

# Gasification in Kentucky

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# Projects/City (County)

- Global Pioneer Energy, Trapp (Clark)
- RST, Inez (Martin)
- CSA, Hickman (Fulton)
- Cash Creek, Henderson (Henderson)
- FutureGen (?), Henderson (Henderson)

# Permitting Requirements

- Global Pioneer Energy
  - NSR/PSD (401 KAR 51:017)
  - 40 CFR 60 Subpart Eb, Large Municipal Waste Combustors (401 KAR 59:021)
  - 40 CFR 60 Subpart GG, Stationary Gas Turbines (401 KAR 60:005)
  - 401 KAR 63:015, Flares
  - 401 KAR 59:105, New Process Gas Streams

# Permitting (Cont'd)

- RST
  - 401 KAR 59:021, Municipal Solid Waste Incinerators
  - Exempt from 40 CFR 60 Subpart E because of size

# Permitting (Cont'd)

- Cash Creek (or any large IGCC)
  - 40 CFR 60 Subpart Da, Electric Utility Steam Generating Units
  - 40 CFR 72-76, Acid Rain/CEMS
  - 40 CFR 96, NO<sub>x</sub> Budget for SIP states (97 for delegated states)

# SCR on IGCC?

- Why did Cash Creek change their application to include one?
- Could an IGCC plant be permitted in Kentucky without one?

# BACT (from 401 KAR 51:001)

“(25) "Best available control technology" or "BACT" means an emissions limitation, including a visible emission standard, based on the maximum degree of reduction for each regulated NSR pollutant that will be emitted from a proposed major stationary source or major modification that:

(a) Is determined by the cabinet on a case-by-case basis after taking into account energy, environmental, and economic impacts and other costs, to be achievable by the source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of that pollutant;

(b) Does not result in emissions of a pollutant that would exceed the emissions allowed by an applicable standard of 40 C.F.R. Parts 60 and 61; and.....”

# Non-EGU Permitting Requirements

- NSPS(s)
- SOCM (Synthetic Organic Chemicals)
- HON and/or MON
- New Mercury Regulations (NSPS, CAMR)
- NSR/PSD
- State regulations on particulate emissions  
(based on process weight, toxics, etc.)

# Must IGCC be considered in a BACT analysis for a PC boiler?

IGCC would result in a redefinition of the basic design of the project and is not required under a BACT analysis. While the Division has asked for a review of IGCC technology in recent permits, it is the Division's understanding of the BACT review process that a fundamental redefinition of the project to an IGCC process is not required.

In addition, Stephen D. Page, Director, Office of Air Quality Planning and Standards, recently addressed this issue in his letter of December 13, 2005. Director Page determined that U.S. EPA "would not require an applicant to consider IGCC in a BACT analysis for a SCPC unit." While the Division is aware that this determination of U.S. EPA is being challenged, we find that letter is consistent with the Division's understanding of the Act and regulations.