Workshop on Future Large CO2 Compression Systems

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Gasification Project Outlook

Phil Amick
Commercialization Director, Gasification
Phil.Amick@ConocoPhillips.com
Peabody Energy and ConocoPhillips are developing a state-of-the-art energy center that will transform Kentucky coal into clean natural gas.
SNG Process Scrubs Carbon from Coal

- Honest “storage ready” CO$_2$ and Substitute Natural Gas
- Scrubs carbon from the coal and petcoke as CO$_2$
- More than 90% of CO2 generated in the process is captured
- Sequestration places coal on a similar CO$_2$ footing as natural gas

**Carbon Balance**

Coal or Petcoke Feed ➔ Gasifier + CO$_2$ separator ➔ Carbon in SNG ➔ CO$_2$ for Capture

Greater than 90% CO$_2$ Capture
Carbon Capture & Compression Costs


Sources: MIT, Eastman Chemical
Electricity produced from the projects gas results in lower CO₂ emissions compared to other fossil fuels.

Source: Battelle Memorial Institute study, 2008
North American Gasification Projects
2005-2008

Projects
- IGCC
- Ammonia
- CTL
- Chemicals
- Hydrogen
- SNG
- Existing Gasification Facilities

Source: Gasification Technology Council
North American Gasification Projects
Current Development Activity?
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Current Development Activity?

Projects
- IGCC
- Ammonia
- CTL
- Chemicals
- Hydrogen
- SNG

General areas of existing and proposed CO2 pipelines
Gasification
The Enabling Technology