

Section 3. Strategic Issues – Climate Change

The climate change⁴ issue is different from the emissions issues discussed in Section 2. Because there is no technology that can economically be added to an existing fossil-fuel-fired power plant to remove CO₂, and because burning fossil fuels is the basis not only of electricity generation⁵ – but also of modern transportation and society's way of life – the climate change issue requires more comprehensive energy and economic approaches. Indeed, addressing climate change could require a fundamental shift in the way in which society makes and uses energy.

Southern Company has had a comprehensive program of engagement in activities related to the climate change issue and CO₂ emissions for more than a decade. The overall objective of the program is to address the scientific, economic, technological, and policy challenges that the climate change issue presents. About 20 people - engineers, chemists, economists and policy experts - are involved in the program.

There are five primary aspects to Southern Company's climate change issue management program. They are:

- scientific and economic research,
- policy development involvement,
- technology development and deployment,
- voluntary activities, and
- strategic planning and analysis.

Scientific and economic research

In order to be a credible participant in the national and international debate related to climate change, Southern Company has developed an in-depth understanding of the science and economics related to the issue and has participated in relevant, state-of-the-art research. This effort includes maintaining knowledge of ongoing research as well as supporting collaborative research at internationally acclaimed organizations, including the Electric Power Research Institute (EPRI), the Massachusetts Institute of Technology's Joint Program on the Science and Policy of Global Change, and Stanford University's Energy Modeling Forum.

Electric Power Research Institute. EPRI is a non-profit, multi-disciplinary research organization that

facilitates collaborative research on matters of interest to the electric power and other energy industries. Over the years, EPRI's climate program has conducted cutting-edge research addressing a broad range of science, impact, mitigation, and technology issues relevant to the public debate.

MIT Joint Program on the Science and Policy of Global Change. The MIT Joint Program conducts research and analysis on issues of global environmental change, with a concentration on climate. The cornerstone of this research is its model which integrates climate science, technological change, and social and economic sciences, and is designed to study questions that are relevant for formulating policies related to climate change.

Stanford Energy Modeling Forum. The Stanford Energy Modeling Forum (EMF) provides a structured forum for energy experts from government, industry, universities, and other research organizations to meet and study policy-relevant energy and environmental issues of common interest. The process identifies and focuses on the important insights gained from a comparison of alternative modeling approaches, rather than the precise numerical results themselves. In recent years, EMF studies have increasingly included supporting analyses of issues less amenable to modeling. This overall approach makes the Forum's conclusions highly relevant to policymakers and decision makers.

Policy Development Involvement

Southern Company has been involved in the public debate on climate change at both the national and international levels since the 1980s. The goals of the

⁴ The Earth's climate varies over many time and spatial scales; this is evidenced by the periodic glacial and interglacial cycles. The Earth's temperature represents a balance between energy coming in from the sun and outgoing infrared (heat) radiation. Some of the radiation emitted to space from the Earth's surface is absorbed by the principal greenhouse gas water vapor and other trace gases concentrated in the lower atmosphere. The Earth's average surface air temperature is about 33°C (59°F) warmer than it would be if the natural "greenhouse gases" were not present.

The term "global climate change" encompasses concerns with the effects of global warming caused by the increase in the concentrations of the trace greenhouse gases (carbon dioxide, methane, nitrous oxide, and chlorofluorocarbons) and aerosols from man's activities.

⁵ The burning of fossil fuels (coal, natural gas, and oil) currently provides about 70% of the U.S. electricity supply. See Figure 18, on page 22.

company's involvement are to help ensure that policies addressing climate change are sound and that any negative impacts on Southern Company customers and shareholders are minimized. Internationally, Southern Company has participated in both the United Nations Framework Convention in Climate Change and Intergovernmental Panel on Climate Change processes.⁶ Nationally, the company works with policymakers directly and through a variety of organizations to expand understanding of the issues and to enhance the development and implementation of appropriate policies related to climate change and greenhouse gas emissions.⁷

Southern Company believes that any policy on climate change, including any that propose to limit CO₂ and other greenhouse gas emissions, must:

- recognize that the issue is both global and long-term in nature;
- seek to resolve remaining scientific uncertainties about the nature, scope, and pace of change to the climate system;
- protect a secure, economic and diverse supply of energy for the United States;
- acknowledge and promote the important role of long-term technology research, development and dissemination; and,
- incorporate the unrestricted use of market-based flexibility mechanisms such as emissions trading.

Guided by these principles, the company seeks to play

⁶ As a signatory of the United Nations Framework Convention on Climate Change, the United States shares with many countries its ultimate objective: stabilization of greenhouse gas concentrations in the atmosphere at a level that prevents dangerous interference with the climate system. While the U.S. has chosen not to ratify the Kyoto Protocol, the nation has developed a comprehensive long-term strategy on climate change that is informed by science, emphasizes innovation and technological solutions, maintains economic growth, and promotes international collaboration. The U.S. also maintains a leadership role in the Intergovernmental Panel on Climate Change (IPCC) science assessment process established by the United Nations Environment Programme and the World Meteorological Organization by chairing the working group and staffing the Technical Support Unit for Working Group I as the IPCC begins preparing its Fourth Assessment Report, due in 2007.

⁷ This involvement in policy development was validated and urged by the experts the company interviewed as part of the 2004 assessment (see next section). In particular, they urged deep involvement in the design of any policy proposals. They saw this as a vital aspect of protecting the interests of Southern Company's shareholders and customers as climate change policy proposals are discussed.

a constructive leadership role in the debate regarding the development and implementation of policies related to climate change.

Technology development and deployment

Southern Company is at the forefront of technology research related to electricity production, greenhouse gas emissions, and potential climate change. Technology issues are discussed in detail in Section 5.

Voluntary activities to reduce or avoid greenhouse gas emissions

Southern Company was a founding member of the Department of Energy's (DOE's) Climate Challenge voluntary program. Begun in 1994, Southern Company committed to more than 20 company-specific projects while participating in a number of industry-wide initiatives. The company's Climate Challenge results have been reported to DOE through the 1605(b) Voluntary Reporting Guidelines and have included total emissions from generation, greenhouse gas intensity and project results. So far, Southern Company has avoided or reduced more than 93 million metric tons of greenhouse gas emissions. Much of the CO₂ emissions that have been avoided or offset came from availability improvements and capacity additions at the company's nuclear generating plants. Also, the addition of highly efficient co-generation projects and advanced combined-cycle units provided further reductions. Working with state forestry commissions, the company has sponsored efforts to plant more than 35 million trees in the Southeast to sequester CO₂. Improvements in fossil plant heat rates, transmission and distribution system improvements and biomass utilization were also undertaken.

In 2003, DOE announced the Climate VISION program to support the U.S. goal of an 18 percent reduction in the greenhouse gas intensity⁸ of the U.S. economy. The initial focus of this voluntary program is the energy-intensive industries, including electricity generation. Southern Company is one of the leaders of the electric utility industry sector climate change initiative, known as Power Partners, in partnership with the government. The electric utility sector – including the association of investor-owned electric utilities, Edison Electric Institute (EEI) – has pledged

⁸ Emissions of greenhouse gases per unit of economic output.

to reduce its greenhouse gas emissions rate 3 percent to 5 percent over the next decade. On December 13, 2004, the industry signed a Memorandum of Understanding with DOE to cover this voluntary program.

Southern Company is now working to set specific goals under the Power Partners program. The company is considering new and expanded initiatives that build on the Climate Challenge projects and is considering a company-specific CO₂ intensity goal. It is expected that this goal will be in the range of what EEI has pledged for the industry.

Also, as a continuation of its carbon sequestration effort, Southern Company has initiated a tree planting effort known as the *Longleaf Legacy* program. This 5-year, \$3 million partnership with the National Fish and Wildlife Foundation (NFWF) will plant longleaf pine trees, restore critical habitat, sequester carbon and improve biodiversity throughout the Southern Company service territory. By leveraging Southern Company's resources through NFWF, this project will result in more than \$8 million for tree planting and habitat restoration projects with key stakeholder groups in the Southeast. In the first two years of this project, more than 1.5 million trees have been planted and some 3,000 acres of critical habitat have been restored.

In addition, by early 2003, as part of Southern Company's participation in the voluntary EPA SF₆ partnership program, the company had reduced emissions of sulfur hexafluoride (SF₆), a greenhouse gas, nearly 84 percent from 1993 levels, which is 15 percent more than the original goal and three years

ahead of schedule. SF₆ is a more potent greenhouse gas than carbon dioxide and these reductions are equivalent to about 2.5 million metric tons of CO₂.

U.S. Voluntary Programs and Research Initiatives

The United States has more ongoing programs to address climate change than all other nations of the world combined. There have been numerous voluntary efforts to measure and report greenhouse gas emissions, as well as to reduce, avoid and sequester these same emissions through programs such as the DOE Climate Challenge Program, the EPA Climate Leaders Program, the EPA SF₆ Reduction Partnership, the new Climate VISION Program and the government Energy Star Program, to name a few. The United States also has developed the Climate Change Research Initiative, coordinated by an interagency task force that directs the spending of more than \$3.9 billion per year on climate change science research under the Climate Change Science Program, and more than \$1.6 billion on technology development under the National Climate Change Technology Initiative.

Strategic planning and analysis

Southern Company's environmental compliance strategy development process, discussed in Section 1, includes analyzing scenarios that include a price signal for CO₂ emissions. The assessment completed during 2004 and described in Section 4 of this report considered an expanded set of price signals for CO₂ emissions. See the next section for details.

Forward looking statement cautionary note

Much of the information contained in this report is forward-looking information based on current expectations and plans that involve risks and uncertainties. Some of the forward-looking information relates to scenarios that seek to predict future environmental rules and regulations, Southern Company's ability to address those rules and regulations in a cost-effective manner, solutions for addressing such rules and regulations, costs involved in addressing those rules and regulations, and continued economic growth in Southern Company's service territory. 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, 2004, and subsequent securities filings, could cause results to differ materially from management expectations as suggested by such forward-looking information: the impact of recent and future federal and state regulatory change, including legislative and regulatory initiatives regarding deregulation and restructuring of the electric utility industry, and also changes in environmental, 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 the pending Environmental Protection Agency (EPA) civil actions against certain Southern Company subsidiaries; 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 and gas, including those relating to weather, the general economy and population and business growth (and declines); available sources and costs of fuels; ability to control costs; advances in technology; state and federal rate regulations and the impact of pending and future rate cases and negotiations; 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 ability to obtain new short- and long-term contracts with neighboring utilities; the direct or indirect effect on Southern Company's business resulting from terrorist incidents and the threat of terrorist incidents; interest rate fluctuations and financial market conditions and the results of financing efforts, including Southern Company's credit ratings; the ability of Southern Company and its subsidiaries to obtain additional generating capacity at competitive prices; and catastrophic events such as fires, earthquakes, floods, hurricanes or other similar occurrences. Southern Company and its subsidiaries expressly disclaim any obligation to update any forward-looking information.