

People have searched the
universe for the answer to cleaner,
more affordable energy.



Here in Mississippi, it was right under our feet.

Kemper County
I | G | C | C
project



AutoCAD aerial drawing of the IGCC Plant in Kemper County, MS.

A universal issue. A Mississippi answer.

It's a universal issue: Mississippi Power, the state of Mississippi, our country and the world must provide cleaner, affordable and reliable energy. In Mississippi, the answer to this global issue is right under our feet. It's called Mississippi lignite, and our state has a four-billion-ton reserve.

With this coal reserve, Mississippi Power is taking a step toward our state's energy independence by building a state-of-the-art power plant fueled by Mississippi lignite.

Kemper County IGCC Project will capture 65 percent of CO₂— that's equal to similarly sized natural gas combined cycle plants. Mississippi's energy future will be cleaner, affordable and will come from a reliable fuel source in our state. Kemper County IGCC Project is a Mississippi answer to a global energy issue.

What is IGCC and how does it work?

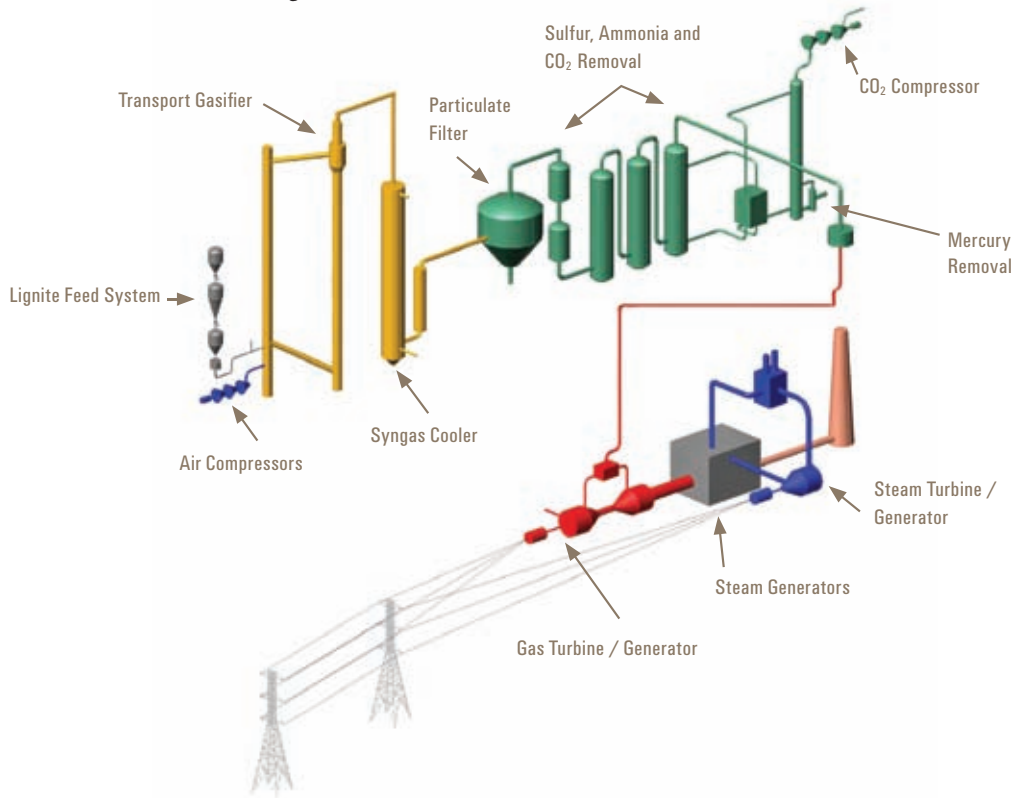
Kemper County IGCC Project is an electric power plant using an Integrated Gasification Combined Cycle (IGCC) design called TRIG™.

TRIG™ is an integrated gasification combined cycle technology, which is sometimes referred to as coal gasification. TRIG™ was developed over the last 15 years at the Power Systems Development Facility in Wilsonville, Alabama—a research facility for the Department of Energy and Southern Company, Mississippi Power's parent company.

As coal is fed into the TRIG™ gasifier, it is heated at a high temperature and under high pressure. The combination of heat and pressure is what turns the coal into a gas.

A unique feature of the TRIG™ high-efficiency design sends coal that is not converted to gas in the initial process back for a second round of gasification. This allows a high rate of coal-to-gas conversion to take place at a lower temperature—and thus lower cost—than what's possible with other available gasification technologies.

TRIG™ produces a gas that can be used to produce electricity while making it easier to remove emissions, such as carbon dioxide, that otherwise would end up in the atmosphere.



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Get the facts about Kemper County IGCC Project, visit mississippipower.com/kemper. Search for career opportunities by going to southerncompany.com/careerinfo.

Project Facts

FACILITY

- ▶ **Plant** – A 582-megawatt power plant, owned and operated by Mississippi Power.
- ▶ **Schedule** – Construction began in 2010. Operation of the facility is expected in late 2014.
- ▶ **IGCC** – Also known as gasification, IGCC (Integrated Gasification Combined Cycle) is a process that converts coal into a synthesis gas that can generate electricity with fewer emissions than existing pulverized coal power plants.

ENVIRONMENTAL BENEFITS OF IGCC

- ▶ **Low carbon** – The plant will include carbon capture and sequestration, a technology that will reduce carbon dioxide emissions by 65 percent.
- ▶ **Lower emissions** – The plant will have fewer sulfur dioxide, particulate and mercury emissions than traditional pulverized coal technology because emission controls are built into the IGCC process.

STATE IMPACT

- ▶ **New jobs** – Approximately 300 permanent jobs, plus 2,000 jobs during peak construction, will be created.
- ▶ **Energy independence** – This project offers our state a leadership role in creating energy independence for Mississippi.
- ▶ **Investment** – Mississippi Power's investment will be approximately \$2.4 billion, which will greatly expand the local tax revenue.

RATE IMPACT

- ▶ **Future rates** – Rates are expected to increase by approximately 30% over the next 10 years.
- ▶ **Reliable service at the lowest cost** – Mississippi Power analysis shows Kemper County IGCC Project is the best long-term option to provide reliable electric service at the lowest cost possible.
- ▶ **Saving interest** – Mississippi Power is utilizing the Construction Work in Progress (CWIP) mechanism, which will save Mississippi Power customers \$183 million in interest.
- ▶ **Funding** – Mississippi Power has received \$412 million of investment tax credits from the IRS and a \$270 million grant from the Department of Energy to develop Kemper County IGCC Project.



- ▶ **Investment in the future** – Yes, it is an investment, but with Kemper County IGCC Project, customers will benefit from a stable, low cost fuel source for generations.

WHY?

- ▶ **Fuel diversity** – The plant will use Mississippi lignite, an abundant natural resource that is largely unused. Lignite is affordable and not subject to highly volatile pricing swings associated with uncontrollable fuel markets.
- ▶ **Future planning** – Mississippi is growing and Mississippi Power wants to be ready for the future needs of its customers. Mississippi Power's integrated resource plan indicates a greater need of electricity by the summer of 2014.
- ▶ **Best choice** – Kemper County IGCC Project is the best choice to help us continue to provide you with reliable, affordable and environmentally-friendly electricity.

