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National Conference of State Legislators (NCSL)

Climate and Energy: Creating the Right Mix

Ron Shipman, VP Environmental Affairs

August 12, 2013

GEORGIA
POWER

A SOUTHERN COMPANY

Donora, PA at noon on Oct. 29, 1948



20 Dead
7,000 Sick

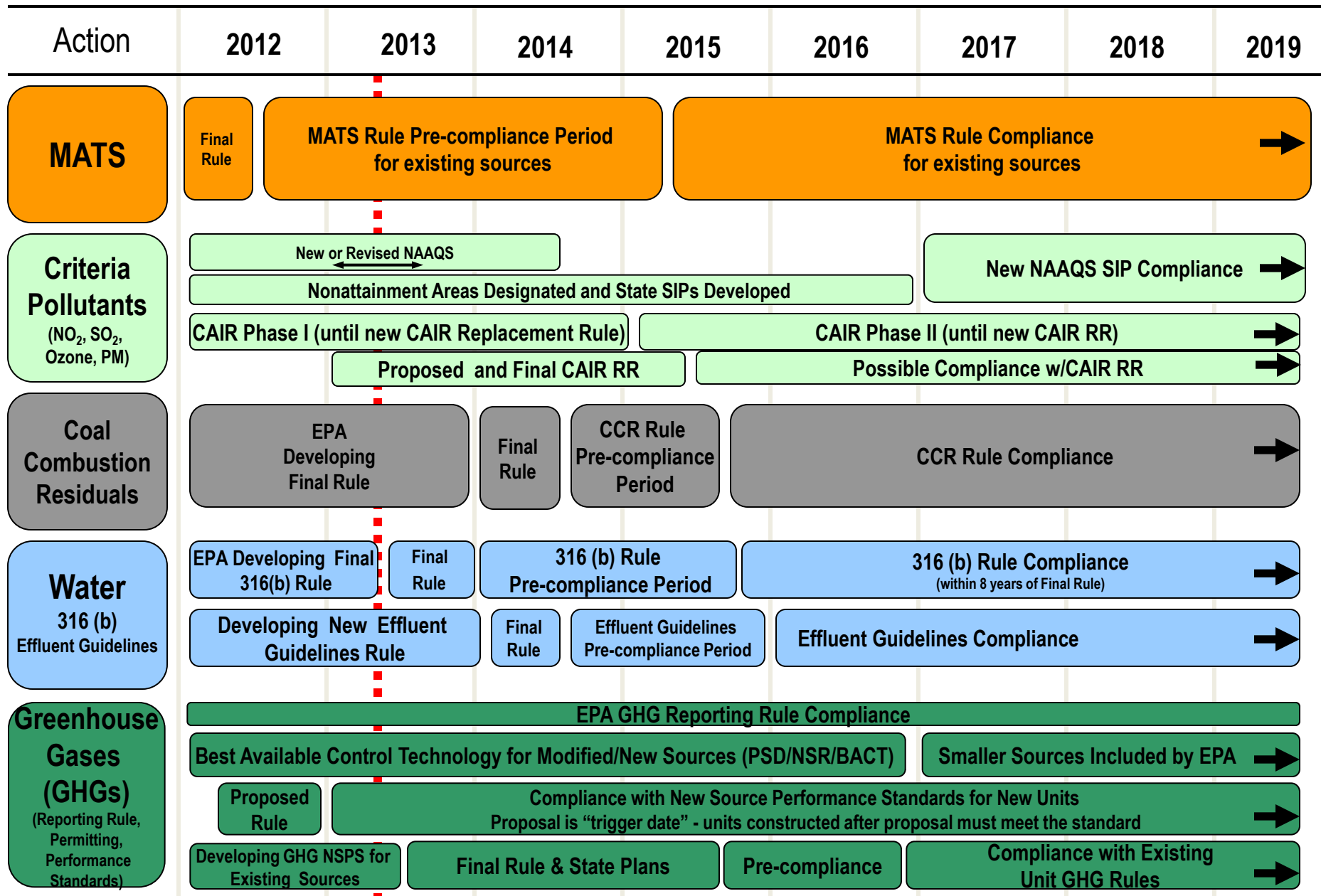
Pittsburgh Post-Gazette Photo)

Cuyahoga River, June 22, 1969



EPA New Regulatory Actions Timeline

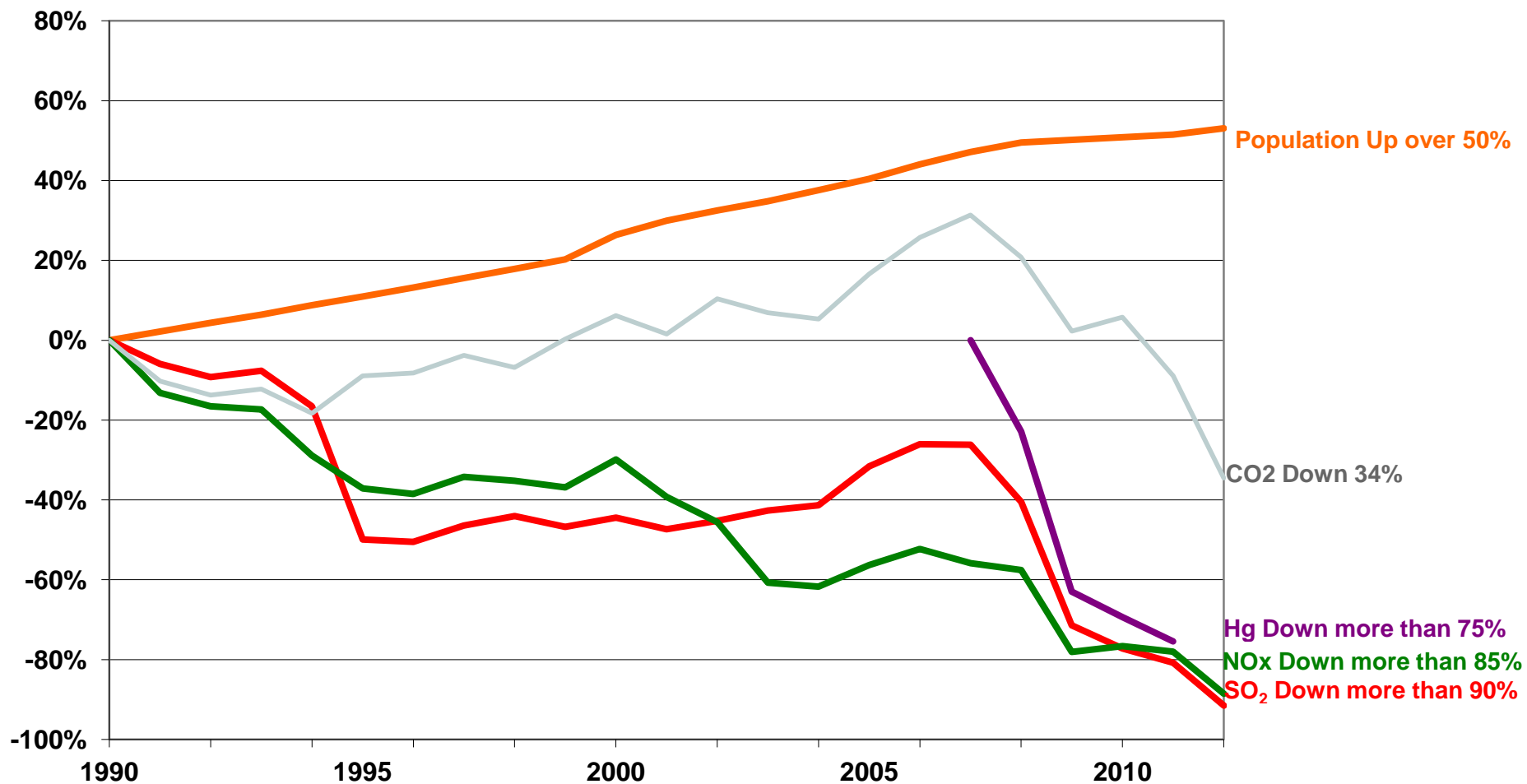
January 2013







Georgia Power Emissions Trends

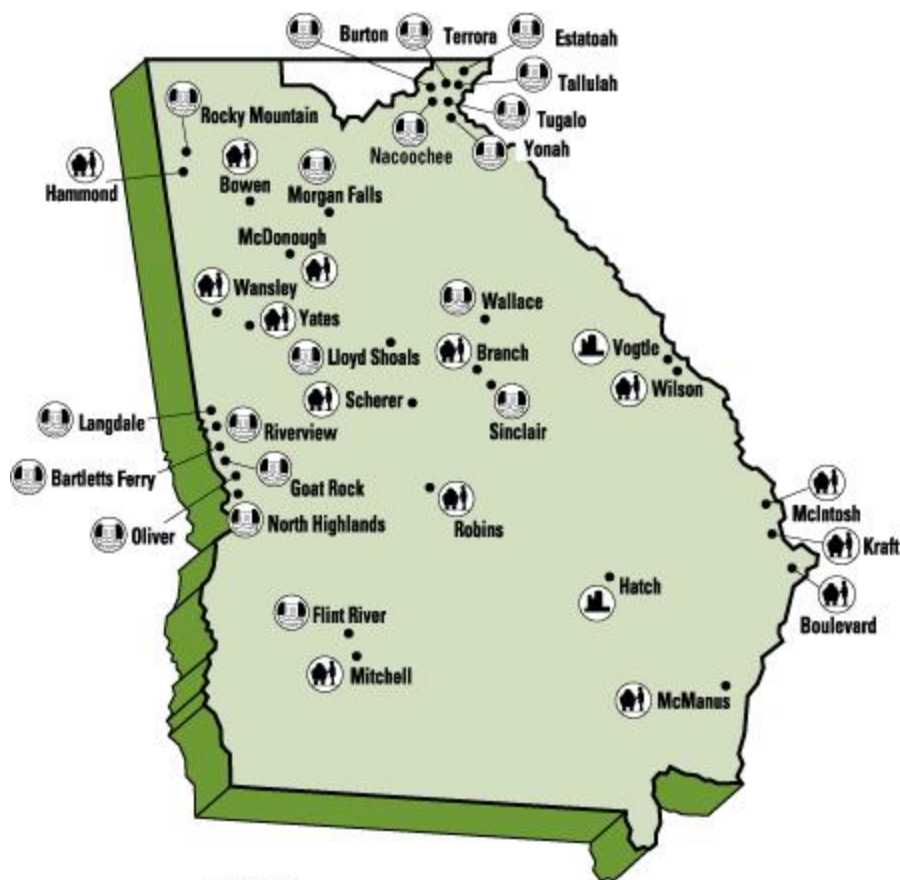


Environmental Rules Impacting Our Plants

- **Georgia Multipollutant Rule**
 - SCRs, Scrubbers, and Baghouses on specific units
- **Mercury and Air Toxics Standard (MATS)**
 - Additional controls for mercury and other emissions required by 2015
- **Greenhouse Gas Standards (GHG) / Global Climate Issues**
 - CO₂ emission limitations on new coal-fired power plants expected in 2013
- **National Ambient Air Quality Standards (NAAQS)**
 - Potential reductions of NO_x and SO₂ emissions expected between 2017-2021
- **Effluent Limitation Guidelines (ELG)**
 - Potential additional wastewater treatment facilities expected by 2018

Mercury & Air Toxics Standards (MATS) Overview

- Applies to all coal- & oil-fired electric generating units (boilers)
- Sets emission limits for mercury, acid gases, and particulate matter
- Compliance required by April 16, 2015
 - Georgia EPD can grant a 1-year extension
 - U.S. EPA can grant an additional limited 1-year for a "documented reliability concern"



LEGEND

- Convert
- Defer
- Retire



LEGEND

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Mercury & Air Toxics Standards (MATS) Overview (continued)

- Startup, Shutdown Provision
 - June 25, 2013 EPA Published in Federal Register
 - Re-opening comment period, seeking comments on:
 - MATS Startup, Shutdown Definitions and Requirements
 - Additional Technical Analysis Conducted by EPA Related to Startup/Shutdown
 - Comment Period likely to end, August 26, 2013

National Ambient Air Quality Standards

- National standards set by EPA based on impacts to human health and the environment
- Areas that do not meet the air quality standards are in “nonattainment”
- Nonattainment areas must reduce emissions to improve air quality
- New rules recently finalized or expected for ozone, particulate matter, SO₂, and NO₂ standards

Potential for new compliance requirements between 2017 to 2021.

Greenhouse Gas Standards

- Proposed in 2012, expected to be finalized in April 13, 2013 (Missed)
- Applies to new coal-fired power plants and new natural gas-fired combined cycle plants
- Sets a “fuel-neutral” CO2 emission limit based on the emissions typical of a natural gas-fired combined cycle plant

Global Climate Issues

June 25, 2013, the Administration directed EPA to issue:

“A revised proposed rule addressing new fossil fuel fired electric generating units by September 20, 2013, and proposed regulations for existing, modified and reconstructed electric generating units by June 1, 2014. On July 12, 2013, DC Circuit Vacated Biomass Combustion 3-Year Deferral of CO2 emissions from 2014 to now ...”

The proposed rule sets a “fuel-neutral” standard, meaning that coal-fired units must meet the same emission limit as natural gas-fired units. The proposed limit is based on the emissions characteristics of a natural gas-fired unit. Thus, a coal unit would require carbon capture and sequestration to meet the standard.

Cooling Water Intake Structure Final Rule 316(b)

- Based on 3rd Amendment between EPA & the Riverkeeper signed on June 27, 2013, Regulatory action moved from June 27, 2013 to November 4, 2013.
 - Clean Water Act requires that NPDES permits for facilities with cooling water intake structures ensure that the location, design, construction, and capacity of the structures reflect the best available technology (BAT) to minimize harmful impacts on the environment.
 - Focuses on Entrainment and Impingement of “aquatic organisms.”
 - Extension needed to Complete consultation under the Endangered Species Act that EPA has requested prior to finalizing the standards.

Effluent Limitations Guidelines Overview

- Proposed April 19, 2013, Published June 7, 2013, comments due by August 6, 2013. Expected to be signed by court-ordered deadline of May 22, 2014
- Applies to coal-fired power plants discharges: FGD wastewater, Fly Ash Transport Water, Bottom Ash Transport Water, Combustion Residual Leachate, Non-chemical Metal Cleaning Wastes, and Wastewater from Flue Gas Mercury Control System and IGCC gasification systems.
- EPA Proposed 8 Options with 4 Preferred Options, EPA Prefers Option 4a
- Compliance Deadline: Applies on a date determined by the permitting authority that is as soon as possible when the next permit is issued beginning July 1, 2017 (approx. 3 years from the rule's effective date)

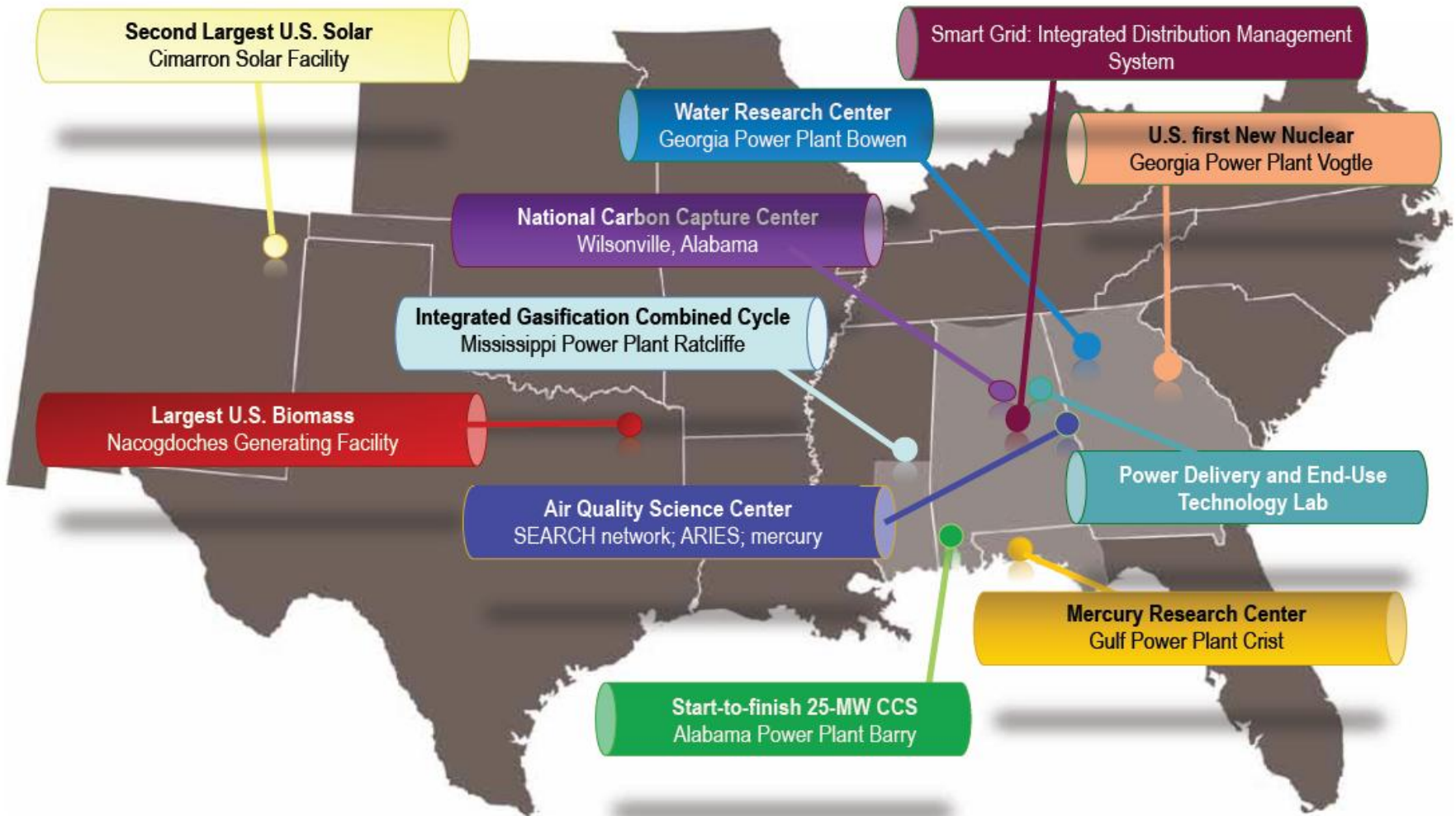
What's on the Horizon

- Coal Combustion Byproducts/ Coal Combustion Residuals (CCB/CCR)
- Endangered Species Listing Petition Reviews
- Complete major constructions projects as scheduled

Southern Company's Research Culture



Research Programs and New Projects



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QUESTIONS ???