



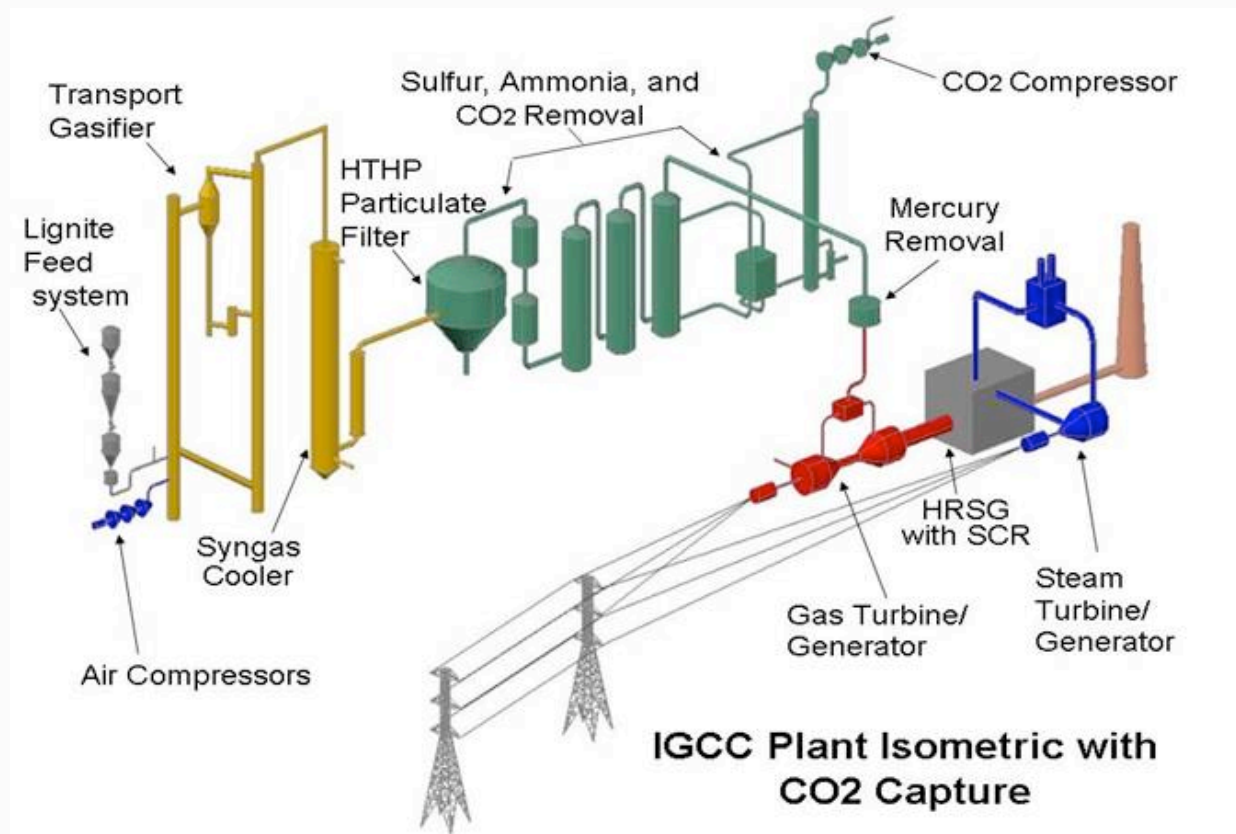
21st Century Coal – Kemper Project IGCC

Southern Legislative Conference 2011
Jim Ellington – Mississippi House of Representatives

What is “IGCC?”

- IGCC stands for “Integrated Gasification Combined Cycle.”
- It’s a combined-cycle power plant and a coal-gasification plant designed specifically to work with each other.
- There are currently only two of these plants in the U.S.

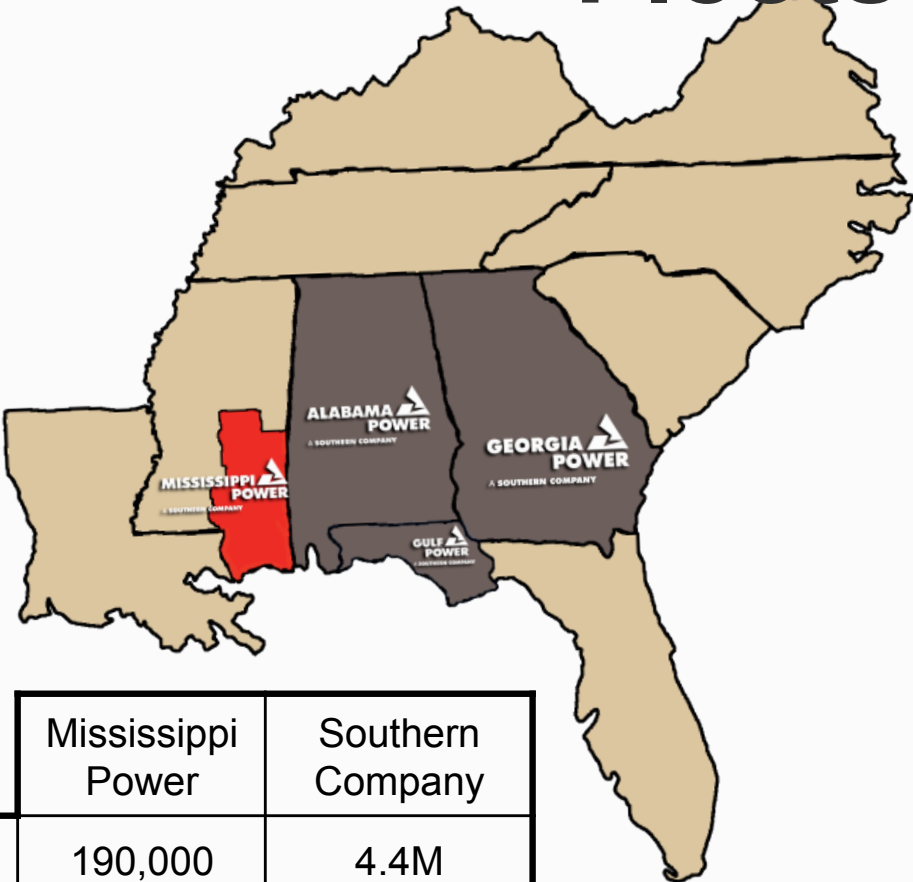
TRIG™ Technology



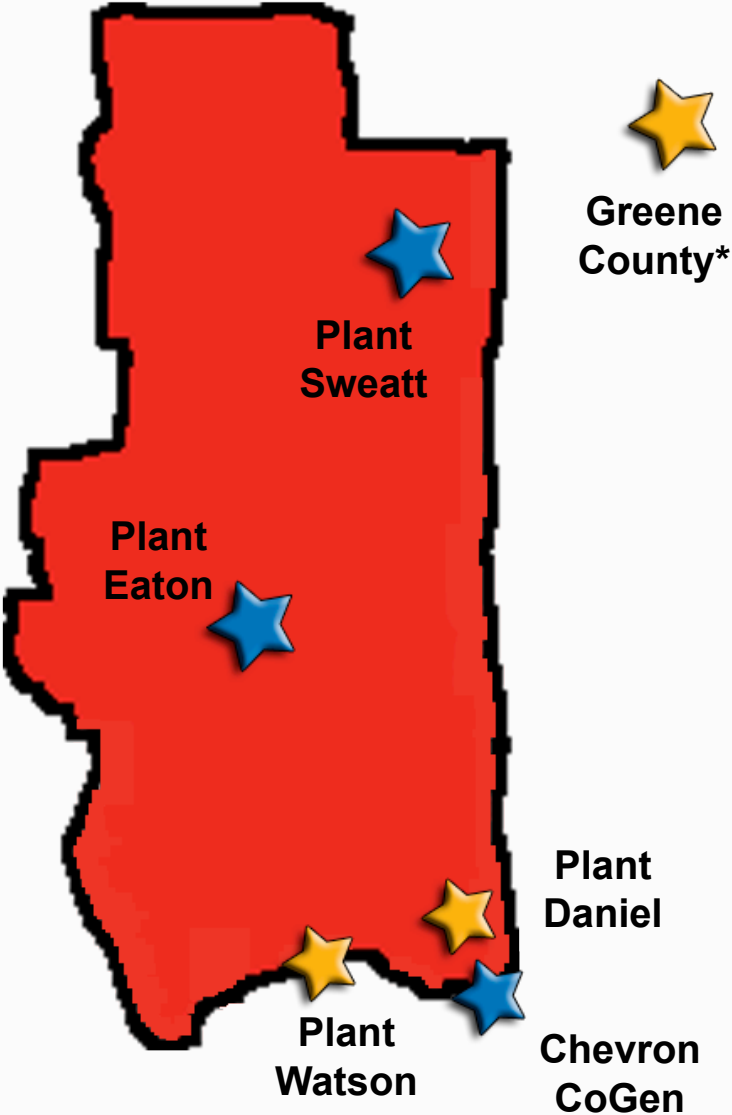
Why “IGCC?”

- Use coal as fuel for highly efficient combined-cycle plant
- Clean coal technology - less NO_x, SO₂ and Mercury
- Less CO₂ than conventional coal-fired power plants
- Greatest potential for future CO₂ capture

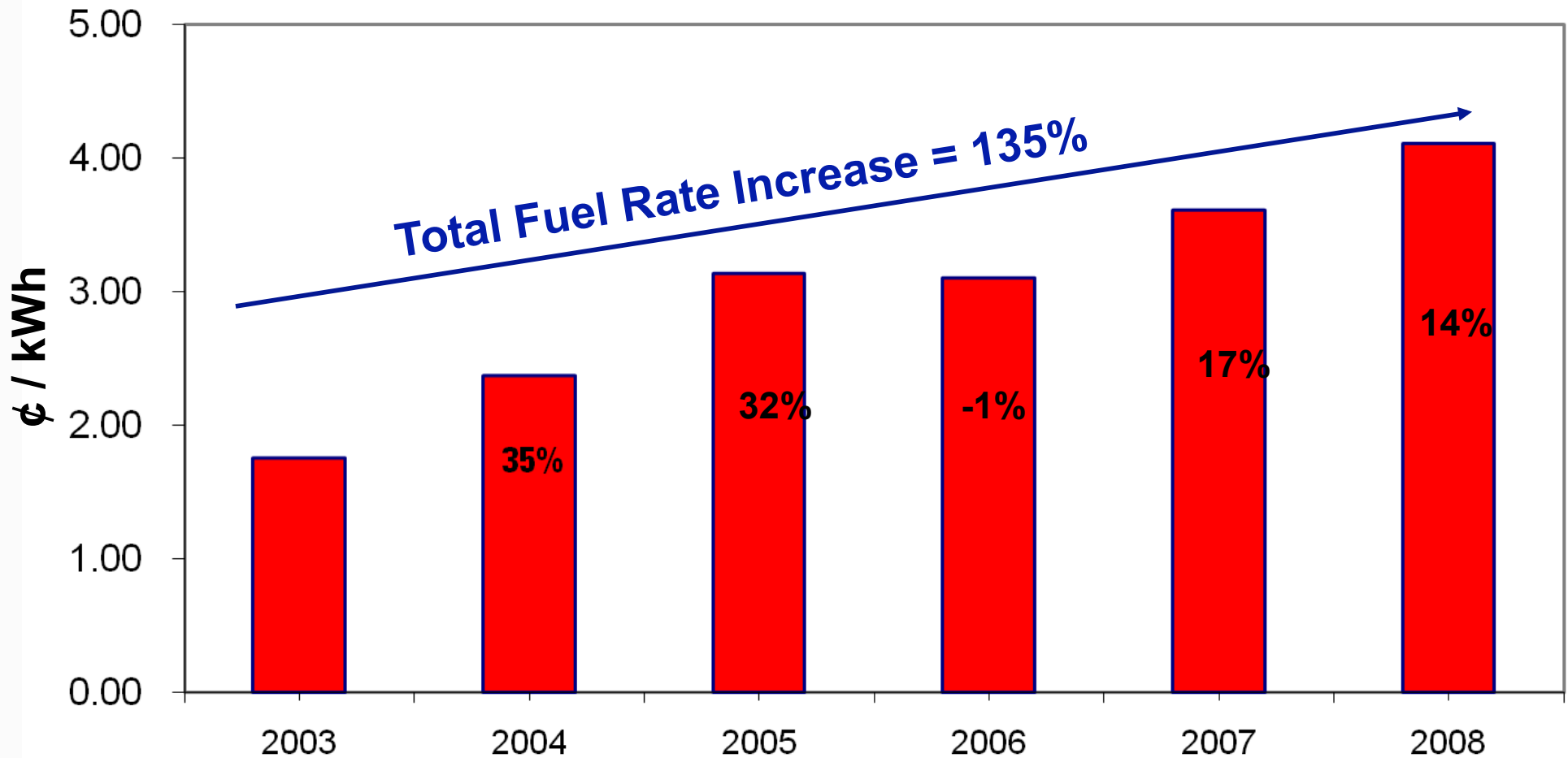
Mississippi Power Generating Fleets



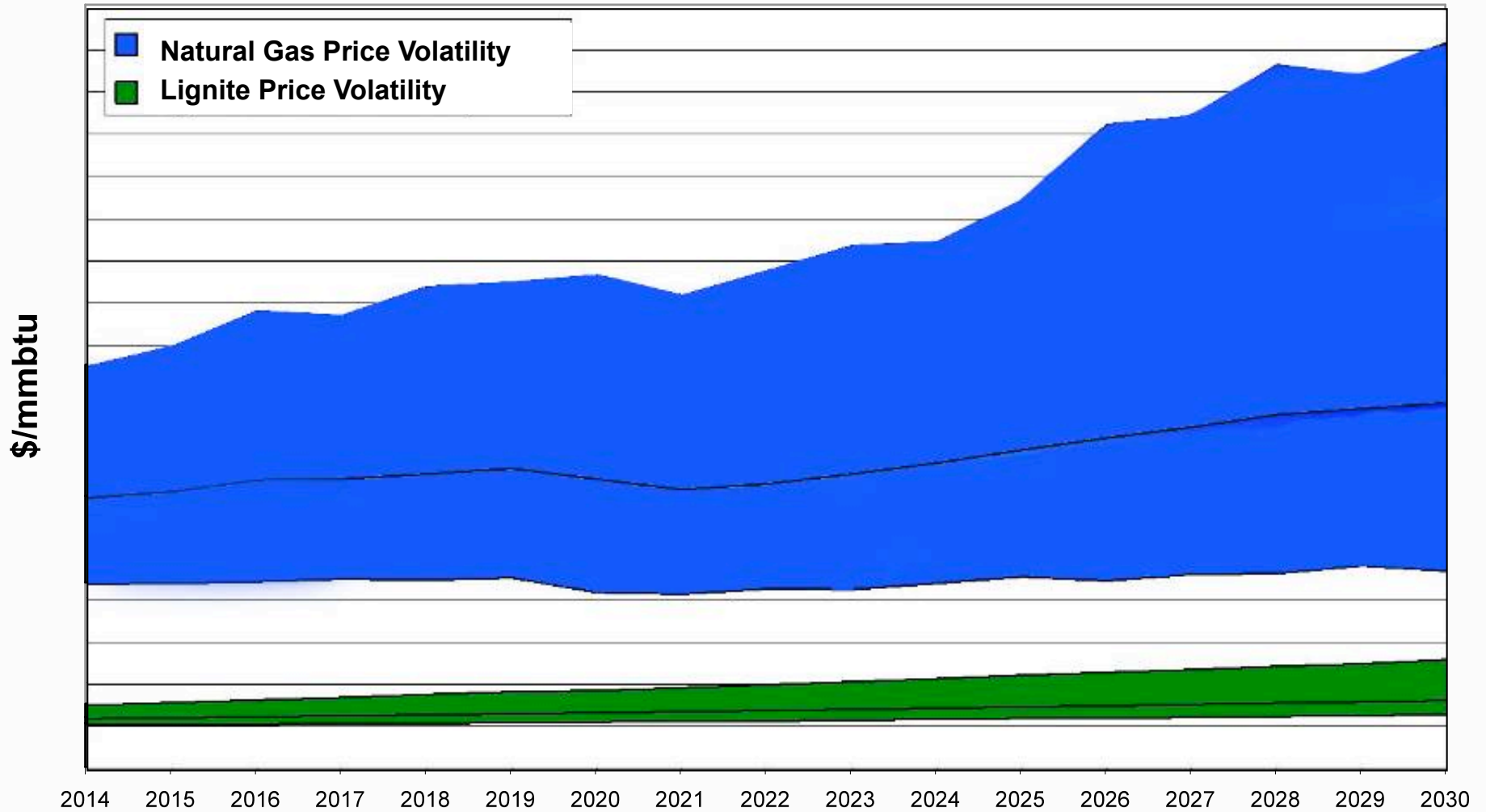
	Mississippi Power	Southern Company
Customers	190,000	4.4M
Generating Capacity	3,200MW	42,000MW
Employees	1,200	26,000



MPC Retail Fuel Rate History



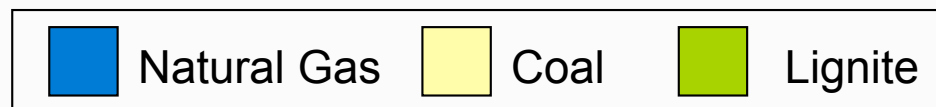
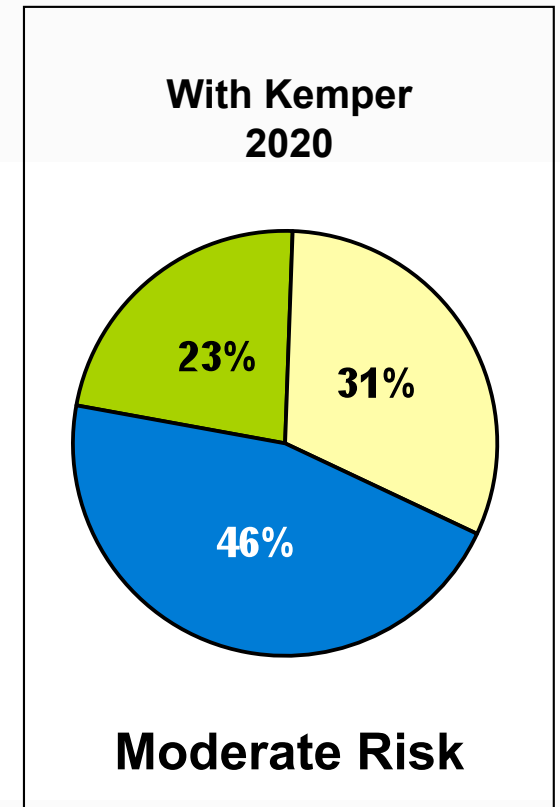
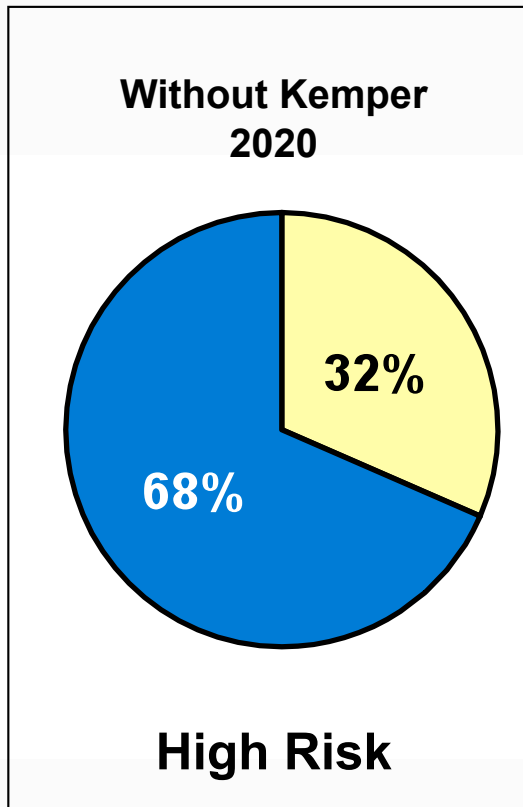
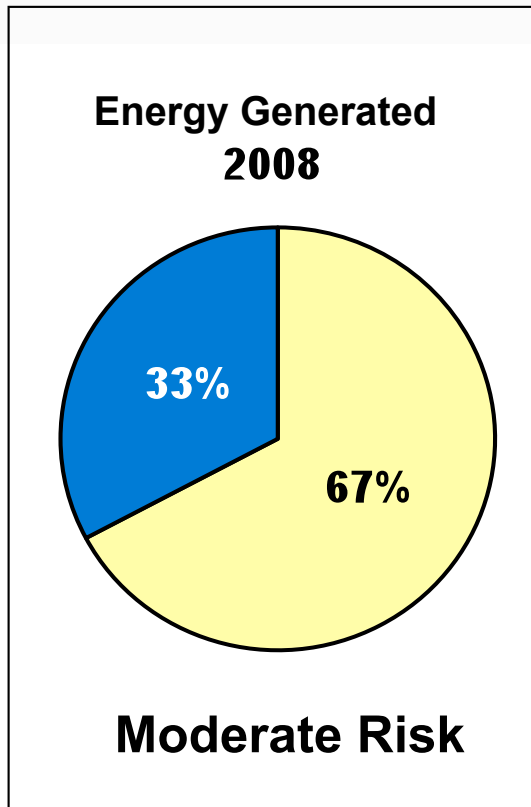
Natural Gas vs. Lignite Volatility



Notes:

1. Volatility represents 5% - 95% confidence interval
2. Fixed Gas Transportation and variable transportation are included in gas price

Diversity of Fuel is Critical



The Right Mix for Mississippi's Energy Future.



natural gas

+



coal

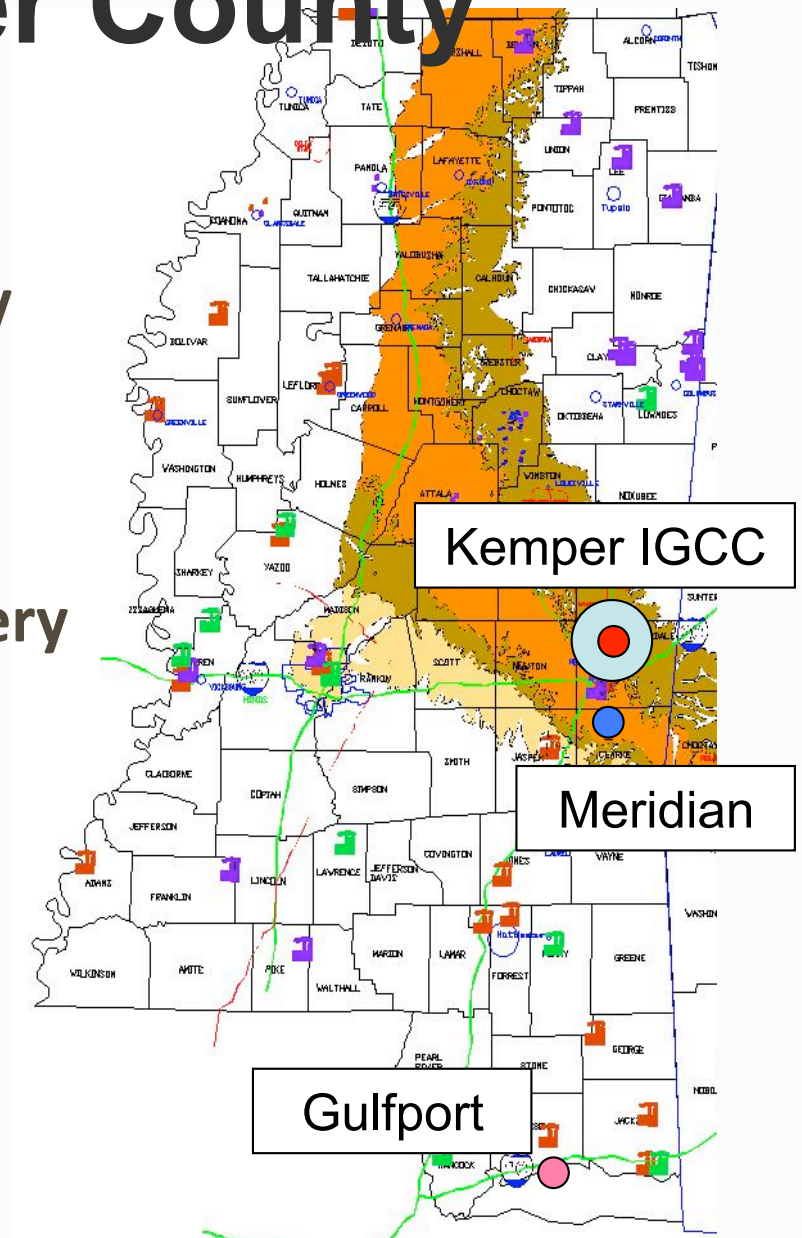
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mississippi lignite

IGCC Plant at Kemper County

- Most advanced clean coal technology
- May 2014 In-Service Date
- 582 MW Capability
- CO2 Capture for Enhanced Oil Recovery
 - 65%, equivalent to NGCC
- Fuel
 - Mississippi Lignite
- \$2.4 billion project estimate



Existing site

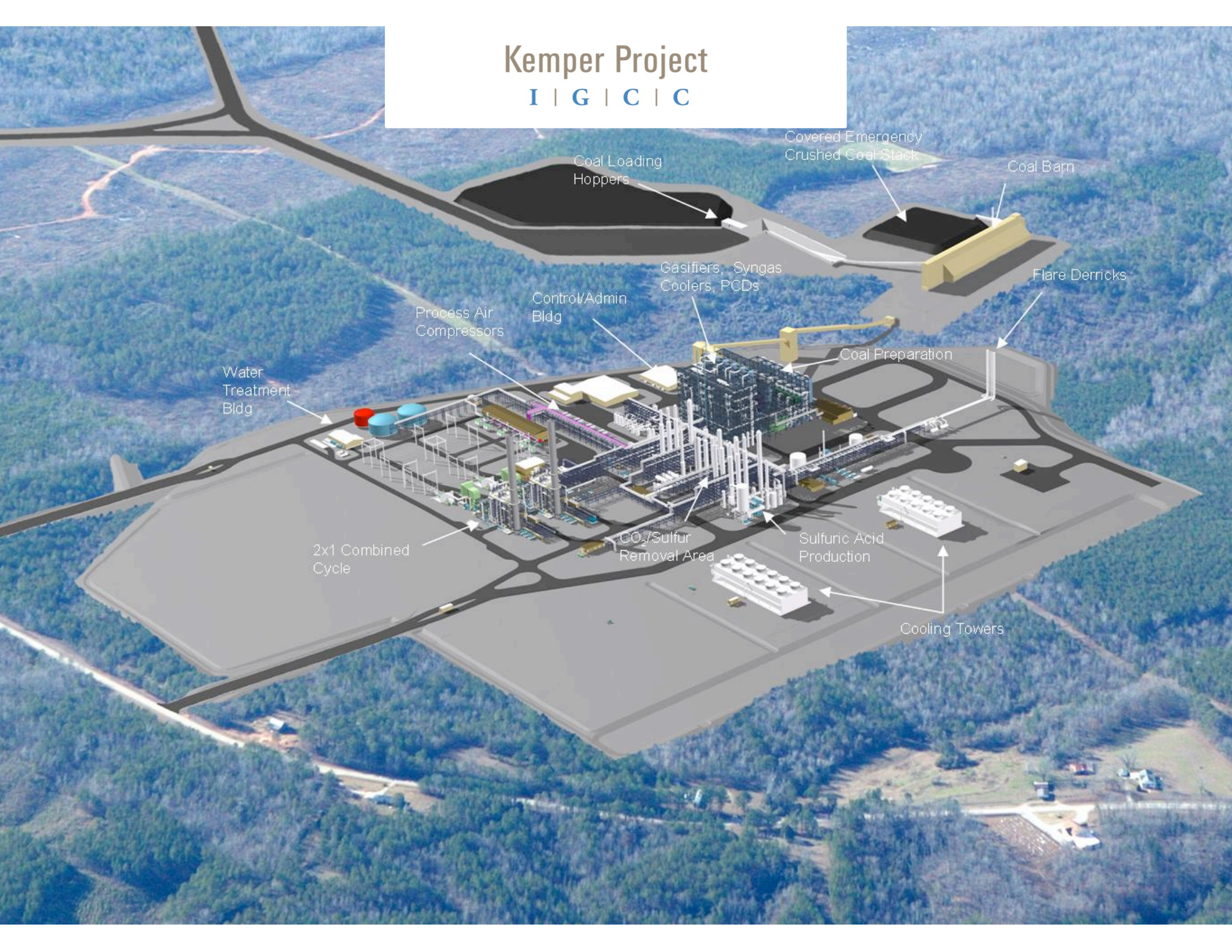


Digital rendering of plant site



Kemper Project

I | G | C | C



- Coal Loading Hoppers
- Covered Emergency Crushed Coal Stack
- Coal Barn
- Flare Derricks
- Coal Preparation
- Gasifiers, Syngas Coolers, PCDs
- Control/Admin Bldg
- Process Air Compressors
- Water Treatment Bldg
- 2x1 Combined Cycle
- CO₂/Sulfur Removal Area
- Sulfuric Acid Production
- Cooling Towers

Enabling Legislation

- Mississippi SB 2793 – Base Load Generation
 - Signed by Governor Barbour May 9, 2008

- Mississippi HB 1693 – Species Exemption
 - Signed by Governor Barbour April 6, 2009

Mississippi Regulatory Process

- Original petition filing date – January 16, 2009
- Needs evaluation
 - Hearings conducted October 4-9, 2009
 - Order issued November 9, 2009
- Resource determination
 - Hearings conducted February 1-5, 2010
 - Certificate issued June 3, 2010

Jobs – Construction, Plant & Mine

Type/Number	Peak	Average/ Final
Plant Construction	1,000	500
Mine Construction	160	240
Plant Operation	80	80
Mine Operation	180	180

Workforce/Jobs

- MS Dept. of Employment Security (MDES) partnered with Mississippi Power to open a WIN Job Center in DeKalb, MS.
- MDES has database to identify local talent by skill and/or craft; available in generic form for all potential contractors.



MISSISSIPPI POWER
A SOUTHERN COMPANY

Kemper County
IGCC plant

APPLY NOW

WIN Job Center is now open to receive applications for the construction phase of the Kemper County IGCC Plant.

For more information go to winmississippi.org or mississippipower.com/kemper.

WIN Job Center
Increasing Employment in Mississippi

Dekalb Farmer's Market/
MSU Extension Service Building
Hours: Monday-Friday | 8am-4pm

Kemper County Messenger 2010

Kemper Community Plan Objectives

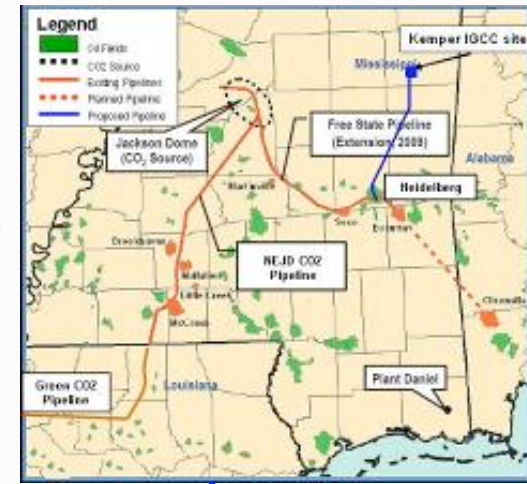
- Hire Local
 - Contractors
 - Employees
- Coordinate Education Initiatives
 - Pre-school
 - Workforce and secondary
- Economic & Community Development
 - Comprehensive Strategic Plan
 - Leadership Development
- Kemper County Foundation

Mississippi's Economic Engine

Coal Gasification with CO₂ capture



Enhanced Oil Recovery



CO₂

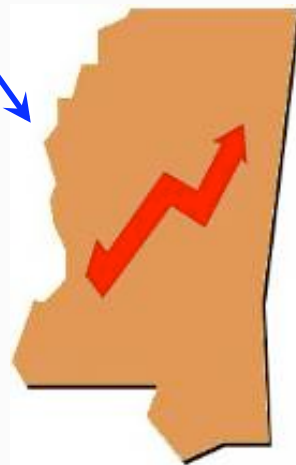
CO₂ Sales

Low Cost Energy



Mine-mouth Lignite

Economic Growth

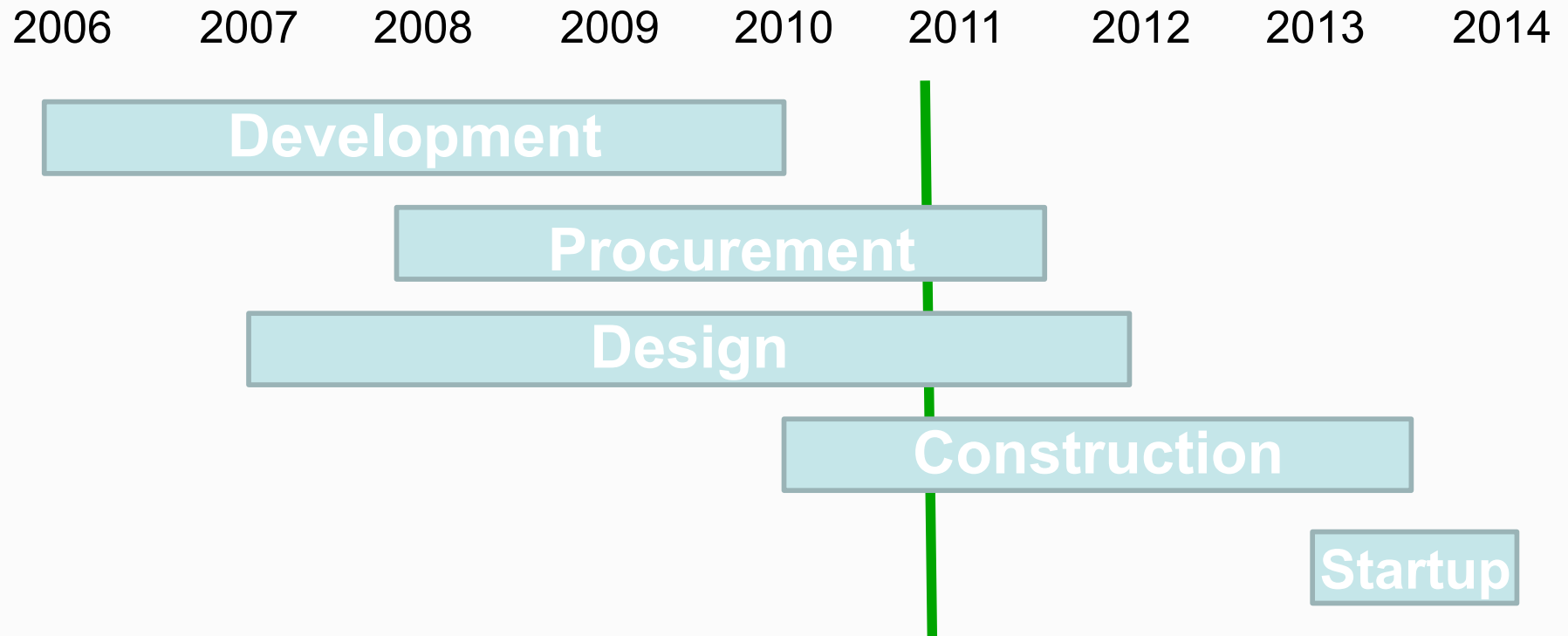


Oil Production



Kemper IGCC Summary Schedule

On Time and On Budget



Questions?



Southern Legislative Conference