FutureGen 2.0 Project at Meredosia

Public Scoping Meetings:  Taylorville, Christian County, IL
                         Tuscola, Douglas County, IL
                         Jacksonville, Morgan County, IL
Presentation Overview

- Ameren Energy Resources – Who We Are
- Meredosia Project Overview
- Description of Oxy-combustion Technology
Ameren Energy Resources - Who We Are

• Merchant Generation Fleet (Independent Power Producer)
  – 6,250 MW of total generation capacity
  – 29.6 TWh of electricity produced in 2010
  – Ameren Energy Marketing Company sells output to wholesale and retail customers
    • Municipals
    • Cooperatives
    • Small to large C&I customers
    • Retail suppliers
    • Investor-owned utilities
    • Power Marketers
Meredosia Project Team

- Ameren Energy Resources – Meredosia Plant Owner/Operator
- Babcock and Wilcox – Boiler Island and Gas Quality Control System
- Air Liquide – Air Separation Unit (ASU) and Compression and Purification Unit (CPU)
- URS – Balance of Plant and interconnect to existing plant facilities
FutureGen 2.0 – Meredosia Project Description

**Meredosia Plant**
- Location - Meredosia, IL
- Operated by Ameren Energy Resources
- 4 existing units, 3-coal fired (2 suspended), 1-oil-fired
- Illinois and Western Coal
- Truck & barge unloading facilities for coal
- Unit 4 is an excellent plant to repower with Oxy-Combustion technology:
  - Built in 1975
  - Currently idle
  - Appropriate scale: 200 MWe, 2400psig, 1000F, 1000F
  - Turbine/generator have low operating hours and can be placed in service as part of repowered plant

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**Performance Overview**

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<td>Design Gross Output (MWe)</td>
<td>202</td>
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<tr>
<td>Target CO₂ Capture (%)</td>
<td>90</td>
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FutureGen 2.0 - Oxy-Combustion Large Scale Test

Oxy-combustion burns coal with a mixture of oxygen and recycled flue gas instead of air to produce a concentrated CO2 stream suitable for storage or beneficial use.
FutureGen 2.0 - Oxy-Combustion Large Scale Test

Oxy-combustion Plant Configuration