



Energy Efficiency and Demand Response

It is critical that the Southern Company system maintains enough power generation capability and natural gas system capacity to serve the energy needs of all customers, particularly during hot summer days and cold winter mornings. Energy efficiency and demand response are key aspects of our efforts to provide clean, safe, reliable and affordable energy to our customers and communities. Both our electric and natural gas subsidiaries have longstanding programs providing education, incentives and options encouraging customers to optimize their energy usage.

- ▶ Economic development success in our Southeast electric service territories is driving **increased customer demand**
 - » Over the past 5 years, over 25,000 new jobs have been created across our Southeast service territory
 - » Winter peak load growth expectations indicate the need for over 6,000 megawatts (MW) of new generating capacity by 2030
- ▶ We expect to meet electricity demand growth in our Southeast electric service territories through a combination of additional generating resources powered by **natural gas, solar resources, battery storage, energy efficiency and demand response measures**
- ▶ Energy efficiency and demand response programs, which are in place at all regulated electric and natural gas subsidiaries, are also important elements of our greenhouse gas emissions reduction target of net zero by 2050 (**Scope 1**)

Key Facts and Figures

Construction of **2,500 MW avoided** across the system due to energy efficiency and demand response programs

Electric energy efficiency programs save **~350 million kWh** of electricity each year

Gas subsidiaries' programs save customers over **1,600,000 MMBtu** each year





Energy Efficiency and Demand Response

Energy Efficiency Strategy and Stakeholder Engagement

Each of our electric and gas operating companies designs energy efficiency and demand response programs to best serve their customers. Our Chairman, President and CEO Chris Womack often says his “favorite kilowatt is the one you don’t use”. In other words, if we can help customers use energy more efficiently, we can reduce the construction and procurement of energy resources, which helps to keep customer bills affordable and fits with our clean energy goals – both of which are important elements of Southern Company’s strategy.

The energy savings programs we promote are largely developed in concert with interested state and local stakeholders, government representatives, trade associations, contractors and codes/standards organizations and require the approval of state regulatory bodies. Southern Company and its subsidiaries embrace these engagements and believe they help us to deploy, along with community partners, initiatives that can reduce energy usage, inform infrastructure investment decisions, improve our carbon footprint and foster more affordable solutions.

Our subsidiaries also have leeway, with support from local stakeholders and regulators, to initiate smaller-scale pilot programs designed to test new and emerging technologies as well as participation enablement mechanisms, customer receptiveness and effectiveness. Pilots vary by topic, customer type, size and duration. In the case of Georgia Power, we even “crowd source” ideas from a broader audience for piloting emerging technology concepts to enhance future demand-side management offerings and underserved customer programs through a centralized channel on georgiapower.com. Georgia Power representatives meet with Georgia Public Service Commission Staff monthly and interested stakeholders quarterly to provide program updates and obtain feedback.



Leadership Accountability

Beginning in 2024, our Board of Directors incorporated additions of energy efficiency and load flexibility/ demand response MWh into the long-term incentive compensation GHG metric target for key executives. Please refer to our [2024 Proxy Statement](#) for additional information.



Energy Efficiency and Demand Response

Electric Energy Efficiency and Demand Response Programs

Southern Company subsidiaries' retail electric energy efficiency programs help save over 350 million kilowatt hours (kWh) of electricity annually. In recent years, our electric utilities have invested approximately \$40 million annually in energy efficiency incentives. Programs are designed to provide a variety of energy saving options and appeal to a wide array of customer situations and use cases. Each year, approximately one million customers take advantage of our energy efficiency offerings and incentives. These programs help engage customers, supply data and encourage ongoing energy management.

- ▶ Residential customers can access personalized information and education through check-ups, calculators, assessments and audits.
- ▶ Our operating companies provide energy saving equipment in kits, discounts for efficient products in stores and in online marketplaces and rebates or credits for installing specific energy efficient technologies.
- ▶ Behavioral programs provide customers with information regarding their usage and supply energy saving tips.

The Southern Company system has also long been an industry leader in demand response. In partnership with thousands of our residential, commercial and industrial customers who take part in our demand response offerings, we have the ability to reduce peak electrical demand by approximately 8%.

Georgia Power Case Study

Georgia Power has a long history of working with community advocates and the Georgia Public Service Commission to pilot and implement energy efficiency and demand response programs. Many of our programs are designed to help further our energy justice efforts to help ensure all communities we serve reap the benefits of enhanced energy efficiency.

Energy efficiency program goals for Georgia Power across residential and commercial customers include:

- ▶ **Generate general awareness** of low-to-no cost tips to help customers save money & energy
- ▶ **Drive awareness and customer satisfaction** around available energy efficiency resources
- ▶ **Increase participation in energy efficiency** programs among customers with the greatest affordability needs

In 2023, Georgia Power had seven active residential programs, four active commercial programs and five active pilot programs. A key focus area is providing solutions for income-qualified customers. For example, in 2023, income qualified households participating in Georgia Power's programs saved approximately 47 million kWh of energy, the equivalent of powering 4,300 homes for a year.

According to Southeast Energy Efficiency Alliance (SEEA):

- ▶ **38%** of households have incomes of **<\$50K, 56%** are **<\$75K**
- ▶ **53%** of all residential buildings in the south were **built before energy codes were developed**

Southern Company's electric utilities are designing and implementing programs to support income-qualified customers





Energy Efficiency and Demand Response



Examples of Georgia Power Energy Efficiency and Demand Response Programs

Residential	Commercial
<p>Home Energy Improvement Program</p> <ul style="list-style-type: none"> ▶ Promotes energy efficiency improvements in existing homes and provides financial incentives for implementing eligible energy efficiency measures ▶ Provides customers, remodelers and property owners with multiple participation options, including a comprehensive, whole-house approach and an individual improvement(s) option to appeal to a wide range of residential customers 	<p>Commercial Prescriptive Program</p> <ul style="list-style-type: none"> ▶ Promotes the purchase of eligible high-efficiency equipment installed at qualifying customer facilities ▶ Incentives offered through this program serve to reduce the incremental cost to upgrade to high-efficiency equipment over standard efficiency options for Georgia Power's new and existing commercial customers
<p>Energy Efficiency for Savings and Efficiency (EASE)</p> <ul style="list-style-type: none"> ▶ EASE promotes energy efficiency improvements in existing income-qualified single-family homes, as well as multifamily properties, targeting and providing financial assistance to income-qualified households that are historically under-represented in energy efficiency program participation ▶ The program also provides members of the community the opportunity to join in charitable giving to assist neighbors in need of home energy efficiency upgrades or improvements 	<p>Small Commercial Direct Install Program</p> <ul style="list-style-type: none"> ▶ Offers free, comprehensive energy assessments conducted by Georgia Power or its authorized representatives to eligible commercial customers, resulting in recommendations for efficiency measures that a customer may select to install ▶ Should the customer decide to participate, efficiency measures identified will be scheduled for installation, with incentives offered through this program to reduce the cost to the customer
<p>Thermostat Demand Response Program</p> <ul style="list-style-type: none"> ▶ Promotes shifting of electricity usage during peak demand periods, including hot summer days, cold winter days, or whenever there is a system capacity need ▶ Georgia Power, or its representative, can manage the load from participating customers' electrically heated and cooled homes by adjusting thermostat settings 	<p>Commercial Behavioral Program</p> <ul style="list-style-type: none"> ▶ Designed to encourage customer engagement with facility energy management and energy efficiency to reduce energy consumption ▶ Program provides customer-specific information that allows customers to compare their energy use to the consumption of a peer group of similar facilities and facilities that are considered energy-efficient



Energy Efficiency and Demand Response

Examples of Georgia Power Pilots Programs



Electric Vehicle Managed Charging: Pilot allows us to detect, measure and manage EV charging for participating customers and to implement active managed charging and test demand response events.



Energy Efficient Manufactured Homes: Pilot allowed us to construct in partnership with EPRI, Southern Company Research and Development and Clayton Homes, two uniquely designed modern manufactured homes consisting of energy efficient, all-electric equipment. The homes, now located in the City of Carrollton, were donated to West Georgia Habitat for Humanity.



Equity Insights and Engagement: Designed to help bring attention and intention to residential energy efficiency programs to ensure they are serving a diverse set of customers, with an emphasis on historically underserved and income-qualified customers.



Low to Moderate Income Portal: A web portal that proactively identifies solutions and helps determine eligibility for utility assistance and energy efficiency program offerings. The web portal is a centralized location for residential customers across the state to submit a single application for eligible solutions.



Residential Battery Storage Demand Response: Recently concluded pilot allowed us to determine the effectiveness of home battery storage solutions to provide backup power, demand response opportunities and savings.

Natural Gas Energy Efficiency and Demand Response Programs

Our electric operating companies are not the only subsidiaries focused on energy efficiency. Southern Company Gas has energy efficiency programs at all its regulated subsidiaries that help customers use gas more efficiently and reduce the GHG emissions associated with our customers' use of natural gas.

For example, in 2019, Virginia Natural Gas launched a Conservation and Ratemaking Efficiency Plan, which has **helped customers save over 18,000 MMBtu** since the program's inception—equivalent to avoiding almost 1,000 metric tons of CO₂ emissions. The CARE program includes a residential home incentive program, low-income home weatherization, home energy audits and customer education and outreach.

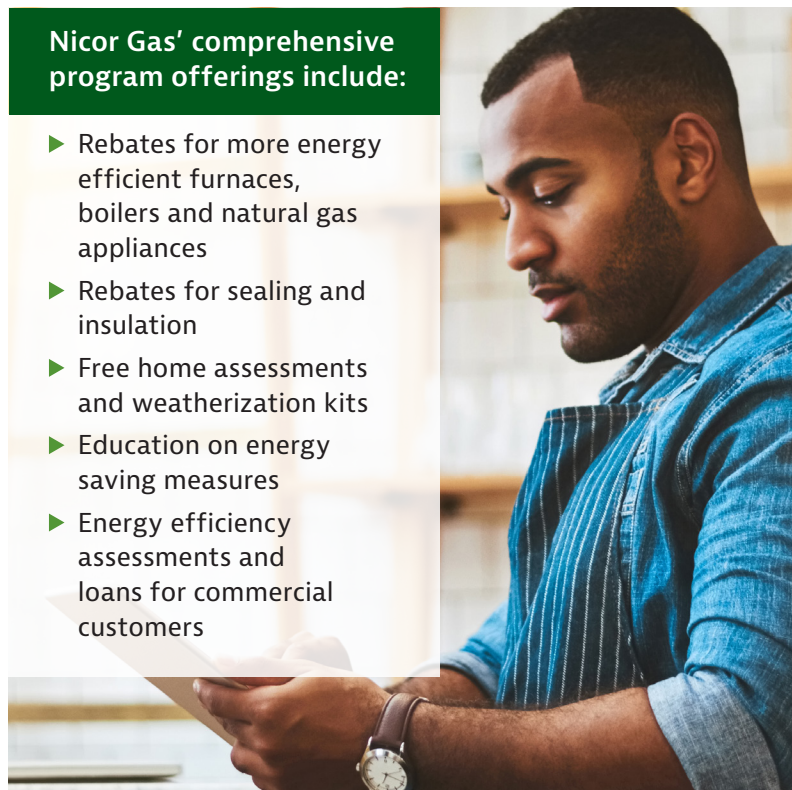
Nicor Gas Case Study

In 2022, Nicor Gas implemented the 10th year of its energy efficiency program, providing approximately **\$40 million per year in energy efficiency incentives and services to customers**, including **\$12.5 million in income-eligible programs**. Nicor Gas' programs are focused on residential, commercial and low-income customers, as well as emerging energy-efficient technologies.

From 2022 through 2025, Nicor Gas' Energy Efficiency Plan will invest approximately **\$183 million** to help customers install more than **750,000 energy efficiency measures** and over **80,000 energy efficiency retrofit and technical assistance projects** in homes and businesses throughout northern Illinois. The plan will **help customers save 660 million net therms** over the lifetimes of the installed measures and projects. These savings are expected to **reduce GHG emissions by over 3.2 million metric tons** and **water use by over 900 million gallons** over the life of installed measures.

Nicor Gas' comprehensive program offerings include:

- ▶ Rebates for more energy efficient furnaces, boilers and natural gas appliances
- ▶ Rebates for sealing and insulation
- ▶ Free home assessments and weatherization kits
- ▶ Education on energy saving measures
- ▶ Energy efficiency assessments and loans for commercial customers

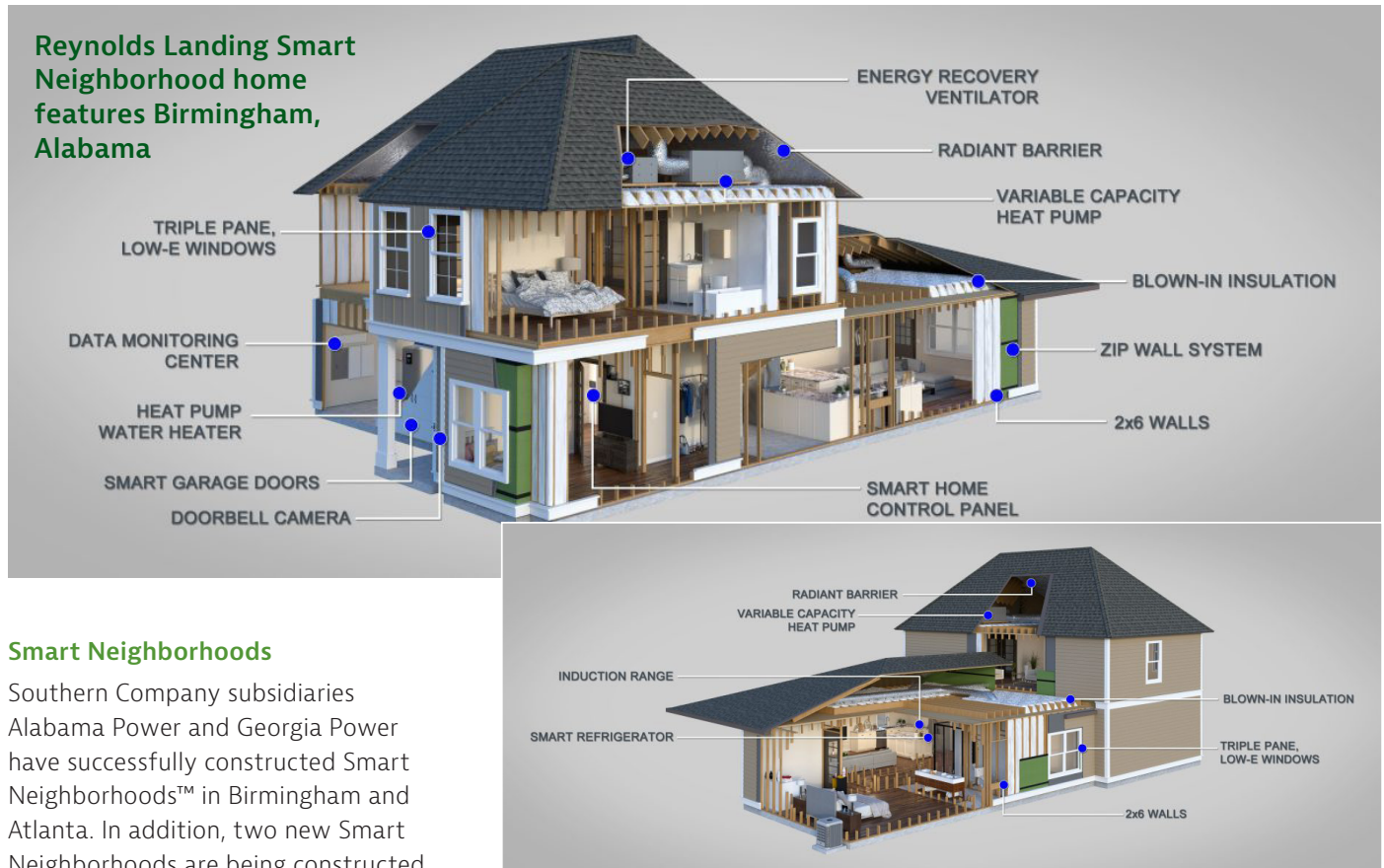




Energy Efficiency and Demand Response

Energy Efficiency and Innovation

While Southern Company and its operating companies have well-established energy efficiency programs already in place, we continue to advance new technologies and partner with other companies, communities and innovation leaders to test products and initiatives that could lead to even greater energy savings in the future.



Smart Neighborhoods

Southern Company subsidiaries Alabama Power and Georgia Power have successfully constructed Smart Neighborhoods™ in Birmingham and Atlanta. In addition, two new Smart Neighborhoods are being constructed in Aurora and North Fox Valley, Illinois, led by our Nicor Gas subsidiary. Smart Neighborhood is a trademarked brand of Southern Company. These neighborhoods are designed to advance energy technologies that work together as a part of an affordable, reliable clean energy economy. They lead to job creation, diverse business partnerships, economic development and green transportation.

Smart Neighborhood communities are enabling researchers and utilities to research, test and validate different next-generation technologies including energy-efficient buildings, community-scale and home-scale microgrids and transactive controls at scale. These real-world test-beds are connecting innovative building energy-efficient technologies with American communities, bringing together lab researchers, utilities and U.S. homeowners in new ways to save Americans money and energy and help improve the grid.

- ▶ [Alabama Power](#) has partnered with local builders and Chorus SmartSecure to develop Smart Neighborhoods. Projects have been completed in Hoover, Auburn and Leeds, Alabama.
- ▶ [Georgia Power](#) partnered with PulteGroup to develop the first Smart Neighborhood in Atlanta. The homes are located in Atlanta's Upper West Side, one of the city's most vibrant and popular areas. Altus at The Quarter contains luxury townhomes with enhanced Smart Home features.
- ▶ For the Illinois projects, [Nicor Gas](#) in partnership with Habitat for Humanity, has announced two planned communities that will total 30 single-family net zero emissions homes equipped with a combination of renewable, electric and natural gas technologies. Eligible residents will enjoy freedom from expensive mortgages and benefit from using features such as energy efficient appliances that help reduce high energy bills; all while reducing their carbon footprint.



Energy Efficiency and Demand Response

While each community has different features, some of the technologies employed include:

- ▶ Power supplemented by individual rooftop solar installations and in-home battery energy storage
- ▶ Community-scale microgrid
- ▶ Optimal insulation for maximum efficiency
- ▶ Advanced heating and cooling systems
- ▶ LED lighting
- ▶ Comprehensive duct-sealing
- ▶ Triple-pane windows
- ▶ Radiant barrier roof decking
- ▶ Electric vehicle chargers
- ▶ Home automation featuring smart thermostats, smart locks and voice control

For more information about electric energy efficiency programs, please visit:

[Alabama Power Company](#)

[Georgia Power Company](#)

[Mississippi Power Company](#)

For more information about natural gas energy efficiency programs, please visit:

[Atlanta Gas Light](#)

[Chattanooga Gas](#)

[Nicor Gas](#)

[Virginia Natural Gas](#)

