

PROJECT facts

U.S. DEPARTMENT OF ENERGY
OFFICE OF FOSSIL ENERGY
NATIONAL ENERGY TECHNOLOGY LABORATORY



REGIONAL EFFORT TO DEPLOY CLEAN COAL TECHNOLOGIES

Addressing the Water-Energy Interface

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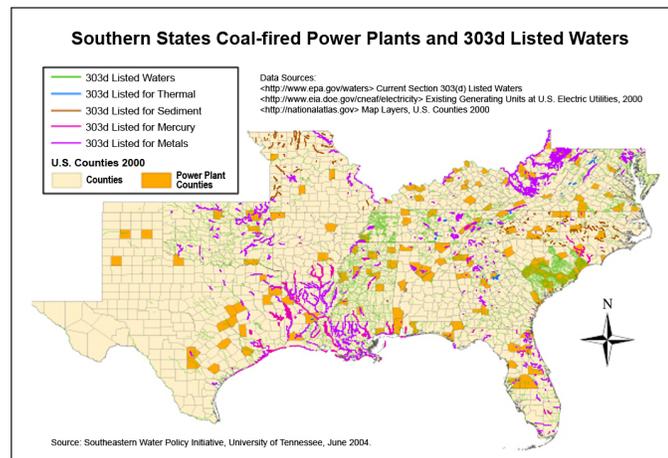
Background

Recent water shortages in various parts of the United States have motivated government and private industries to conduct research concerning the relationship between energy production and water availability. Concurrently, growing dependence on foreign fuel sources is increasing interest in domestic coal resources. However, the relationship between coal-fired power production and water supply and the possible effects coal-fired power production has on available resources has not been thoroughly researched.

Issues of water quantity and quality are inherently regional in nature. This project examines the energy-water interface in the southeastern region of the United States, discussing the barriers and incentives necessary to deploy clean coal technologies in Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia.

Primary Project Goal

The primary goal of this project is to provide state decision-makers with information to assist in removing barriers and implementing incentives to deploy clean coal technologies. This will be accomplished through two specific tasks, one focused on domestic energy security and diversity and the other on the energy-water interface.



Depending on the specifics of each state's TMDL regulations, power plants near listed waters could be required to further treat water before discharging it.



PARTNER

Southern States Energy Board

PERIOD OF PERFORMANCE

06/30/2003 to 09/30/2007

COST

Total Project Value
\$325,000

DOE/Non-DOE Share
\$325,000 / \$0

ADDRESS

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Objectives

Several resources are being developed to assist state decision-makers:

- A briefing packet on coal and advanced power systems
- Summary assessment of the energy-water interface for the southeastern region
- A report that assesses the likely availability of freshwater for electricity generation in the Southern States Energy Board (SSEB) region's states
- An Issues Report to address planning for energy-related disruptions to drinking water supplies
- Summary report on Total Maximum Daily Load (TMDL) and its implications for coal resource development (focusing on domestic energy security) in the southeastern region
- Briefing sessions delivered to SSEB member states' governors, legislators, and state regulators

Accomplishments

A report titled "Regional Efforts to Deploy Clean Coal Technologies: Impacts and Implications for Water Supply and Quality" has been completed. This report explores the relationship between coal-fired power production and water availability; tracks the development of sixteen southern states' TMDL Programs; examines non-regulatory alternatives to mitigating water pollution allocations – including water pollution trading programs; and identifies concerns that should be addressed in future research and policy formulation. Additionally, multiple briefing sessions on the issues have been held with officials of SSEB's member states.

Benefits

Research into the energy-water interface will provide additional guidance on managing these two critical resources. State officials of SSEB's member states will benefit by being able to make educated decisions regarding the concurrence of power-plant siting and water issues, such as TMDL and impaired waters within their jurisdiction. Additionally, states will be able to plan for and mitigate disruptions to drinking water as a result of power disruptions. Efforts will work towards enhancing deployment of clean coal technologies.

Planned Activities

Additional research will encompass the energy-water interface, including:

- Mapping potential power plant sites in member states with regard to water availability;
- The use of impaired waters for power plant processes, in lieu of potable and fresh water sources;
- A comprehensive overview of current practices regarding responses to adverse impacts on water quality and water availability caused by a disruption of energy supply.