

Demonstration of a Coal-Based Transport Gasifier

Performer: Southern Company Services
Website: Mississippi Power Company
Award Number: FC26-06NT42391
Project Duration: 01/30/2006 – 05/01/2018
Total Award Value: ~ \$3,000,000,000*
DOE Share: \$270,000,000
Performer Share: \$2,800,000,000
Technology Area: Clean Coal Power Initiative (CCPI)
Key Technology: Transport Integrated Gasifier
Location: Kemper County, Mississippi

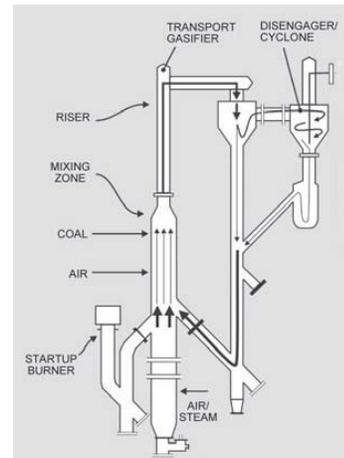


Figure 1: TRIG™ Gasifier

Project Description

Southern Company Services (SCS), Inc., in a team effort with Mississippi Power Company (MPC), and Kellogg Brown and Root, LLC (KBR), will design, construct, and operate a coal-based Transport Integrated Gasification (TRIG) Combined Cycle (IGCC) power plant with 67% carbon dioxide capture at a site in Kemper County, MS. The transport gasifier is based on Kellogg Brown and Root's catalytic cracking technology and is cost-effective when handling low rank coals and when using coals with high moisture or high ash content. These coals make up half the proven reserves in both the U. S. and the world. The captured carbon dioxide would be transported via pipeline for beneficial use in existing enhanced oil recovery (EOR) operations in Mississippi.

Project Benefits

The project addresses advances in coal gasification systems and technologies that permit improved management of carbon emissions and reductions of mercury and other power plant emissions as required by the CCPI-2 solicitation. Specifically the project will demonstrate a commercial scale air-blown Transport Gasifier; integrated with a combined cycle island; configured for pre-combustion CO₂ capture. Concurrently demonstrated will be an advanced syngas cleanup system that will address sulfur removal and recovery; high temperature, high-pressure particulate filtration; the recovery of ammonia and the removal of mercury.

*Note: The cost above includes scope in which DOE is not participating in cost sharing under the CCPI.

Contact Information

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