Keeping the lights on in Georgia requires significant water resources, so we have a long-vested interest in using water wisely. While the company withdraws water from public waterways, on average we put back approximately 90 percent of what we take out.

Like most other businesses, droughts we've seen over the past few years can impact our business. The company has conducted aggressive water research pilot projects to reduce water use in cooling and emission control processes.

To be more efficient in our water use, we are proud to partner with EPRI, a number of other power generation companies, and Southern Research Institute on a first-of-its-kind power generation water research R&D facility at Georgia Power's Plant Bowen.

The Water Research Center is testing technologies and addressing industry-wide water-use efficiencies and power generation process water quality. The outcomes of this pioneering research will be analyzed to determine what works and what doesn't work to conserve water in very specific ways in the processes of generating electricity.

With high demands on existing water supplies, smart water management and use will be even more important in the years ahead as Georgia's population continues to grow. It's up to all of us as businesses and citizens to explore innovative ways we can help to preserve our water resources.

Paul Bowers
President and CEO
Georgia Power

GEORGIA POWER
A SOUTHERN COMPANY

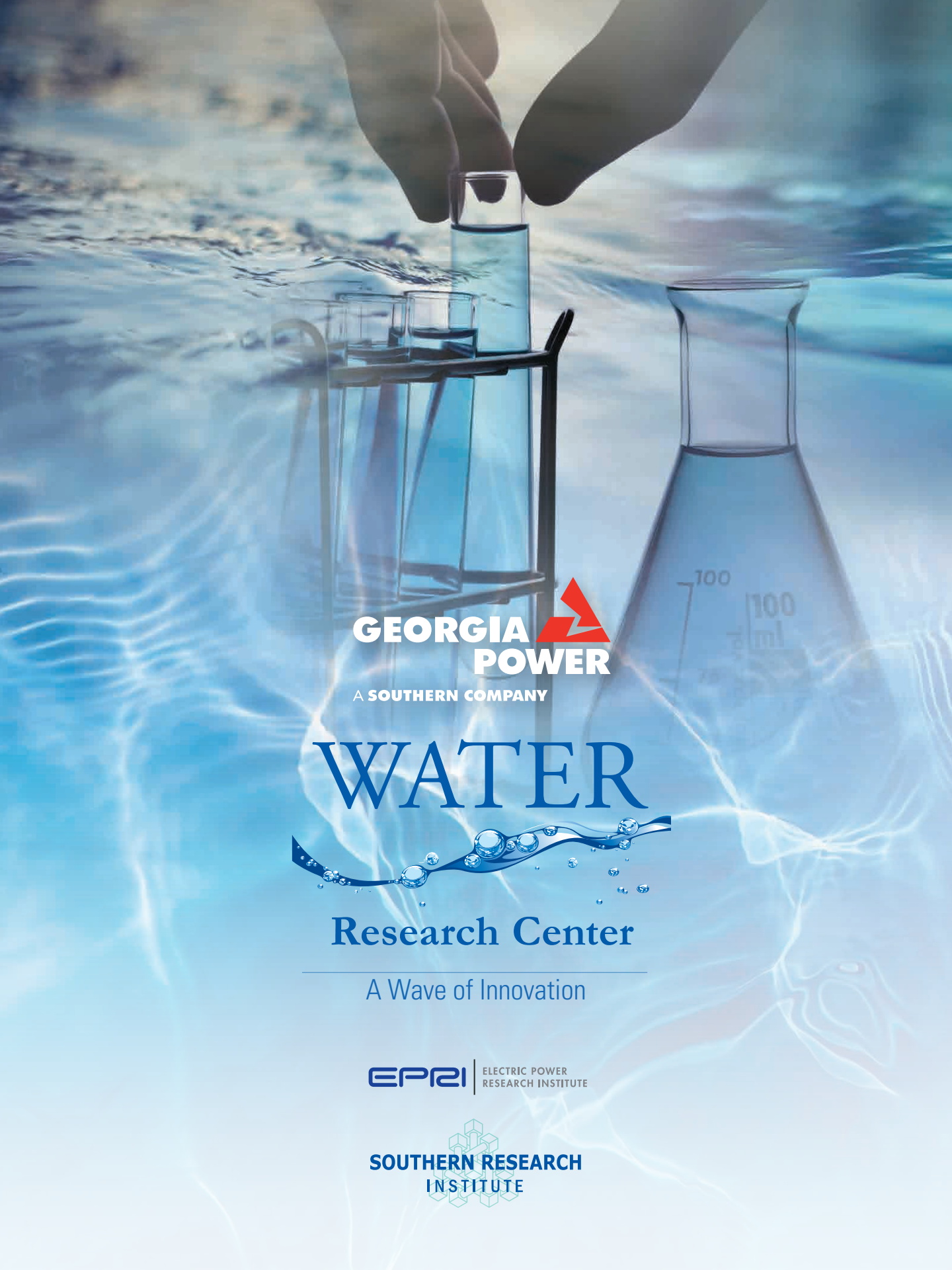
Georgia Power is the largest subsidiary of Southern Company, one of the nation's largest generators of electricity. The company is an investor-owned, tax-paying utility with rates below the national average. Georgia Power serves 2.3 million customers in all but four of Georgia's 159 counties.

EPRI | ELECTRIC POWER RESEARCH INSTITUTE

The Electric Power Research Institute (EPRI) is an independent, non-profit company performing research, development and demonstration in the electricity sector for the benefit of the public.

SOUTHERN RESEARCH INSTITUTE

Southern Research Institute is a non-profit scientific research organization collaborating with partners in the life sciences, defense, aerospace, environmental and energy industries.


GEORGIA POWER
A SOUTHERN COMPANY
WATER
Research Center
A Wave of Innovation
EPRI
ELECTRIC POWER
RESEARCH INSTITUTE
SOUTHERN RESEARCH
INSTITUTE

"We are excited to be collaborating with our partners in the Water Research Center. The goals of minimizing industry water use and positively impacting conservation not only benefit the power generation industry, but also the environment, and future generations to come. This is a win in every way."

— Arthur J. Tipton, Ph.D., President and CEO, Southern Research Institute

When you think about electricity, you probably don't think about water – but water is an essential component in generating electricity. From steam-driven turbines, to hydroelectric power – water is the backbone of most of the power generation in the United States. And that's why finding new ways to protect our water resources and use them efficiently is so important.

Georgia Power's Plant Bowen is the site of the new state-of-the-art Water Research Center, dedicated to finding new ways to reduce water consumption and improve the quality of any water that is returned to the environment, all without degrading energy efficiency.

The Water Research Center is an exciting partnership between Georgia Power, the Electric Power Research Institute, the Southern Research Institute and 14 other electricity generation companies.

It's an innovative collaboration between public and private entities focusing on developing revolutionary technologies with real-world applications that will be deployed to improve the management of water use across the entire energy industry.

The Water Research Center has seven distinct focus areas:

Moisture Recovery
Focuses on researching innovative technologies and methods to recover moisture that would otherwise be consumed or lost into the atmosphere through emissions "scrubbing," cooling tower plumes and flue gas.

Cooling Tower and Advanced Cooling Systems
Explores ideas such as increasing cooling tower cycles of concentration, diverting/reducing cooling tower heat loads, assessing the feasibility and applicability of hybrid wet/dry cooling systems,

examining wet surface air coolers and using non-traditional water sources.

FGD and Process Wastewater Treatment
Focuses on technologies to treat water from various waste streams throughout the power plant, with an emphasis on flue gas desulfurization (FGD) discharges and cooling tower blowdown. Includes treatment of other streams, such as floor drains and stormwater runoff, that will allow the reuse of these waters in various processes within the plant.

Zero-Liquid Discharge
Explores technologies that separate pollutant-bearing waters into a solid material and a high-quality distillate. Distillated waters created from these processes could be reused within the plant boundaries for purposes such as flue gas scrubber water, boiler feedwater, service water and ash wetting.

Solid Landfill Water Management
Explores water issues related to managing on-site landfills with the addition of new solids such as zero-liquid discharge salts and sludges to existing landfills containing bottom ash, fly ash and gypsum.

Carbon Technology Water Issues
Develops models to determine the impacts of various post-combustion, carbon-capture technologies on the use of water at the plant site, with a goal of reducing the impact of carbon dioxide capture on plant water use.

Water Modeling, Monitoring and Best Management Practices
Uses results from each of the focus areas to model strategies for managing water use/reuse and to explore tools for evaluating overall water use (baseline and real time).

"We are proud to be a part of exploring unique and innovative water treatment and conservation research projects. The Water Research Center will be the industry standard to advance new technology options that address current and future water challenges."

— Dr. Michael W. Howard, President and CEO, EPRI

Funding Partners

Southern Company
Georgia Power
Electric Power Research Institute
Southern Research Institute
American Electric Power
The Babcock & Wilcox Company
DTE Energy
Duke Energy
Edison International
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FirstEnergy
Great River Energy
Hoosier Energy
Oglethorpe Power Corp.
Pinnacle West Capital Corporation
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