US-China Advanced Coal Technology Consortia: Summary Highlights To US Energy Association

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(next meeting - September, 2014)
Important progress: Pre and Post CO2 capture

- Huaneng-Duke amine capture technical and economic valuation
- New solvent and sorbent development
- Dynamic modeling of solvents
- HUST oxy-fired CO2 capture project
Important progress: CO2 capture

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Important Progress: Sequestration

- Ordos Basin anthropogenic CO2 Inventory
- CO2 source-sink matching
  - SimCCS: Scalable Infrastructure Model for CCS
- Ordos & Illinois Basin reservoir characterization; Yannchang Petroleum, Wyoming University (100kt/yr)
- Yanchang EOR tight sandstone collaborations; Wuhan Rock & Soil Institute, Wyoming University; Shanxi Province
Important progress: Sequestration

- $50/\text{tCO}_2$
- $65/\text{tCO}_2$

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Important progress: Sequestration

Yanchang Oil Field, Ordos Basin
Important progress: Utilization

- Demonstrated flue-gas fed microalgae photo bioreactor and postprocessing
Important progress: Clean coal technology - generation and conversion

- Polygeneration with waste coal and low rank fuels to produce CaC2
- Novel processes for coal to chemicals
- Process efficiency improvement
Important progress: Conversion and Generation

Figure 2.1.2: Cooling water temperature contours for slag collector radial wall cooling jacket.
Plan for Upcoming Years

- Identified new key projects: Pressurized Oxy-combustion
- Identified more joint efforts: EWR
- Expand student/staff exchanges
- Seminars and Press conferences for public awareness
- Increasing industrial (private sector) members
谢谢！
MANY THANKS!

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