2016 CARBON DISCLOSURE REPORT



# INTRODUCTION

Southern Company and its subsidiaries are committed to developing real, innovative solutions to shape America's energy future. At our foundation is a focus on providing more than 4.5 million customers with clean, safe, reliable and affordable energy through the full portfolio of electricity generation resources. Sometimes referred to as an "all of the above" strategy, the full portfolio includes nuclear, 21st century coal, natural gas, renewables and energy efficiency. Southern Company is the only U.S. electric utility developing and innovating around the full portfolio, with a committed investment of more than \$20 billion.

Southern Company also leads the industry in conducting robust research, development and deployment of new, innovative energy technologies — and in deploying those technologies to address greenhouse gas (GHG) emissions. GHG emission reduction is a major focus of the company's research and development organization, which has a historic record of technology advancement that goes back to the 1960s.

This report details the range of actions the Southern Company system is taking and includes information that was previously submitted to the Carbon Disclosure Project (CDP), resulting in a single, comprehensive look at the system's challenges, opportunities and progress related to GHG emissions.

#### LEADERSHIP OVERSIGHT<sup>1</sup>

Southern Company's commitment to the environment begins at the top and extends throughout the company. Southern Company's chief environmental officer, who is also the senior vice president of research and environmental affairs, is responsible for environmental programs, including GHG policy activities, for the Southern Company system. The chief environmental officer reports to Southern Company's chief operating officer (COO), who reports to the chairman, president and chief executive officer (CEO) of Southern Company.

Overall leadership is provided by the Southern Company management council, a team of senior officers responsible for setting and reviewing corporate policies and key strategies and evaluating the company's performance. The management council is made up of Southern Company's CEO; COO; executive vice president and chief financial officer; president of external affairs; executive vice president and general counsel; and the CEOs of each operating company and Southern Company Services. The full Southern Company board of directors also reviews the company's environmental policy activities. The nuclear/operations committee of the board has general oversight responsibilities regarding significant information, activities and events related to the system's operations, including significant environmental policy and planning issues. This committee regularly reports to the full board.

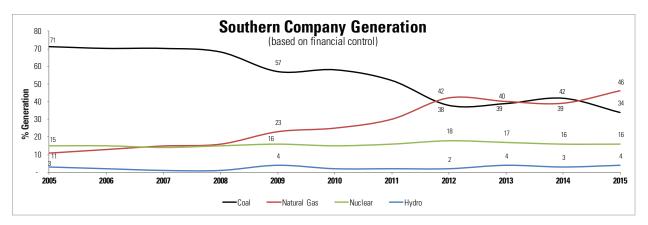


Figure 1: The Southern Company system's generation 2005-2015 based on financial control

<sup>&</sup>lt;sup>1</sup> The information in the report that corresponds to the specific questions included in CDP's 2016 Climate Change Information Request is footnoted throughout the report. For the "Leadership Oversight" section, CDP's 2016 Climate Change Information Request questions: 1.1, 1.1a, 2.3f are answered.

# GENERATION AND GREENHOUSE GAS EMISSIONS<sup>2</sup>

The Southern Company system's generation mix from 2005 to 2015 is shown in Figure 1. In 2005, the system generated about 71 percent of its power from coal and 11 percent from natural gas. For the year 2015, with natural gas prices near record lows, Southern Company generated 34 percent of its power from coal and 46 percent from natural gas. The system's fuel diversity and ability to economically dispatch its existing coal and natural gas capacity helped keep the cost of electricity low for the benefit of customers.

As shown in Figures 2 and 3, the Southern Company system's GHG emissions have generally decreased since 2007. Without federal mandates, total annual emissions

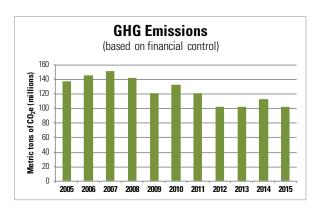


Figure 2: The Southern Company system's  $CO_2$ e emissions: 2005-2015 based on financial control

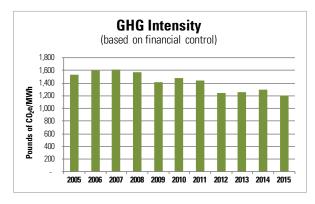


Figure 3: The Southern Company system's CO<sub>2</sub>e lbs/MWH: 2005-2015 based on financial control

in 2015 were approximately 25 percent lower than 2005 levels, while delivering customers the benefits of a more diverse generating fleet.

Variability in emissions is the result of multiple factors, such as the economy, weather and fuel prices. Because of lower natural gas prices, the Southern Company system has increased generation from natural gas; with natural gas containing approximately half the GHG emissions of coal, lower overall GHG emissions is the result. As the economy changes and/or as natural gas prices increase, as exhibited in 2014, future emissions could be higher than historical levels.

The emissions shown in this report are based on units for which the Southern Company system has financial control. For 2015, the Southern Company system's GHG emissions were approximately 102 million metric tons of carbon dioxide equivalent  $(CO_2e)$ .<sup>3</sup>

The system's GHG emissions are calculated using methods required by the U.S. Environmental Protection Agency (EPA) GHG Reporting Program (GHGRP), including the GHGRP's global warming potentials and emission factors. The majority of the system's GHG emissions are measured with continuous emissions monitors (CEMs) according to EPA's 40 CFR (Code of Federal Regulations) Part 75 specifications. Emissions from electricity generation not monitored by CEMs are calculated based on fuel burned in the unit. The emissions reported under the GHGRP are verified by EPA and based on units for which the system has operational control.<sup>4</sup> Several units operated by Southern Company subsidiaries are co-owned by various other companies.

The majority of the Southern Company system's GHG emissions result from the use of fossil fuels to generate electricity, which results in emissions of three GHGs: carbon dioxide ( $\rm CO_2$ ), methane ( $\rm CH_4$ ) and nitrous oxide ( $\rm N_2O$ ). More than 99 percent of the system's GHG emissions are  $\rm CO_2$ . The system's traditional operating companies, Alabama Power, Georgia Power, Gulf Power and Mississippi Power, as well as Southern Power and Southern Electric Generating Company (SEGCO), all have emissions of  $\rm CO_2$ ,  $\rm CH_4$  and  $\rm N_2O$ .

<sup>&</sup>lt;sup>2</sup> CDP's 2016 Climate Change Information Request questions: 3.1, 3.1f, 3.3, 4.1, 7.1, 7.2, 7.3, 7.4, 8.1, 8.2, 8.5, 8.6, 8.6a, 8.6b, 9.1, 9.2, 9.2a, 9.2b, 9.2c, 9.2d, 12.1, 12.1a, 12.3. All data shown throughout this report are CDP Scope 1 emissions. The Southern Company system does not track CDP Scope 2 or Scope 3 emissions. EPA's GHG Reporting Program is located at 40 CFR Part 98. Emissions reported to EPA on an operational basis, as well as on a facility level, can be found on EPA's Facility-Level GHG Emissions Data Tool: http://ghgdata.epa.gov/ghgp/main.do.

The system's transmission and distribution organizations also have emissions of the GHG sulfur hexafluoride (SF $_{\rm g}$ ). SF $_{\rm g}$  is a colorless, odorless, nontoxic, nonflammable and extremely stable insulating gas that is essential for the safe operation of transmission and distribution switchgear across the U.S. The system has used SF $_{\rm g}$  in switchgear since the 1970s and currently has a system capacity of approximately 500,000 pounds. Annual emissions of SF $_{\rm g}$  have been reduced by more than 90 percent since the 1990s. SF $_{\rm g}$  represents the smallest percentage of the system's GHG emissions.

Figure 4 shows the system's GHG emissions based on business division.

The Southern Company system does not currently have a GHG emissions reduction target. However, the system is committed to continuing the robust research, development and deployment of new technologies to reduce GHG emissions. Our commitment to the environment — demonstrated through environmental stewardship and working to protect valuable natural resources — is a core value that applies to every employee, every day.

# FUTURE EMISSIONS<sup>5</sup>



The National Carbon Capture Center conducts research and development to evaluate and advance emerging carbon capture technologies.

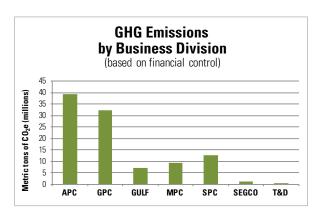


Figure 4: The Southern Company system's 2015 GHG emissions by business division based on financial control

It is uncertain how the Southern Company system's GHG emissions will change in the future. This is due to the fact that GHG emissions are based in part on factors such as electricity demand and fuel prices, as well as the availability of cost-effective, commercial-scale technology while seeking to maintain low rates for customers. To reduce GHG emissions while providing reliable and affordable energy, a diverse generating mix is required, as well as an emphasis on new technology and energy efficiency. Low-emitting, cost-effective electricity generation and end-use technologies must be researched, developed and deployed. The Southern Company system has managed nearly \$2 billion in research and development investments to deploy such technologies. The system has invested approximately \$11.4 billion to put environmental control technologies to work for customers, reducing emissions of sulfur dioxide and nitrogen oxides more than 80 percent since 1990 and mercury emissions by more than 70 percent since 2005, while electricity generation has increased.

#### 21ST CENTURY COAL

The U.S. is home to an abundant supply of coal, which has served customers' energy needs well as a low-cost and reliable fuel source over time. With over 25 percent of the world's coal reserves — more than any other country in the world<sup>6</sup> — coal is currently used to generate approximately 33 percent of the nation's electricity and is widely deployed around the world. To keep electricity costs affordable while meeting

<sup>&</sup>lt;sup>5</sup> CDP 2016 Climate Change Information Request questions: 3.1f, 3.3a, 3.3b, 3.3c, 8.9. <sup>6</sup> http://www.fossil.energy.gov/education/energylessons/coal/gen\_coal.html

the demand for lower  ${\rm CO_2}$  emissions, the nation must invest in the research, development and deployment of new technologies, such as carbon capture, utilization and storage (CCUS).

Southern Company's leadership and commitment to developing 21st century coal technologies for the benefit of customers is exemplified by several major initiatives. The Southern Company system manages and operates the U.S. Department of Energy's (DOE) National Carbon Capture Center (NCCC). Located in Wilsonville, Alabama, the center provides facilities for testing new technologies for coal-derived flue gas and syngas, helping to accelerate the development of cost-effective CO<sub>2</sub> capture technologies. Working with scientists and technology developers from government, industry and universities, the NCCC helps bridge the gap between laboratory research and large-scale demonstrations. Testing is conducted in realistic powerplant conditions with the necessary infrastructure for emerging technologies and more advanced technologies nearing commercial demonstration, while generating meaningful data that can accurately verify performance.



Kemper County energy facility will use native Mississippi lignite and is expected to generate electricity with carbon emissions better than a comparably sized natural gas facility.

Because carbon capture will have different technical solutions depending on local site conditions, the NCCC, along with DOE, supports an "all of the above" strategy for technology development. The NCCC is testing solvents, sorbents, membranes, enzymes and advanced alternatives such as chemical looping, all of which are showing advancements. In 2016, the NCCC became the host site of the Carbon Capture International Test Center Network, a global coalition of facilities working to accelerate the research and development of carbon capture technologies.

Southern Company also joined DOE and other worldwide partners in the largest start-to-finish demonstration of CCUS on a pulverized-coal plant in the U.S. The facility, located at Alabama Power's Plant Barry, is capable of capturing annually up to 150,000 tons of  $\rm CO_2-the$  equivalent of emissions from 25 megawatts (MW) – for permanent underground storage. The captured  $\rm CO_2$  is transported through a 12-mile pipeline and injected and permanently stored 9,500 feet underground in a deep geologic formation. The project has captured more than 240,000 metric tons of  $\rm CO_2$  and has transported and injected more than 115,000 metric tons of  $\rm CO_2$ . In 2015, Southern Company, along with Mitsubishi Heavy Industries, earned three of R&D Magazine's R&D 100 Awards for a process developed at the Barry project.

Southern Company and its partners KBR and DOE have jointly developed and tested at the NCCC a state-ofthe-art coal gasification technology, known as Transport Integrated Gasification (TRIGTM), which is helping lead the way in producing electricity with lower carbon emissions. TRIG™ technology is uniquely suited for the low-cost, low-rank coals that make up about half of the world's proven coal reserves. In addition, this technology is designed to have fewer nitrogen oxide, sulfur dioxide and mercury emissions than traditional pulverized coal technology. The nation's first commercial-scale deployment of TRIG™ is currently being implemented at Mississippi Power's Kemper County energy facility. The 582-MW integrated gasification combined-cycle (IGCC) project is designed to cleanly produce electricity with carbon emissions better than a comparably sized natural gas plant, and will use an otherwise unused



An elevated view of the Plant Vogtle Unit 3 containment from the turbine building

fuel — locally mined lignite — that is not subject to the price volatility and transportation costs associated with other fuel sources. The project is expected to include at least 65 percent carbon capture, with captured carbon to be beneficially reused in enhanced oil recovery. As global electricity demand grows, the company believes TRIG™ can provide a valuable solution for 21st century coal generation, particularly in Eastern Europe, China, South Korea, Australia and Indonesia.

Also in Mississippi, Southern Company and partners successfully conducted a carbon storage pilot injection study at Plant Daniel. In this DOE-funded project, 3,000 metric tons of  $\mathrm{CO}_2$  were injected into a deep saline geologic formation 8,500 feet below the ground surface and monitored to demonstrate permanent storage.

Other significant carbon storage activities with Southern Company system involvement include a Southeast Regional Carbon Sequestration Partnership project to study injection of  ${\rm CO_2}$  into an unmineable coal seam near Tuscaloosa, Alabama, a project with the University of Alabama at Birmingham (UAB) and Denbury

Resources to examine the potential beneficial use of  ${\rm CO_2}$  for geologic storage with enhanced oil recovery operations, a geologic sequestration site-characterization project in partnership with the University of Alabama, and a partnership with UAB to evaluate the physical properties of rocks for geologic sequestration and train students in carbon storage science and engineering.

In addition, Southern Company is involved in the Edison Electric Institute (EEI) Carbon Capture and Sequestration Task Force and the Carbon Sequestration Council, which are working on behalf of the industry toward a regulatory framework for carbon technologies.

#### **NUCLEAR ENERGY**

Nuclear energy, which currently accounts for about 20 percent of the U.S. energy mix, must continue to be a dominant solution — as part of an "all of the above" strategy — as America transitions to a carbon-constrained future. Nuclear energy is emission-free, safe and increases America's fuel diversity using a low-cost, reliable, 24/7, abundant resource.

Nuclear energy facilities are by far the largest source of electricity that do not emit GHGs and other air emissions. About 63 percent of all American emission-free electricity is nuclear. In 2015, nuclear power supplied about 16 percent of the Southern Company system's generation from three plants: Vogtle and Hatch in Georgia and Farley in Alabama. Southern Company is committed to the safe operation of its nuclear energy facilities with equipment and systems that meet rigorous Nuclear Regulatory Commission safety and design regulations.

Southern Company, through its Georgia Power subsidiary, is leading America's nuclear renaissance by constructing two of the nation's first new units in more than three decades near Augusta, Georgia. The construction of Plant Vogtle units 3 and 4 is progressing successfully toward achievement of both the nation's goal of energy security and customers' goal of a diverse, cost-efficient portfolio of electricity sources. Upon completion, Plant Vogtle units 3 and 4 are expected to provide 2,200 MW of carbon-free nuclear energy – enough electricity to power more than half a million homes and businesses - and will incorporate the Westinghouse AP1000 technology – the newest generation of nuclear technology in the world today. Vogtle units 3 and 4 represent one of the largest infrastructure projects currently underway in the U.S.

Southern Company has also been awarded up to \$40 million from DOE to explore, develop and demonstrate advanced nuclear reactor technologies through subsidiary Southern Company Services. The effort will be managed through a new public-private partnership with TerraPower, Oak Ridge National Laboratory, the Electric Power Research Institute (EPRI) and Vanderbilt University. Housed at TerraPower's laboratories in Bellevue, Washington, and at DOE's Oak Ridge National Laboratory, in Oak Ridge, Tennessee, the research will bolster the development of molten chloride fast reactors, an advanced concept for nuclear generation.

#### NATURAL GAS

Continued innovations in hydraulic fracturing, or fracking, have increased the amount of natural gas

available to help meet America's energy needs while lowering fuel prices. As a result, Southern Company has more frequently dispatched natural gas in place of coal, lowering fuel costs to customers and maintaining the flexibility of its diverse generating fleet.

Based on recent data, the Southern Company system's consumption of natural gas places it as the third-largest consumer of natural gas in the U.S. In the past decade, Southern Company has more than tripled its use of natural gas.

Due to its historic price volatility, natural gas should be utilized as part of a diverse portfolio of generation resources — not as a stand-alone resource. Though natural gas supplies are now more abundant, transportation challenges remain. In addition, the possibility of natural gas exports could increase fuel prices in the U.S. by reducing the supply available to the domestic market. These and other challenges must be addressed if natural gas generation is to become an even larger part of America's energy mix.

#### RENEWABLE ENERGY<sup>7</sup>

Southern Company is committed to developing renewables as part of the full portfolio of generation resources and is one of the nation's leaders in developing renewable energy. The Southern Company system has added or announced more than 4,000 MW of renewable energy generation projects since 2012.



Southern Company subsidiary Southern Power is operating, acquiring or developing solar projects in six states.

<sup>&</sup>lt;sup>7</sup> Southern Company's subsidiaries may self-build renewable generation and/or enter into power purchase agreements (PPAs) for energy and environmental attributes from generating facilities fueled by renewable resources. The companies retain the right to use the energy delivered as renewable energy for customers and retire the environmental attributes, as well as the right to sell the energy and the environmental attributes, separately or bundled together, to third parties at their sole discretion.

Furthering the development of renewables, the Southern Company system currently has over 20 research and development projects underway to determine the potential of different renewable resources and technologies. Areas of research include solar photovoltaic (PV) deployment, operation and maintenance, offshore and onshore wind generation, advanced hydropower turbine systems, biomass-fueled power generation, bulk-power system integration of variable generation sources, energy storage and the integration of storage with solar PV technology, and integration and operation of distributed renewables on the grid.

#### Solar

The Southern Company system is one of the largest owners of solar PV facilities in the U.S., generating electricity that can be used to serve customers or sold to third parties, with or without the associated renewable energy credits (RECs).

Southern Company's wholesale subsidiary Southern Power is operating, acquiring or developing solar PV plants in six states — California, Georgia, New Mexico, Nevada, North Carolina and Texas.

Georgia Power is pursuing what is expected to be the largest voluntary solar generation portfolio of any utility in the U.S. and is currently projected to add over 1 gigawatt of solar capacity by the end of 2016<sup>8</sup> – more than any other utility that operates without government mandates. The efforts in Georgia have prompted recognition by the Solar Energy Industries Association and Smart Electric Power Alliance (SEPA), formerly the Solar Electric Power Association, with Georgia Power being named to SEPA's Top 10 Utility Solar list. The company was previously named Investor-owned Utility of the Year by SEPA.

In addition, the Southern Company system also serves as the only electric utility in the nation to partner with the U.S. Army, U.S. Navy, U.S. Marine Corps and U.S. Air Force to develop innovative renewable energy generation projects both on- and off-base. Through January 2016, Southern Company and its subsidiaries Alabama Power, Georgia Power, Gulf Power and



Southern Power owns two wind projects in Oklahoma.

Mississippi Power have announced nine solar projects totaling approximately 300 MW on 19 military bases, the largest number of military base projects of any electric utility in the country.

The partnership with the Department of Defense not only helps meet the military's goals but also puts solar to work for customers across the Southern Company system, providing options to benefit the military base, federal emergency programs and the communities the system is privileged to serve.<sup>9</sup>

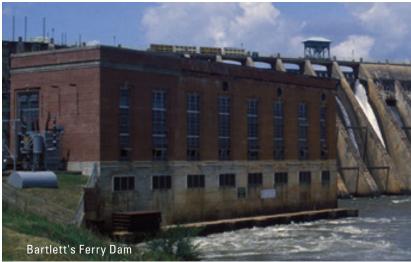
In addition to its military projects, Mississippi Power is collaborating with solar energy businesses to build more than 100 MW of additional utility-scale solar projects, making the company the largest partner in renewable energy in the state. Mississippi Power will have the ability to serve customers with the solar energy generated, when it makes sense, or sell it and the associated RECs to third parties for the benefit of customers.

Alabama Power has received approval from state regulators to secure up to 500 MW of generation from renewable resources, including solar, over the next six years.

As advances in solar energy continue, the Southern Company system is evaluating various types of solar technologies to help the company determine which technologies perform best and most cost-effectively.

<sup>&</sup>lt;sup>8</sup> Georgia Power purchases only the null energy output from some renewable generating facilities that have contracted to sell energy from their facilities to Georgia Power. The ownership of the associated renewable energy credits (RECs) is specified in each respective PPA, and the party that owns the RECs retains the right to use the RECs. <sup>9</sup> The respective operating companies retain all rights to the energy and RECs from the military projects, which they can use to serve customers with renewable energy or sell to third parties.





The company is also working to identify issues that come with integrating solar onto the electric grid.

As part of this effort, performance data from several different PV systems installed at locations across the system are being collected, and the electricity generated from these systems is being fed directly back into company buildings. Georgia Power headquarters hosts a 44-kilowatt (kW) rooftop demonstration project, which was recently updated to reflect emerging solar technologies and provides the ability to measure and compare the solar project output using a variety of system orientation and optimization factors. A 15-kW demonstration site with seven different PV systems was also installed at an Alabama Power facility in Mobile to continue performance and reliability studies. A 5-kW, thin-film PV system was installed at Mississippi Power headquarters in Gulfport, along with high-quality weather monitoring equipment that will add to the system's understanding of PV systems and the impact of weather on their performance.

The Southeastern Solar Research Center (SSRC), in Birmingham, Alabama, is an example of the system's commitment to finding real energy solutions. Through a collaborative effort between EPRI, Southern Company, Southern Research and others, the facility was developed to study the effects of southeastern U.S. weather conditions — such as high levels of heat, humidity, precipitation and pollen — on the performance of solar PV systems in the region. The resulting data

will provide insight into the optimal design of solar PV systems for utilities and promote a better understanding of solar PV applications in the Southeast. With projects like the SSRC, Southern Company is pursuing the development of cost-effective renewable generation resources that will benefit customers and drive innovation in the electric utility industry.

#### Wind

While wind generation in the Southeast is challenging, the Southern Company system is importing wind energy from other regions when it is cost-effective. In instances where the delivered price of wind energy to the system's service territory is competitive with other generation alternatives, Southern Company's subsidiaries seek to incorporate those resources into their respective generation portfolios.

Alabama Power, Georgia Power and Gulf Power have purchased, or plan to buy, more than 800 MW of wind generation from Oklahoma and Kansas. They may use this energy and the associated RECs to serve customers, or they can sell the energy and RECs, together or separately, to third parties. Southern Power owns two wind projects operating in Oklahoma.

Southern Company also has many wind research projects under way, including evaluating the potential of onshore and offshore wind generation. The system is working with a federal agency to obtain a lease to permit the installation of a meteorological tower





or floating meteorological buoy to collect data to determine the feasibility of wind generation off the Georgia coast. Southern Company is also collaborating with the Southeastern Wind Coalition and other partners to deploy sonic detection and ranging devices in the Southeast to validate and improve wind resource databases, including higher altitude data, specific to the Southeast. This information will add to wind data previously collected by the company along the Gulf Coast in Florida and Mississippi. Georgia Power is also working to evaluate performance of small-scale wind turbines. A study conducted with the Georgia Institute of Technology found several economic, technological and regulatory obstacles must be overcome before offshore wind-power generation in the Southeast would be feasible.

#### Hydro

Since its earliest years, the Southern Company system has relied on hydro power to serve customers and communities with one of the cleanest, environmentally safe and affordable sources of renewable energy. Hydro is the lowest-cost energy source available on the system, in that the "fuel" (water) is free and produces zero emissions. Plus, harnessing the power of falling water is a self-reliant process, not dependent upon other systems or fuel infrastructure.

With 33 hydro generating facilities and a combined nameplate generating capacity of approximately 2,800 MW, the system has ranked as high as seventh in the nation for hydro generation.

The Southern Company system recently completed projects that created an additional 16 MW of incremental hydro capacity. State-of-the-art gate systems at many hydro plants help protect the habitat of marine animals, improve efficiency and create more stable water levels at the reservoirs. The system is also exploring ways to increase hydro capacity through innovations that improve turbine efficiency. In addition, these facilities provide more than 200,000 acres of lakes and more than 5,000 miles of shoreline for recreational use by the public.

#### **Biomass and Landfill Gas**

Electricity from sustainably grown biomass can be considered "carbon neutral." Although some  $\mathrm{CO}_2$  is emitted during the generation process, it is equivalent to the amount absorbed while the biomass was growing, thus causing no net increase in  $\mathrm{CO}_2$  emissions on a carbon-lifecycle basis.

Switchgrass, sawdust and wood chips are among the most abundant biomass sources available in the Southeast. Southern Company's operating utilities have evaluated opportunities to convert existing fossil units to biomass and have cofired biomass as part of normal operations at some facilities.

Southern Power operates one of the nation's largest biomass power plants in Nacogdoches, Texas. In addition, Alabama Power's purchase arrangements with Resolute Forest Products and Westervelt Renewable Energy have further diversified the company's mix of fuel sources by providing renewable

generation capacity from wood byproducts. At the same time, these arrangements have given the company opportunities to sell RECs associated with the generation, which helps lower costs for customers.

Gulf Power owns and operates a landfill gas-to-energy facility at the Perdido Landfill in Escambia County, Florida. Georgia Power also has a power purchase agreement (PPA) with Waste Management Inc. for landfill gas to energy and receives the RECs from the project, which it makes available to Georgia Power customers through its Green Energy program.

#### **Distributed Generation**

The Southern Company system has a long and successful history of incorporating distributed generation into its energy mix. Southern Company views distributed generation as a natural evolution and seeks the best ways to serve customers who want it without impacting the local operating utilities' ability to continue providing clean, safe, reliable, affordable energy to all of its customers.

Southern Company's operating utilities purchase energy from distributed generation resources such as qualifying facilities, standby generation and other similar programs, and also own or buy energy output from cogeneration operations located alongside customer facilities that have large electric and thermal energy needs.

In addition, Georgia Power is now providing solar installation and sales services through an unregulated business unit, Energy Services. Georgia Power's Rooftop Solar Service program, within the Energy Services business unit, commenced July 1, 2015, providing enhanced support and education to residential customers interested in installing rooftop solar.

The system continues to support all forms of distributed generation that are consistent with applicable federal and state policies and that do not result in increased rates for customers who choose not to install distributed generation.

#### **Green Partnerships**

The Southern Company system is offering customers increasing amounts of renewable energy from qualified

sources, such as wood waste, landfill methane gas, solar, wind and hydro. Green energy programs provide Georgia Power and Gulf Power customers the option of purchasing renewable energy by paying a premium in addition to their regular power bill. Similarly, Alabama Power residential and commercial customers can "green" their energy use by purchasing RECs associated with energy generated from renewable sources. Alabama Power customers also can work with the company to support the development of new renewable facilities.

#### **ENERGY EFFICIENCY**

The Southern Company system has a responsibility to operate a reliable, cost-effective system of resources to bring electricity to customers whenever they flip a switch. Electricity providers are central to the economy and improving the lives of American families. Energy is growth capital, and the nation must do everything it can to ensure a secure, abundant supply. The electric utility system must maintain enough power generation capability to serve the energy needs of all of its customers, particularly during hot days in the summer and cold days in the winter. Energy efficiency programs play an important role. When demand reduction coincides with periods when the Southern Company system is called on to produce the most electricity, they reduce the need to build more plants or obtain rights to new generation options.

The Southern Company system is a leader in offering innovative energy efficiency programs that help customers use energy more wisely. Since 2000, energy efficiency programs have helped the system reduce peak demand for electricity by more than 4,500 MW and avoid more than 2.7 billion kilowatt-hours (kWh) of energy use. That's enough electricity to power the cities of Savannah, Georgia, Montgomery, Alabama, and Birmingham, Alabama, for an entire year. Over that same time period, the Southern Company system has invested approximately \$887 million on energy efficiency and demand-response programs to reduce peak demand, including over \$92 million in 2015. The system is currently on the path to invest over \$1 billion on energy efficiency by 2020.

A sampling of energy efficiency and demand-response programs offered to residential customers by the Southern Company system includes home energy audits, low-income weatherization, distribution of low-flow showerheads, outlet gaskets, refrigerator coil brushes and compact fluorescent lights, a student energy efficiency education program, variable pricing and "smart" thermostat combinations, geothermal heating and cooling systems, solar thermal water heating, and home-building guidelines. For largervolume commercial and industrial customers, energy services, real-time pricing, rebates, interruptible customer rate programs, standby generation and commercial construction programs are among the offerings also available. My Power Usage enables customers to view their daily energy usage in dollars or kWh, set up and maintain personal energy-use budget alerts, subscribe to energy efficiency reminders and view their projected electric bill amount.

Southern Company operating subsidiaries are partners with EPA and DOE in the ENERGY STAR® program, which promotes the use of energy efficient products and practices.

In addition, Southern Company and Nest Labs Inc. have announced a partnership to develop innovative products and services to help customers save energy.

Southern Company is a founding member of the Southeast Energy Efficiency Alliance and is a



founder-level associate member of the Alliance to Save Energy. Southern Company also is among more than 60 leading energy organizations that worked with EPA and DOE to develop the National

Action Plan for Energy Efficiency. As a charter member of the EPRI national energy efficiency initiative, Southern Company supported programs such as the "living laboratories," which develop new "smart" appliances and energy-management technologies. The system continues to increase its commitment to energy efficiency, recognizing that these efforts can also help the environment.

Southern Company has made major investments — around \$7 billion — in smart grid technologies, including the deployment of approximately 4.4 million smart meters, or advanced metering infrastructure, that can help customers manage their energy use and save money. Smart meters offer a host of benefits for customers, such as improved system maintenance, improved response time to outages, live outage maps and power consumption information available to customers who seek to manage their own energy use and control their energy bill.

#### **ELECTRIC TRANSPORTATION**

As the U.S. economy becomes more electrified, the Southern Company system is facilitating the use of



electric vehicles (EVs) by, for example, offering EV charger rebates and working with partners to make EV charging more available.

On-road and non-road EVs and equipment are quiet, clean and efficient and offer users the opportunity to save money on fuel and maintenance costs, reduce their environmental impact and contribute to the energy independence of the U.S. by using a domestically produced source of energy.

The Southern Company system is shaping and growing the electric transportation industry — both on-road and non-road — by finding ways to help customers who purchase EVs. This includes offering lower electricity rates and programs for off-peak usage so customers can save on their charging costs and helping commercial and industrial customers reduce their operating costs and environmental impact by using electricity, rather than traditional fuels, to transport cargo. The system is promoting a multitude of total electric non-road transportation and charging technologies at airports, seaports, rail yards, mines, manufacturing plants and distribution centers.

In addition, the Southern Company system is evaluating plug-in EVs – both hybrid and total electric – and charging technologies for use in its own operations.

The system has been committed to the research, development and marketing of electric transportation technology since the 1990s and is working to understand the economic impact electric transportation can provide to the company and region. It is currently studying the impact of this technology on grid reliability and developing mitigation strategies to lessen or eliminate impacts; helping to develop charging infrastructure, fast charging and wireless standards; and working with vehicle manufacturers and EPRI to bring viable on-road EV technologies to the market, enhance the speed of adoption and improve vehicle/grid integration. The system is also researching fleet applications, including electric truck refrigeration units and plug-in hybrid work truck technologies to improve efficiencies and reduce costs in the industrial and commercial sectors.

# BUSINESS STRATEGY INTEGRATION<sup>10</sup>

Information on the Southern Company system's business strategy, how Southern Company operates as a system (the Pool), its planning process and how weather impacts its business strategy is discussed below.

#### THE POOL

Alabama Power, Georgia Power, Gulf Power, Mississippi Power and Southern Power operate as an integrated system pursuant to the Southern Company system Intercompany Interchange Contract (IIC), an agreement on file with the Federal Energy Regulatory Commission (FERC). The IIC provides a framework whereby generating resources of the operating companies are operated in a coordinated, integrated fashion to reliably and economically serve their aggregate firmload obligations, as well as to engage in shorter-term opportunity transactions in the wholesale markets. The IIC is administered by Southern Company Services, which acts as the agent for the operating companies in connection with Pool-related activities and processes.

The concept of economic dispatch, which seeks to minimize total system production cost, is a fundamental premise of the Pool. The generating assets of all the operating companies in the Pool are committed and dispatched as a single system, without regard to operating company ownership. Subject to reliability considerations and operational limitations, generation assets with the lowest variable costs are dispatched during each hour to meet the aggregate load obligations of the system. The goal of this process is to minimize the total cost of energy every hour, which benefits customers of all the operating companies. The IIC sets forth methodologies and procedures for an after-the-fact accounting of system dispatch, so that each operating company realizes the economic benefit of its owned resources and receives its proportionate share of other costs and revenues resulting from Pooled operations.

<sup>&</sup>lt;sup>10</sup> CDP 2016 Climate Change Information Request questions: 2.1, 2.1a, 2.1b, 2.1c, 2.2, 2.2a



Construction of a baghouse at Alabama Power's Plant Gaston

#### **ENVIRONMENTAL COMPLIANCE PLANNING**

The operating companies of the Southern Company system develop their environmental compliance strategies on a coordinated basis, using inputs and expertise from several organizations across the system. These groups represent environmental and governmental affairs, planning, fuels, engineering, finance, operations, communications, generation and research functions. As described below, the process entails a series of meetings, presentations and discussions, where requirements, modeling data, emissions information, emissions technologies, cost, schedules and other considerations are examined in detail. While participating in this coordinated planning process, each operating company retains the right and responsibility to review and approve its own compliance plans and strategies.

Gathering all available knowledge about current and possible future local, state, regional and national environmental requirements is critical. The future requirements may be in the form of legislation that will result in future rulemakings or in the form of proposed rules that must go through the rulemaking process to become final. For many rules, the possibility that litigation will result in changes to the rule creates additional uncertainty. The forecast of impacts of the requirements on generating plants is formally refreshed at least annually.

To forecast the impacts of requirements on generating plants, various assumptions must be made regarding generating units, including possible responses by the Southern Company operating companies and other systems across the nation to existing and future environmental requirements, in addition to changes in electricity demand. These assumptions include unit operating characteristics such as heat rates, capacity, emission rates, fuel characteristics and costs, allowance prices for market-based programs, emission limits and environmental requirements, control technology options and costs, and future generation demand.

To appropriately consider uncertainty, a scenario process is employed by the Southern Company system for long-term resource planning. A range of planning scenarios is developed and modeled. This range is established through the work of a coordinated planning team consisting of internal subject matter experts and company planning managers. The analytical work is supported by external expert inputs with key parts of the analysis conducted with an external consultant. Planning scenarios identify important drivers in the ongoing evolution of the electric utility industry, including fuel markets, possible CO<sub>2</sub> regulations and other environmental issues, economic growth, and technology development.

The scenarios consider multiple views of CO<sub>2</sub> regulations and fuel prices. Using a coordinated approach, the

operating companies analyze the scenarios using a fully integrated multisector energy-economic model. Model outputs characterize the evolution of the U.S. energy economy – including electricity, transportation, manufacturing, industrial, commercial and residential for each of the scenarios. The interconnected nature of these sectors is captured through the system's modeling approach. For example, higher CO<sub>2</sub> and fuel costs would increase electricity prices and tend to reduce growth in overall economic activity, including reduced growth in electricity sales. Moreover, CO<sub>2</sub> legislation or regulation places costs and restrictions on CO2 and other GHG emissions. These costs and restrictions, along with varying projections of fuel prices, would shift generation investment choices through retirements of existing capacity, installation of new environmental control technologies and construction of new replacement capacity. These and other such interrelated factors are considered in the system's scenario modeling process.



Customer impacts are at the heart of planning for the system's environmental compliance strategy and fuel mix.

The application of control technology is dictated initially by the anticipated environmental requirements for each specific generating plant and/or unit. In some cases, the plant or unit emission-control requirements are mandated. In other cases, such as the market-based program for sulfur dioxide established to address acid rain, utilities can choose the most cost-effective option: fuel switching, applying control technology or purchasing emission allowances.

Customer impact must be at the heart of decisionmaking, and the resulting strategy must consider a range of potential outcomes. These impacts include the direct cost-effectiveness of the strategy as compared to alternative strategies, as well as local community impacts such as jobs and taxes. Some units and plants may not be able to achieve required emission reductions in a cost-effective manner, resulting in the need to switch fuels, find alternate methods to comply or retire. If emission controls are mandated for a specific unit, then the economic value of the generating asset, including future operating costs, must be considered to determine whether it is in the best interest of customers to apply the technology or whether it is better to retire the generating asset and replace it with another resource. The decision process reviews the cost-effectiveness of each feasible option for each unit. After the process is completed and analyzed across various planning scenarios, a strategy is compiled on a unit level and reviewed annually based on the most current information.

One major goal of the environmental strategy process is to maintain flexibility by including as much information as possible before making final decisions. If allowed under the regulations, controls are applied to the most cost-effective units first. A key advantage of this process is that it allows decision-making on an incremental basis. While the strategy includes emission-control plans for the next 10 years, final decisions on specific pollution-control projects are not made until commitments are required in order for construction to commence early enough to meet any required compliance date. While controls may be planned on a particular unit, no firm commitment to

that plan will be made until necessary to assure the emission control equipment is in place and operational when needed. This flexibility enables each operating company to adapt to changing requirements and keep costs low for customers.

#### **WEATHER**

The operating results of the operating companies are affected by weather conditions that may fluctuate on a seasonal to interannual basis. The Southern Company system is keenly aware of the region's climate and broad range of weather conditions that could impact its operations and business. Significant weather events, such as hurricanes, tornadoes, floods and droughts, have at times resulted in substantial damage to or limited the operation of the system's properties. Not surprisingly, the occurrence of such events can negatively impact results of operations and financial condition.

Electric power supply is generally a seasonal business. In many parts of the country, demand for power peaks during the summer and winter months with market prices also peaking during those periods. As a result, the overall operating results of the Southern Company system may fluctuate substantially on a seasonal or even annual basis.

Volatile or significant weather events could result in substantial damage to the system's transmission and distribution lines. The system has significant investments in the Atlantic and Gulf Coast regions that could be affected by major storm activity. Further, severe drought conditions can reduce the availability of water and could restrict or prevent the operation of certain generating facilities.

Each operating company maintains a financial reserve to cover the cost of damages from weather events to its transmission and distribution lines and the cost of uninsured damages to its generating facilities and other property. In the event an operating company experiences any of these weather events, natural disaster or other catastrophic event, recovery of costs in excess of reserves and insurance coverage is subject



Hurricane Katrina caused unprecedented destruction to the Gulf Coast of Mississippi, as well as significant damage and outages in Alabama.

to the approval of its state public service commission (PSC). While the operating companies should be entitled to recover prudently incurred costs resulting from such an event, any denial by the applicable state PSC or delay in recovery of any portion of such costs could have a material negative impact on the Southern Company system's results of operations, financial condition and liquidity.

In addition, damage caused by significant weather events within the Southern Company system service territory may result in reduced customer demand for electricity for extended periods and, potentially, a drop in the number of connected customers. For example, Hurricane Katrina hit the Gulf Coast of Mississippi in August 2005 and caused the complete loss of a number

of customer houses and businesses and substantial damage to other customer properties within Mississippi Power's service territory. Any significant reduction in the number of customers or demand for electricity could have a material negative impact on operating results, financial condition and liquidity.



# ENGAGEMENT<sup>11</sup>

Southern Company is a publicly held company that seeks to provide consistent and predictable returns for its stockholders while keeping customers at the center of everything we do. Part of serving customers and stockholders is engagement in GHG issues with policymakers in both the regulatory and legislative arenas, while advocating for a common-sense national energy policy that prioritizes the full portfolio, energy innovation and the restoration of America's financial integrity. In addition, Southern Company is actively involved in various trade associations and engages with numerous stakeholders.

#### **POLICYMAKERS**

Southern Company actively seeks to have direct, open communication with various policymakers, including EPA. For example, the company is regularly

engaged with EPA on regulation that could potentially impact a portion of its business and operations. The company provides feedback to agencies on potential regulation by having face-to-face meetings, as well as submitting public comments. Southern Company also has a presence in Washington, D.C., in order to have a constructive dialogue with policymakers in the federal government. The company attempts to ensure policymakers are provided accurate information in order to appropriately discuss, debate and make decisions on policy issues that could impact the Southern Company system's business units and customers.

Southern Company engages with DOE to further action on various issues and challenges, including mitigation of GHG emissions. This engagement happens through projects such as the NCCC, the development of  $TRIG^{TM}$  technology and CCUS projects at Plant Barry and around the system (discussed previously in the Future Emissions section).

# TRADE ASSOCIATIONS AND RESEARCH ORGANIZATIONS

Southern Company is a member of EEI, the association of U.S. stockholder-owned



electric companies that represents approximately 70 percent of the U.S. electric power industry. EEI represents its members' interests in legislative and policy arenas and provides public-policy leadership, critical industry data and strategic business intelligence. Southern Company seeks to provide leadership within EEI by serving on and rotating off boards and committees across a wide range of issues.

Southern Company is a member of the Utility Air Regulatory Group (UARG), which is a voluntary, nonprofit association of electric generating companies and industry trade associations. UARG's purpose is to participate on behalf of its members collectively in EPA's rulemakings and other Clean Air Act proceedings that affect the interests of electric generators and in litigation arising from those proceedings.

<sup>&</sup>lt;sup>11</sup> CDP 2016 Climate Change Information Request questions: 2.3, 2.3a, 2.3b, 2.3c, 2.3e, 2.3f



EPRI is another organization in which Southern Company is an

active participant. The members of EPRI include utilities throughout the world. EPRI is an independent nonprofit research group that seeks to pool resources and ideas from all members to advance the development and deployment of technologies impacting the electricity sector. Southern Company was instrumental in forming EPRI as the primary research organization for more than 90 percent of the electric utility industry.

#### **STAKEHOLDERS**

Stakeholder engagement has always been a part of the utility business and is integrated into long-standing processes. For example, as an investor-owned utility, Southern Company conducts annual and quarterly financial reporting and business planning, including the review of stockholder proposals. The system engages in processes regulated by national, state and local authorities and elected officials. State PSCs within the system's service territory have established mechanisms for assessing the need for rate changes, which leads to an open dialogue among the states, company and other stakeholders. The company also participates in environmental and community impact engagements, including local town hall meetings and meetings during plant and transmission licensing and approval processes.

Since 2011, Southern Company's CEO and top executive-level management have actively engaged diverse national and regional stakeholders in candid, transparent and constructive dialogues on a wide range of issues related to energy and the environment that are important to the company, the Southeast and the nation. Interactions have included forums, webinars, calls and one-on-one meetings covering a range of topics, including regulatory and policy issues, system risk, renewables, energy efficiency, GHG emissions, resource planning, research and innovation and issues affecting energy productivity. This positive engagement has fostered a level of trust and understanding that is necessary to build long-term, constructive relationships.

Through these interactions, Southern Company has set a path forward for discussions on various issues — including those on which the company and stakeholders differ — and openly sought places of common ground. This process has defined priority areas of concern and established a foundation for seeking areas of agreement and opportunities for collaboration. Ongoing dialogue with these stakeholders continues to enhance and inform the company's decision-making and long-term strategic view by identifying issues, concerns, strategies and actions.

# EPA REGULATION OF GHGS<sup>12</sup>

EPA is regulating GHG emissions under the Clean Air Act. To date, regulatory actions include: changing the permitting process for stationary sources; promulgating CO<sub>2</sub> emission performance



standards for new, modified and reconstructed electric generating units; and promulgating  $\mathrm{CO}_2$  emission guidelines for existing electric generating units.

Southern Company believes the Clean Air Act is ill-suited to regulate GHG emissions and that it is not EPA's responsibility to set national energy policy — that is the responsibility of Congress and the states, which have the lens to balance utilities' responsibility to provide clean, safe, reliable and affordable energy.

#### **PERMITTING**

As of Jan. 2, 2011, new and modified stationary sources that produce GHG emissions over certain thresholds must go through the prevention of significant deterioration permitting process, including installation of the best available control technology for  $\mathrm{CO}_2$  and other GHGs. GHG emissions must also be included in Title V permits. The inclusion of GHG requirements in permits will likely make permitting more difficult and potentially impose new types of emissions and operational limits on power plants.

<sup>&</sup>lt;sup>12</sup> CDP 2016 Climate Change Information Request questions: 4.1, 5.1

## CO<sub>2</sub> EMISSION PERFORMANCE STANDARDS FOR NEW, MODIFIED AND RECONSTRUCTED SOURCES

On Oct. 23, 2015, EPA finalized new, modified and reconstructed source standards for  $\mathrm{CO}_2$  emissions under section 111(b) of the Clean Air Act. EPA's final standard for new steam electric generating units and IGCC units is 1,400 pounds of  $\mathrm{CO}_2$  per gross megawatt-hour (MWh). EPA based the standard on an efficient new supercritical pulverized coal unit implementing partial CCUS. EPA's final standard for new baseload stationary combustion turbines is 1,000 pounds of  $\mathrm{CO}_2$  per gross MWh.

The final rule potentially impacts the operational flexibility of new natural gas combined-cycle units and effectively eliminates new coal-fired electric generation without partial CCUS. Southern Company believes meeting customers' electricity needs requires the full portfolio of energy resources — nuclear, 21st century coal, natural gas, renewables and energy efficiency. The final rule, however, discourages the development of all of America's energy resources.

#### **CLEAN POWER PLAN**

On Oct. 23, 2015, EPA finalized  $\mathrm{CO}_2$  emission guidelines for existing electric generating units, also known as the Clean Power Plan or 111(d) for the subsection of the Clean Air Act on which it is based. Section 111(d) of the Clean Air Act is premised on EPA creating emission guidelines and individual states developing plans that establish performance standards, compliance frameworks and compliance options for affected sources considering EPA's emission guidelines.

EPA's final  $\mathrm{CO_2}$  emission guidelines set national subcategory-specific performance rates (pounds of  $\mathrm{CO_2}$  per net MWh) for (1) fossil-steam and IGCC units and (2) natural gas combined-cycle units. EPA based the subcategory-specific performance rates on a best system of emission reduction that consisted of three building blocks: (1) coal unit heat rate improvements, (2) operating natural gas combined-cycle units at a

75 percent capacity factor and displacing fossil-steam generation accordingly, and (3) increasing renewable energy generation and displacing fossil generation accordingly. EPA also finalized state-specific emission rate and mass targets.

After thorough review of EPA's final guidelines, it remains clear that EPA's overreaching and unworkable Clean Power Plan will fundamentally change the ways our nation makes, moves and consumes electricity while increasing electricity costs to hardworking American families. The company is diligently evaluating state plan pathways and associated compliance options. Believing that states can best account for customers' interests, Southern Company remains highly engaged with state environmental agencies, PSCs and environmental organizations in developing state plans that would minimize costs to customers. In February 2016, the U.S. Supreme Court issued a stay of the Clean Power Plan while the courts review ongoing legal challenges.

On Oct. 23, 2015, EPA also released a three-part proposal: federal plan requirements for meeting existing source  $\mathrm{CO_2}$  emission guidelines, model trading rules and amendments to Clean Air Act section 111(d) implementing regulations. If a state plan is not submitted or deemed unsatisfactory by EPA, a federal plan could be put in place at the agency's discretion. On Jan. 21, 2016, Southern Company provided detailed and constructive comments on EPA's proposed federal plan, model trading rules and amendments to section 111(d) implementing regulations.

### ADDITIONAL INFORMATION

For additional information related to the Southern Company system's GHG-related activities, please view the following links.

http://www.southerncompany.com/what-doing/environmental-reports.cshtml

http://investor.southerncompany.com/informationfor-investors/overview/default.aspx

#### **Cautionary Note Regarding Forward-Looking Statements**

Certain information contained in this report is forward-looking information based on current expectations and plans that involve risks and uncertainties. Forward-looking information includes, among other things, statements concerning future GHG emissions, the construction and future performance of the integrated coal gasification combined-cycle project in Kemper County, Mississippi (Kemper IGCC) and Plant Vogtle units 3 and 4, proposed environmental regulations and related estimated expenditures, the purchase of solar and wind energy, capital expenditures, estimated expenditures related to energy efficiency and demand-control programs, and sources and costs of fuels. Southern Company cautions that there are certain factors that could cause actual results to differ materially from the forwardlooking 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 fiscal year ended Dec. 31, 2015, 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, including legislative and regulatory initiatives regarding deregulation and restructuring of the electric utility industry, environmental laws regulating emissions, discharges and disposal to air, water and land, and also changes in tax and other laws and regulations to which Southern Company and its subsidiaries are subject, as well as changes in application of existing laws and regulations; current and future litigation, regulatory investigations, proceedings or inquiries, including, without limitation, Internal Revenue Service and state tax audits; the effects, extent and timing of the entry of additional competition in the markets in which Southern Company's subsidiaries operate, variations in demand for electricity, including those relating to weather, the general economy and recovery from the last recession, population and business growth (and declines), the effects of energy conservation and efficiency measures, including from the development and deployment of alternative energy sources such as self-generation and distributed generation technologies; available sources and costs of fuels; the ability to control costs and avoid cost overruns during the development and construction of facilities; 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; state and federal rate regulations and the impact of pending and future rate cases and negotiations, including rate actions relating to fuel and other cost recovery mechanisms; legal proceedings and regulatory approvals and actions related to Plant Vogtle units 3 and 4, including Georgia Public Service Commission (PSC) approvals and Nuclear Regulatory Commission actions and related legal proceedings involving the commercial parties; actions related to cost recovery for the Kemper IGCC; the ability to successfully operate the electric utilities' generating, transmission and distribution facilities and the successful performance of necessary corporate functions; the inherent risks involved in operating and constructing nuclear generating facilities; the performance of projects undertaken by the nonutility businesses and the success of efforts to invest in and develop new opportunities; internal restructuring or other restructuring options that may be pursued; potential business strategies, including acquisitions or dispositions of assets or businesses, which cannot be assured to be completed or beneficial to Southern Company or its subsidiaries; the expected timing, likelihood and benefits of completion of the proposed acquisition of AGL Resources Inc.; the ability of counterparties of Southern Company and its subsidiaries to make payments as and when due and to perform as required; the ability to obtain new short- and long-term contracts with wholesale customers; the direct or indirect effect on the Southern Company system's business resulting from cyber intrusion or terrorist incidents and the threat of terrorist incidents; interest rate fluctuations and financial market conditions and the results of financing efforts; changes in Southern Company's and any of its subsidiaries' credit ratings; the impacts of any sovereign financial issues; the ability of Southern Company's subsidiaries to obtain additional generating capacity (or sell excess generating capacity) at competitive prices; catastrophic events such as fires, earthquakes, explosions, floods, hurricanes and other storms, droughts, pandemic health events such as influenzas, or other similar occurrences; and the direct or indirect effects on the Southern Company system's business resulting from incidents affecting the U.S. electric grid or operation of generating resources. Southern Company expressly disclaims any obligation to update any forward-looking information.

## SOUTHERN COMPANY'S CLIMATE CHANGE POLICY STATEMENT

Climate change is a challenging issue for our world and our nation. Southern Company is committed to a leadership role in finding solutions that make technological, environmental and economic sense. The focus of this effort must be on developing and deploying technologies that reduce greenhouse gases while making sure that electricity remains reliable and affordable. Southern Company believes that this is the most responsible approach to meeting the needs of the environment, our customers and our shareholders.





