided accurate information that leads to appropriate discussions, debates and decisions on policy issues that could impact the Southern Company system's business units and customers. Regarding energy efficiency, Southern Company has engaged Congressional staff, environmental organizations, think tanks, research organizations and various associations to assist in developing well-designed energy efficiency policies.</p>	<p>Southern Company will continue to keep customers at the center of everything we do while we support growth in lower-emitting generation and continued development and deployment of a diverse portfolio of energy resources. We strive for low cost, high reliability, high customer satisfaction, and constructive regulation as we advocate for a suite of complementary policies that achieve a net zero GHG emission power sector and economy. Southern Company supports efficient energy use as a primary tool to reduce greenhouse gas emissions, including adoption and enforcement of cost-effective building codes and appliance standards. We promote efficient energy use through education, pricing, cost-effective energy efficiency programs, and providing solutions for economically vulnerable communities. Efficient energy use will provide growing benefits as we transition to net zero emissions.</p>
Other, please specify Energy efficiency (EV and low emitting vehicles)	Support with minor exceptions	<p>Southern Company actively seeks direct, open communication with various policymakers, regulators and stakeholders. Southern Company has a presence in Washington, D.C., that enables a constructive dialogue with policymakers in the federal government. The Company attempts to ensure policymakers are provided</p>	<p>Southern Company will continue to keep customers at the center of everything we do while we support growth in lower-emitting generation and continued development and deployment of a diverse portfolio of energy resources. We strive for low cost, high reliability, high customer satisfaction, and constructive</p>

		<p>accurate information that leads to appropriate discussions, debates and decisions on policy issues that could impact the Southern Company system’s business units and customers. Regarding policies to support low- and no-emitting vehicles, Southern Company has engaged Congressional staff, environmental organizations, think tanks, research organizations and various associations to assist in developing well-designed policies to support low- and no-emitting vehicles.</p>	<p>regulation as we advocate for a suite of complementary policies that achieve a net zero GHG emission power sector and economy. Southern Company supports enhanced and extended federal funding and tax incentives to spur the adoption of low- and no-emitting vehicles, promote alternative vehicle charging infrastructure installation, and support additional R&D in vehicles, batteries, electric grid integration, and other non-vehicle equipment and services. As decarbonizing the transportation sector represents the single largest opportunity for GHG reductions, we believe a coordinated Federal-State-Local Government approach is essential for the success of this effort.</p>
<p>Other, please specify Clean energy generation (Clean Energy Standard)</p>	<p>Support with minor exceptions</p>	<p>Southern Company actively seeks direct, open communication with various policymakers, regulators and stakeholders. Southern Company has a presence in Washington, D.C., that enables a constructive dialogue with policymakers in the federal government. The Company attempts to ensure policymakers are provided accurate information that leads to appropriate discussions, debates and decisions on policy issues that could impact the Southern Company system’s business units and customers. Regarding a clean energy/electricity standard (CES), Southern Company has engaged the White House, Congressional staff, environmental organizations, environmental think tanks, research organizations, and various associations to assist in developing a well-designed CES.</p>	<p>Southern Company will continue to keep customers at the center of everything we do while we support growth in lower-emitting generation and continued deployment of a diverse portfolio of energy resources. We strive for low cost, high reliability, high customer satisfaction, and constructive regulation as we advocate for a suite of complementary policies that achieve a net zero GHG emission power sector and economy. A well-designed CES for the electric sector can be an important element of achieving a net zero GHG emission power sector and economy, especially when coupled with complementary policies.</p>
<p>Other, please specify Clean energy</p>	<p>Support with minor exceptions</p>	<p>Southern Company actively seeks direct, open communications with various policymakers, regulators and stakeholders. Southern Company has</p>	<p>Southern Company will continue to keep customers at the center of everything we do while we support growth in lower-emitting generation</p>

<p>generation (RDD&D)</p>		<p>a presence in Washington, D.C., that enables constructive dialogue with policymakers and the federal government. The Company attempts to ensure policymakers are provided accurate information that leads to appropriate discussions, debates and decisions on policy issues that could impact the Southern Company system's business and customers. Southern Company actively engages with policymakers, regulators and key stakeholders to ensure continued support for robust public-private investment in the research, development, demonstration and deployment of clean energy technologies. These efforts focus on advancing a diverse portfolio of transformational energy solutions that will enable utility and economy-wide decarbonization while increasing customer value and providing affordable energy.</p>	<p>and continued deployment of a diverse portfolio of energy resources. We strive for low cost, high reliability, high customer satisfaction, and constructive regulation as we advocate for a suite of complementary policies that achieve a net zero GHG emission power sector and economy. Southern Company believes that the path to economy-wide net zero emissions is through robust research, development, demonstration and deployment (RDD&D) that enables net zero carbon emission solutions to be realized across various timeframes at equal or lower cost of service for energy customers compared to current conditions. We support establishing and expanding long-term stable funding in energy RDD&D that enables breakthrough technologies and strategies that optimize economy-wide outcomes and are critical to net zero goals.</p>
<p>Other, please specify Clean energy generation (Financial incentives)</p>	<p>Support with minor exceptions</p>	<p>Southern Company actively seeks direct, open communications with various policymakers, regulators and stakeholders. Southern Company has a presence in Washington, D.C., that enables constructive dialogue with policymakers and the federal government. The Company attempts to ensure policymakers are provided accurate information that leads to appropriate discussions, debates and decisions on policy issues that could impact the Southern Company system's business and customers. Regarding financial incentives for clean energy generation, Southern Company has engaged Congressional staff, environmental organizations, think tanks, research organizations, and various associations to assist in</p>	<p>Southern Company will continue to keep customers at the center of everything we do while we support growth in lower-emitting generation and continued deployment of a diverse portfolio of energy resources. We strive for low cost, high reliability, high customer satisfaction, and constructive regulation as we advocate for a suite of complementary policies that achieve a net zero GHG emission power sector and economy. Southern Company supports equitable tax policy improvements, such as production tax credits and investment tax credits, that recognize the breadth of climate change solutions that achieve permanent carbon reductions, while establishing financial tools that provide optionality</p>

		developing well-designed financial incentives for clean energy generation.	and flexibility. Investor-owned utilities, like Southern Company, can drive adoption of cleaner energy solutions with appropriate tax policy that eliminates unintended economic barriers to the deployment of low carbon technologies and reduces costs to customers.
Regulation of methane emissions	Support with minor exceptions	Southern Company actively seeks direct, open communications with various policymakers, regulators and stakeholders. Southern Company has a presence in Washington, D.C., that enables constructive dialogue with policymakers and the federal government. The Company attempts to ensure policymakers are provided accurate information that leads to appropriate discussions, debates and decisions on policy issues that could impacts the Southern Company system’s business and customers. Regarding methane regulation, Southern Company has engaged federal agencies, Congressional staff, environmental organizations, environmental think tanks, research organizations, and various associations to assist in developing well-designed methane regulations.	Southern Company will continue to keep customers at the center of everything we do while we support growth in clean energy solutions. We strive for low cost, high reliability, high customer satisfaction, and constructive regulation as we advocate for a suite of complementary policies that achieve a net zero GHG emission economy. Southern Company aims to continue reducing fugitive methane emissions from our natural gas distribution operations to align with ONE Future’s 2025 goal. Furthermore, we support methane regulations that utilize performance-based metrics, as used in the ONE Future methodologies.

C12.3b

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?

Yes

C12.3c

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Trade association

Alliance to Save Energy

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

"Climate strategies must prioritize [EE], which is proven to be the fastest and cheapest option to cut emissions while creating jobs and saving consumers money."

How have you influenced, or are you attempting to influence their position?

A Southern Company representative is the chair of the Board. Southern Company is actively engaged on energy efficiency issues.

Trade association

Alliance for Transportation Electrification

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

"In summary, broad collaboration and multiple partnerships are essential to leverage utility investments to reach ambitious decarbonization and clean transportation goals."

How have you influenced, or are you attempting to influence their position?

A Southern Company representative is a member of the Board. Southern Company is actively engaged on electric transportation issues.

Trade association

American Biogas Council

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

"Biogas systems protect our air, water and soil by recycling organic material, like food waste and manure, into renewable energy and soil products."

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged, serving on working committees.

Trade association

American Clean Power Association (ACPA)

Is your position on climate change consistent with theirs?

Mixed

Please explain the trade association's position

“A presidential administration should call on Congress to adopt one of the major types of federal portfolio standards—Renewable Energy Standards (RES) and Clean Energy Standards (CES)—as they are ideal programs to ensure clean energy goals are met in the power sector.”

“For any future such legislation [RES and CES], AWEA recommends a meaningful target (e.g., 100 percent clean/renewable energy by no later than 2035).”

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged.

Trade association

American Coal Ash Association (ACAA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association’s position

“For each ton of fly ash used in place of traditional cement a reduction of slightly less than one ton of carbon dioxide is achieved. To put this in perspective, one ton of carbon dioxide is equivalent to about two months’ emissions from an automobile. Estimating based upon the amount of fly ash used annually in concrete, approximately 13 millions tons of carbon dioxide is prevented from entering the earth’s atmosphere.”

How have you influenced, or are you attempting to influence their position?

A Southern Company representative serves on the Board of Directors and representatives serve on multiple committees and in leadership positions.

Trade association

American Gas Association (AGA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association’s position

“The American Gas Association is committed to reducing [GHG] emissions through smart innovation, new and modernized infrastructure, and advanced technologies that maintain reliable, resilient, and affordable energy service choices for consumers.”

How have you influenced, or are you attempting to influence their position?

A Southern Company representative serves on the Board of Directors and representatives serve on multiple committees and in leadership positions in AGA.

Trade association

American Gas Foundation (AGF)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

"The increasing frequency and intensity of climatic events combined with the transformation of the energy system to one increasingly powered by intermittent renewable sources establish the need for a new consideration of the resilience of the energy system. Utilities, system operators, regulators, and policymakers need to recognize that resilience will be achieved through a diverse set of integrated assets—for the foreseeable future, policies need to focus on optimizing the characteristics of both the gas and electric systems."

How have you influenced, or are you attempting to influence their position?

A Southern Company representative serves on the Board of Directors.

Trade association

American Wind Wildlife Institute (AWWI)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

"Electricity from wind energy is a major contributor to reducing [GHG] emissions from fossil fuel use and thus to reducing the impacts of climate change. Wind energy also has other environmental benefits like little or no air pollution, water, or land use. Wind power in the U.S. also supports job creation and has other economic, energy security, and sustainability benefits nationally and for local communities. However, like all power sources, wind energy can have adverse impacts on some species of wildlife, including direct impacts to birds and bats from turbine collisions, and the loss and fragmentation of species' habitat."

How have you influenced, or are you attempting to influence their position?

A Southern Company representative serves on the Board of Directors.

Trade association

Bipartisan Policy Center (BPC)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

"the nation needs a Green 'True' Deal that allows government and industry to work together to decarbonize our economy by 2050."

"A broad combination of policies will be necessary to achieve net-zero emissions by 2050."

"...support for durable policy solutions that address the urgency of climate action, shared

interest in cost-effective, technology-neutral approaches encouraging innovation and ambition, and commitment to equitable energy transitions for all parts of the country.”

How have you influenced, or are you attempting to influence their position?

Southern Company actively engages with the BPC on multiple activities and issues, specifically our CEO is a founding member of BPC’s Net Zero Business Alliance where corporate members are committed to address the urgency and difficulties associated with achieving a net zero economy.

Trade association

Business Roundtable

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association’s position

“Addressing climate change and its impacts demands a robust, coordinated effort with a sound policy portfolio. Business Roundtable CEOs are calling for a well-designed market-based mechanism and other supporting policies to provide certainty and unleash innovation to lift America toward a cleaner, brighter future.”

How have you influenced, or are you attempting to influence their position?

Southern Company’s CEO is a member of the Business Roundtable.

Trade association

Carbon Utilization Research Council (CURC)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association’s position

“CURC advocates for a number of policy solutions that, if enacted, would allow for increased investment in fossil fuel technologies”

“CURC advocates for...actions that would accelerate the development of advanced fossil fuel technologies and the export of those technologies internationally”

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged and serves as a co-chair.

Trade association

Center for Climate and Energy Solutions (C2ES)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

"[C2ES'] mission is to advance strong policy and ambitious action to: reduce [GHG] emissions; promote and accelerate the clean energy transition; strengthen adaptation and resilience to climate impacts; and facilitate the necessary financial investments to do so. A range of solutions, including market-based approaches and other complimentary policies will be critical to achieve each of these goals. [C2ES] believes a sound climate strategy must reflect the urgent need for ambitious action. Solutions developed through inclusive stakeholder engagement, informed by the latest science focused on the long-term goals of the Paris Agreement, which are equitable and just leaving no one behind, and which create good jobs, are essential to ensure a strong, sustainable domestic and global economy."

How have you influenced, or are you attempting to influence their position?

Southern Company is a member of the Business Environmental Leadership Council.

Trade association

Center for Transportation and the Environment

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

"The Center for Transportation and the Environment works to improve the health of our climate and communities by bringing people together to develop and commercialize clean, efficient, and sustainable transportation technologies."

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged.

Trade association

Coalition for Renewable Natural Gas (RNG Coalition)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

"RNG Coalition is...dedicated to the sustainable advancement of [RNG] as a clean, green, alternative and domestic energy resource - and as a key component and partial solution to addressing global climate change."

"RNG Coalition will provide policy advocacy and education to help ensure sustainability and growth for the RNG industry, and to improve recognition of the [RNG] production process (methane mitigation and carbon sequestration) as a critical component of and partial solution to address global climate change."

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged.

Trade association

Cross-Cutting Issues Group

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

This organization has not published a climate position. Southern Company believes the overall mission is consistent with our climate position.

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged.

Trade association

Downstream Natural Gas Initiative

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

“The Downstream Initiative members are engaged with state policymakers and stakeholders to support cost-effective strategies and opportunities to reduce [GHG] emissions and transition to a low-carbon future. These short- and long-term strategies and opportunities include reducing methane emissions, increasing end use energy efficiency, and decarbonizing energy supply. The latter includes near-term efforts to increase the supply of [RNG], as well as longer-term opportunities to incorporate hydrogen blending and power-to-gas technology.”

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged.

Trade association

Edison Electric Institute (EEI)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

“Global climate change presents one of the biggest energy and environmental policy challenges this country has ever faced. EEI member companies are committed to addressing the challenge of climate change and have undertaken a wide range of initiatives over the last 30 years to reduce, avoid or sequester GHG emissions. Policies to address climate change should seek to minimize impacts on consumers and avoid harm to U.S. industry and the economy.”

How have you influenced, or are you attempting to influence their position?

Southern Company serves on multiple committees and in leadership positions in EEI.

Trade association

Electric Drive Transportation Association (EDTA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

"The [EDTA], the collective voice of the entire EV value chain, believes that: Achieving net-zero emissions transportation for all Americans is a critically important goal that requires a comprehensive effort across multiple sectors of the economy to electrify transportation.

U.S. leadership in this effort to electrify transportation will secure our economic future while driving innovation that reduces emissions, creates jobs and boosts investment opportunities in our communities and across all segments of the economy.

To secure our leadership, the U.S. should implement an aggressive five-year plan that catalyzes growth with significant, long-term investments in market expansion and accelerates technology development and deployment for cross-sector adoption of e-mobility."

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged on electric transportation issues and serves at the board level.

Trade association

Electric Highway Coalition

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

This organization has not published a climate position. Southern Company believes the overall mission is consistent with our climate position.

How have you influenced, or are you attempting to influence their position?

Southern Company is a founding member.

Trade association

Electric Power Research Institute, Inc.

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

“Global power sector transformation drives changes in company operational decisions, investment strategies, environmental management, resource planning, business strategies, policy creation, and industry structure. EPRI’s research provides technical data and information, analytic tools, and insights to support resource and strategic planning through this evolution. Research focuses on economic, policy, and planning aspects of change, including decarbonization, emerging and advanced technologies, electrification, and climate impacts.”

How have you influenced, or are you attempting to influence their position?

A Southern Company representative is the chair of the Board, and Southern Company representatives are involved in many levels of the organization.

Trade association

Energy Forward

Is your position on climate change consistent with theirs?

Mixed

Please explain the trade association’s position

This organization has not published a climate position.

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is engaged.

Trade association

Energy Solution Center, Inc. (ESC)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association’s position

"Provide knowledge, skills, and strategies that enable individual members to bring energy solutions, products, and services to their customers more effectively.

Provide a collaborative platform for equipment manufacturers, developers, vendors, and LDCs to network and partner in order to facilitate the promotion and deployment of energy-efficient gas equipment and technologies.

Educate members' customers to help them choose energy options that improve efficiency, reliability, resiliency, and affordability.

Ensure the organizational and financial sustainability of the Energy Solutions Center”

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged.

Trade association

Energy and Wildlife Action Coalition (EWAC)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

"...EWAC advocates for federal environmental policies and regulations that protect wildlife and related natural resources while ensuring that the electric power industry can deliver the safe, reliable, affordable, and increasingly clean energy their customers need."

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged.

Trade association

Energy Storage Association (ESA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

"ESA's policy activities focus on three overarching goals to advance the U.S. market for the full range of energy storage technologies:

Increase revenues available to storage, such as by creating electricity markets and programs that reward flexibility and establishing deployment targets & incentive programs;

Enhance the competitiveness of storage, such as by including storage in state and regional planning processes and updating procurement evaluation methods; and

Ensure grid & market access for storage, such as through improving grid interconnection processes, codes & standards, and multiple use functionality of storage.

In addition, ESA engages on regulatory matters affecting the future market of the energy storage industry, including end-of-life processes, supply chain issues, and workforce development."

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged in energy storage topics.

Trade association

Energy Systems Integration Group Inc.

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

"A core team, including the Energy Systems Integration Group (ESIG)... is actively developing the [Global Power System Transformation (G-PST)] consortium and will be engaged in implementation of technical work."

“...the Global Power System Transformation (G-PST) Consortium, a bold and innovative public-private partnership to accelerate transitions to net-zero-emissions power systems and drive broader economic growth.”

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged.

Trade association

Gas Heat Pump Collaborative

Is your position on climate change consistent with theirs?

Unknown

Please explain the trade association’s position

Not available.

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged.

Trade association

Gas Technology Institute (GTI)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association’s position

“Carbon management is a key environmental concern among all stakeholders. Common sense, cost-effective solutions that can reduce annual emissions of carbon dioxide and other potential [GHG] emissions to the atmosphere are needed. All sectors of the energy industry are looking to enhance their environmental performance.

The development of new energy-efficient technologies is one of the most important and easiest ways that we can lower energy consumption, reduce energy costs, and control [GHG] emissions.”

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged and serves on the board.

Trade association

Interstate Natural Gas Association of America (INGAA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association’s position

“As America’s energy leaders, INGAA’s members recognize the need to build upon our efforts and to continue to act to address global climate change by advancing our commitment to minimize and reduce [GHG] emissions, including methane emissions. INGAA members are determined to lead the effort to modernize our nation’s interstate natural gas delivery network infrastructure with a goal of reducing emissions and helping minimize the impact on our climate. [INGAA’s] commitments will include an active effort to do even more to address climate change by supporting renewables, as well as new and innovative technologies and process enhancements that will further reduce emissions. Working together, [INGAA is] determined to support sound public policies that protect the environment while ensuring a safe, reliable and resilient energy transmission system that provides the affordable energy so many of our businesses and families need.”

“[INGAA] support[s] equitable, efficient, effective, and flexible federal policy designed to minimize and reduce emissions across the entire economy, and a recognition that all sectors of the economy should contribute to any new federal emission reduction policies. Policies to address climate, including any policies that include a price on carbon or clean energy standards, must also diminish potential adverse financial impacts on consumers and avoid harm to the U.S. economy.”

How have you influenced, or are you attempting to influence their position?

A Southern Company representative serves on the Board of Directors and representatives serve on multiple committees and in leadership positions in INGAA.

Trade association

Midwest Energy Efficiency Alliance (MEEA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association’s position

“Energy efficiency policy drives investment and savings. Every state can achieve cost-effective energy efficiency with policies tailored to their unique needs and makeup.”

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged.

Trade association

National Association of Manufacturers

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association’s position

“The NAM and our member companies are committed to addressing global climate change while preserving competitiveness.... Policymakers should focus on enabling the technological

breakthroughs that are needed to significantly reduce emissions, and should incentivize increasing the use of products and processes that are the most cost-effective and carbon-efficient. Government should not impede or impair the ability of energy-producing and energy-consuming segments of industry from obtaining adequate funding for energy-related investments. The NAM supports policies that strengthen the competitiveness of U.S. manufacturers and opposes policies that weaken the competitiveness of U.S. manufacturers. Incentives are often effective policy tools, but should not artificially create winners and losers in a quest for developing competing technologies or fuels. In establishing federal clean energy policies, the NAM encourages Congress to provide transparent assessments of costs and benefits, prioritize energy reliability, recognize regional differences in renewable energy resource availability, and harmonize policies so that state and federal regulations made duplicative or unnecessary are eliminated. Research and development efforts should be pursued as a means to enhance energy flexibility and expand diversification of energy supplies over time to increase the competitiveness of U.S. manufacturers.”

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged and serves at the board level.

Trade association

National Coal Transportation Association (NCTA)

Is your position on climate change consistent with theirs?

Unknown

Please explain the trade association’s position

Not available.

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged with a representative serving on the board.

Trade association

National Petroleum Council (NPC)

Is your position on climate change consistent with theirs?

Unknown

Please explain the trade association’s position

Not available.

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged with a representative serving on council.

Trade association

Natural Allies for Clean Energy Future

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

"Natural Allies advocates for a clean energy future by recognizing natural gas as a fundamental source of fuel that partners with renewable resources to ensure affordability and reliability for families and businesses."

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged.

Trade association

Natural Gas Supply Association (NGSA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

"NGSA recognizes that the burning of fossil fuels leads to increased concentrations of [GHG] in the atmosphere, which contribute to climate change.

NGSA members support the Paris Agreement, which is a path to net zero carbon emissions.

NGSA advocates for rules and policies that protect the environment while allowing our members to continue to supply electric utilities, manufacturers, businesses and households with affordable and reliable natural gas.

Energy policies must allow consumers to reap the benefits of our natural gas resources, ensuring that no consumers are left behind as we transition to a clean and affordable energy future."

"[NGSA] consider[s] it our responsibility to be leaders in moving toward a clean energy future. [NGSA] support[s] a price on carbon as the best way for policymakers to achieve lower emissions and incentivize technologies that cut or eliminate future carbon emissions, while enabling all consumers to enjoy the benefits of energy that is affordable and reliable."

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged.

Trade association

Natural Gas Supply Collaborative

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

This organization has not published a climate position. Southern Company believes the overall mission is consistent with our climate position.

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged.

Trade association

NGV America

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

"In addition to tax policy equalization, NGVA federal advocacy efforts include initiatives to enhance NGV infrastructure, secure funding for important NGV research and development, clarify safety regulations related to NGV transportation, achieve parity for NGV driving range requirements, and improve the NGV fuel system weight exemptions on federal highways"

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged.

Trade association

Northeast Gas Association

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

This organization has not published a climate position. Southern Company believes the overall mission is consistent with our climate position.

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively involved with a representative serving on the board.

Trade association

Nuclear Energy Institute (NEI)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

"We need deep decarbonization to hit our climate goals. Nuclear power can get us there. As our largest source of clean energy, nuclear power is critical to reduce carbon emissions. Wind, solar and geothermal are on the rise, but the smartest policies will ensure these technologies complement, not replace, nuclear's clean energy production. Protecting and growing our use of

nuclear technologies are important ways to make a dent in [GHG] and help us make meaningful progress to address climate change.”

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively involved with employees serving on the board and the Executive Committee.

Trade association

ONE Future

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association’s position

“[ONE Future is] a unique coalition of leading companies who recognize that excessive methane emissions can potentially erode the benefits of natural gas relative to other fossil fuels and therefore prudent development and operations are vital to ensuring the industry can support the energy needs of the nation and the world in a sustainable manner, even in a low carbon economy. With operations across every part of the natural gas value chain, [ONE Future is] focused on identifying policy and technical solutions that yield continuous improvement in the management of methane emissions associated with the production, processing, transmission and distribution of natural gas.”

How have you influenced, or are you attempting to influence their position?

As a founding member, Southern Company is actively engaged and serves several roles including on the board level and technical committees.

Trade association

Renewable Thermal Collaborative (RTC)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association’s position

“[The Renewable Thermal Collaborative’s] goal is to create a community of over 100 corporate buyers, establish policy support, and put us on the path to reduce industrial sector thermal emissions 30% by 2030 and full sector decarbonization by 2050.”

“The Renewable Thermal Collaborative supports policies to accelerate deployment of affordable and sustainable renewable thermal technologies.”

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged, serving on working committees.

Trade association

Resources for the Future (RFF)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

This organization has not published a climate position. Southern Company believes the overall mission is consistent with our climate position.

How have you influenced, or are you attempting to influence their position?

Southern Company is a member of RFF's Business Leadership Council.

Trade association

Smart Electric Power Alliance (SEPA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

"The Smart Electric Power Alliance (SEPA)...envisions a carbon-free energy system by 2050."

"SEPA has a very specific role in the journey towards carbon-free. Our mission is to facilitate the electric power industry's smart transition to a clean and modern energy future through education, research, standards, and collaboration."

How have you influenced, or are you attempting to influence their position?

Southern Company is a member.

Trade association

Smart Energy Consumer Collaboration (SECC)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

This organization has not published a climate position. Southern Company believes the overall mission is consistent with our climate position.

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged on smart energy and a Southern Company representative serves as Board chair.

Trade association

Southeast Energy Efficiency Alliance (SEEA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

“Energy efficiency is often referred to as a “least cost resource,” meaning that it is the single most cost-effective productivity tool we have within an energy portfolio. Energy efficiency measures make it possible for us to create products, services and benefits for the lowest energy cost.”

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged on energy efficiency issues and serves at the board level.

Trade association

Southeastern Wind Coalition

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

This organization has not published a climate position. Southern Company believes the overall mission is consistent with our climate position.

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged on wind energy issues to implement policies that help with deployment and operations. Southern Company serves at the board level.

Trade association

Southern Gas Association

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

“[Southern Gas Association] explore[s] different terminology used to define climate change, including global warming, and discover how natural gas has helped reduce overall carbon dioxide emissions. [Southern Gas Association is] not working to convince anyone one way or another, but it is important to be able to have a conversation, ask questions, and provide relevant information for how natural gas is helping to solve some of our climate challenges.”

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged and serves several roles including on the board level.

Trade association

The Climate Registry

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

"The Climate Registry is a leading authority on GHG measurement, reporting and verification (MRV). We provide resources that empower organizations and governments to take bold climate action."

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged.

Trade association

Think Microgrid

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

"Work to advance pending government initiatives that support microgrid adoption and encourage new policy activity and government programs in promising jurisdictions."

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged.

Trade association

U.S. Chamber of Commerce

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

"The climate is changing and humans are contributing to these changes. [The Chamber] believe[s] that there is much common ground on which all sides of this discussion could come together to address climate change with policies that are practical, flexible, predictable, and durable. [The Chamber] believes in a policy approach that acknowledges the costs of action and inaction and the competitiveness of the U.S. economy.

[The Chamber] believe[s] that durable climate policy must be made by Congress, and that it should encourage innovation and investment to ensure significant emissions reductions, while avoiding economic harm for businesses, consumers and disadvantaged communities. This policy should include well designed market mechanisms that are transparent and not distorted by overlapping regulations. U.S. climate policy should recognize the urgent need for action, while maintaining the national and international competitiveness of U.S. industry and ensuring consistency with free enterprise and free trade principles."

How have you influenced, or are you attempting to influence their position?

Southern Company is a member of the U.S. Chamber of Commerce and actively engages on multiple issues taken up by the membership.

Trade association

Utility Solid Waste Activities Group (USWAG)

Is your position on climate change consistent with theirs?

Unknown

Please explain the trade association's position

Not available.

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively involved with a representative serving on the steering committee.

Trade association

Utility Water Act Group (UWAG)

Is your position on climate change consistent with theirs?

Unknown

Please explain the trade association's position

Not available.

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively involved with a representative serving in a leadership role.

Trade association

Warrior Tombigbee Waterway Association (WTWA)

Is your position on climate change consistent with theirs?

Unknown

Please explain the trade association's position

Not available.

How have you influenced, or are you attempting to influence their position?

As a member, Southern Company is actively engaged.

Trade association

Zero Emission Transportation Association (ZETA)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

"Specifically, ZETA is calling for five key policy pillars that can, in aggregate, put America on the pathway to full EV adoption by 2030:

1. Outcome-driven consumer EV incentives.
2. Emissions / performance standards enabling full electrification by 2030.
3. Infrastructure investments.
4. Domestic manufacturing.
5. Federal leadership and cooperation with sub-national entities."

How have you influenced, or are you attempting to influence their position?

Southern Company is a founding member of the organization.

C12.3d

(C12.3d) Do you publicly disclose a list of all research organizations that you fund?

No

C12.3e

(C12.3e) Provide details of the other engagement activities that you undertake.

Southern Company places great importance on consistent dialogue with all our stakeholders, including customers, employees, regulators, and investors. We regularly engage in discussions with, and provide comprehensive information for, constituents interested in our corporate governance, citizenship, stewardship and environmental compliance. We are receptive to stakeholder concerns, and we are committed to transparency and proactive interactions with our investors. We regularly communicate with our stakeholders to better understand their viewpoints, gather input on our business strategy and execution and obtain feedback regarding other matters of interest. The feedback received from our outreach efforts informs discussions in the boardroom.

Since 2011, we have held regular environmental stakeholder forums, webinars, calls and meetings covering a range of topics, including regulatory and policy issues, system risk and planning related to renewables, energy efficiency and GHG matters. Members of senior management participate in these events, including the Chairman and CEO; CFO; Chief Legal Officer; EVP of Operations and SVP of Environmental and System Planning. At the annual environmental stakeholder forum in May 2020 topics included carbon reduction strategies, energy efficiency and methane. A webinar on Coal Combustion Residuals followed the annual stakeholder meeting as well as in-person engagements with smaller groups of stakeholders throughout the year to discuss issues such as the just transition of our generating fleet.

The Board of Directors places great importance on regularly communicating with our stockholders to better understand their viewpoints and gather feedback. The NGCR Committee of the Board oversees our stockholder engagement efforts on behalf of the Board.

For the prior three years, we have reached out to our 100 largest stockholders representing more than 50% of our outstanding shares and offered to engage on ESG-related topics, as well as any other

topics of interest. We also reached out to stockholders that are not among our 100 largest but expressed an interest in engaging with us. We received positive responses from, and had engagements with, stockholders representing over 30% of our outstanding shares. We engaged with a broad range of stockholders, including index funds, union and public pension funds, actively managed funds and socially-responsible investment funds, as well as stockholder advisory firms.

Key topics for stockholder engagement included climate-related matters, executive compensation, cybersecurity, leadership development and management succession planning, human capital management and corporate culture, Board leadership structure, Board succession planning and on-boarding of new Directors, as well as how these topics tie to our long-term strategic thinking. Participants in these engagements included independent directors (Lead Independent Director, Chair of NGR Committee and Chair of CMS Committee); Chairman and CEO; CFO; Chief Legal Officer; SVP of Environmental and System Planning; SVP of Human Resources/Total Rewards; VP, Corporate Governance; and Director, Investor Relations. In addition, our investor relations group leads our management team in hundreds of investor meetings throughout the year.

In 2019, Southern Company was recognized by the U.S. Transparency Awards as the winner of the best proxy statement among the top S&P 250 companies, providing investors with the information needed for informed decision-making in advance of the company's annual shareholders meeting.

C12.3f

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

Members of Southern Company's policy management team evaluate our membership and/or funding of relevant organizations through regular and consistent review. In addition to serving at the leadership level in multiple organizations, many Southern Company subject matter experts advise and engage in organizations.

The policy organizations are aided in this process by the SCMC. The CEO leads a team of the most senior officers across the Southern Company system, called the Southern Company Management Council (SCMC). Other members of the SCMC include the Company's CFO; EVP of operations and CEO of Southern Company Services; EVP and president of external affairs; EVP, chief legal officer and chief compliance officer; EVP, chief commercial officer and customer solutions officer; EVP and chief information officer; and the CEOs of each state regulated electric operating company, Southern Company Gas and Southern Nuclear. 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 and at each operating company. 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. The monthly meetings allow for alignments on direct and indirect activities that influence policy consistent with the overall decarbonization strategy.

When the Southern Company's Board evaluates climate-related issues, it routinely reviews lobbying expenses to ensure consistency with climate-related business strategy.

C12.4

(C12.4) Have you published information about your organization’s response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In voluntary sustainability report

Status

Complete

Attach the document

 Planning-for-a-low-carbon-future_PDF4.pdf

 Net-zero-report_PDF1.pdf

Page/Section reference

Content elements

Governance

Emissions figures

Emission targets

Other metrics

Other, please specify

Decarbonization Strategy and Scenario Planning and Risk Management

Comment

In 2018 we published the Planning for a Low Carbon Future report to outline how we are taking steps to increase disclosure of our preparations for a low-carbon future. In 2020 we published an addendum to the 2018 report titled: Implementation and Action Toward Net Zero. In the recent iteration we provide further insights into how we are tackling these tough issues including setting a net zero carbon goal for our 2050 operations


Publication

In voluntary sustainability report

Status

Complete

Attach the document

 Ingenuity-Fueling-a-Sustainable-Future.pdf

Page/Section reference

Content elements

Other metrics

Comment

In 2021, Southern Company Gas published a sustainability report to discuss the legacy of environmental protection and clean energy innovation as well as the current and future path toward net-zero GHG emissions and other sustainability initiatives.

Publication

In voluntary sustainability report

Status

Complete

Attach the document

Page/Section reference

Alabama Power 2020 Sustainability Report, available digitally at:
<https://alabamapowersustainabilityreport.com>

Content elements

Other metrics

Comment

In 2021, Alabama Power published a sustainability report to provide company-specific sustainability metrics and ESG-focused information.





Publication

Other, please specify
Communication regarding carbon issues

Status

Complete

Attach the document

-  Planning-for-a-low-carbon-future_PDF4.pdf
-  Southern_Company_Data_Download (1).pdf
-  Net-zero-report_PDF1.pdf
-  EEI-ESG-Sustainability-Reporting-Template_PDF3 (1).pdf

Page/Section reference

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

<https://www.southerncompany.com/corporate-responsibility/report-parameters.html>
Provides the most recent version of the Corporate Responsibility Report and other environmental reports


Publication

In mainstream reports

Status

Complete

Attach the document

 SOCO 2021 10-k.pdf

Page/Section reference

"Global Climate Issues" starting on page 90, Risks, p 25.

Content elements

Risks & opportunities
Emissions figures
Emission targets

Comment

C15. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

Cautionary Note Regarding Forward-Looking Statements:

Certain information contained in this release is forward-looking information based on current expectations and plans that involve risks and uncertainties. Forward-looking information includes, among other things, statements concerning GHG reduction goals, including timing of achievement,

costs related to carbon, expected renewable and carbon free generation growth and capital expenditures. 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, 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, as well as changes in application of existing laws and regulations; the potential effects of the continued COVID-19 pandemic; 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 control costs and avoid cost and schedule overruns during the development, construction and operation of facilities or other 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 ability to successfully operate the electric utilities' generating, transmission, and distribution facilities and Southern Company Gas' natural gas distribution and storage facilities; the performance of projects undertaken by the non-utility businesses and the success of efforts to invest in and develop new opportunities; and the successful performance of necessary corporate functions. Southern Company expressly disclaims any obligation to update any forward-looking information.

C15.1

(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Chairman, President, and CEO Southern Company	Board chair

SC. Supply chain module

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

SC0.1

(SC0.1) What is your company's annual revenue for the stated reporting period?

Annual Revenue

Row 1	
-------	--

SC0.2

(SC0.2) Do you have an ISIN for your company that you would be willing to share with CDP?
 No

SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges
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SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?
 Yes

SC1.4a

(SC1.4a) Describe how you plan to develop your capabilities.
 National customers can receive state-specific emission factors by reaching out to their Southern Company national accounts representatives. Local customers can receive state-specific emission factors by reaching out to the marketing representative at each Operating Company. In addition, EEI annually publishes utility emission factors provided by individual utility companies at <https://www.eei.org/Pages/CO2Emissions.aspx>

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I am submitting to	Public or Non-Public Submission	Are you ready to submit the additional Supply Chain questions?
I am submitting my response	Investors Customers	Public	Yes, I will submit the Supply Chain questions now