

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

**Jim Wood
Director**

**Advanced Coal Technology Consortia
US-China Clean Energy Research Center**



**U.S. - China Clean Energy Research Center
中美清洁能源研究中心**

Joint Research Meeting Jackson, Wyoming October 2-4, 2013 (next meeting - September, 2014)



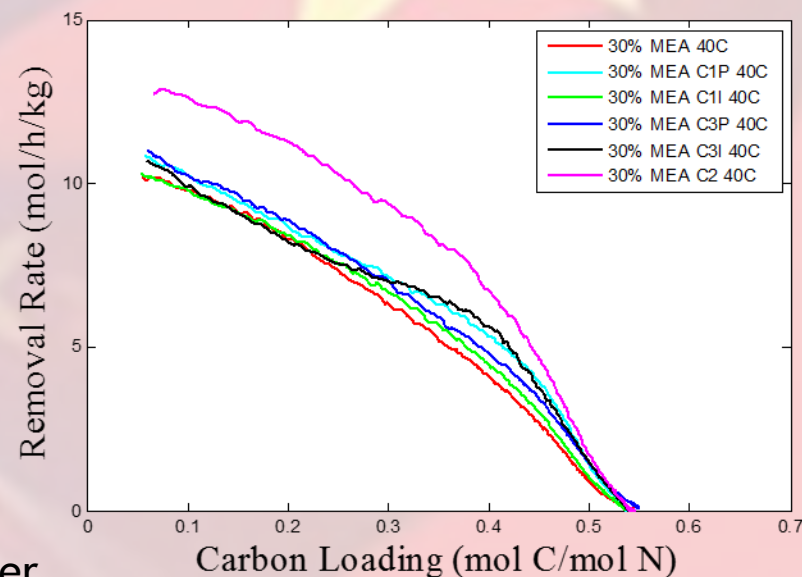
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Important progress: Pre and Post CO2 capture

- ▣ 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



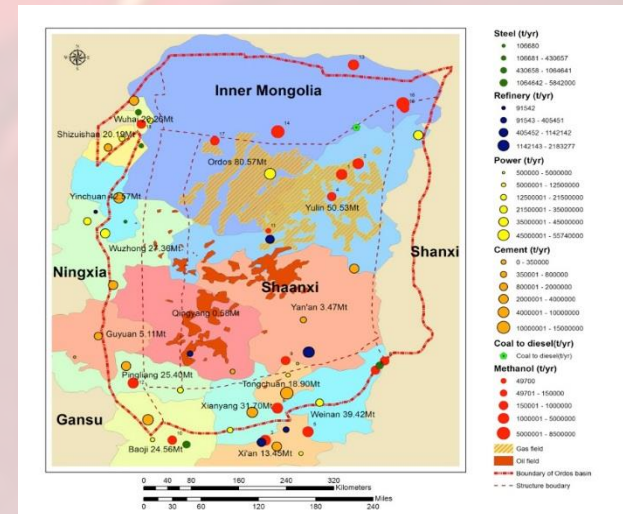
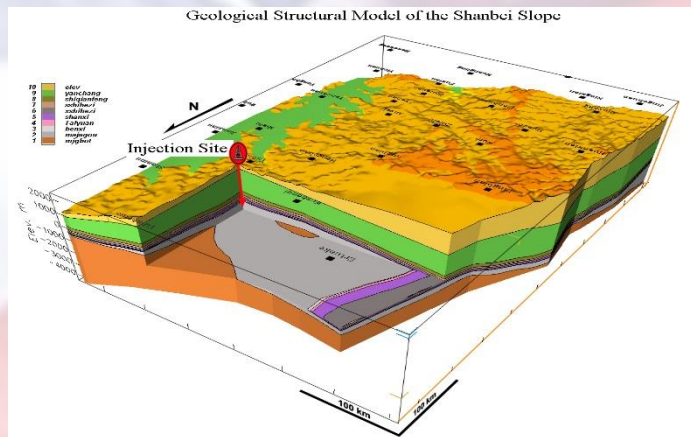
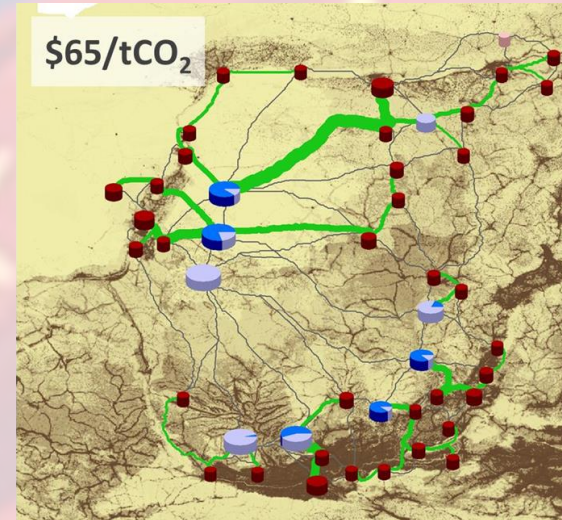
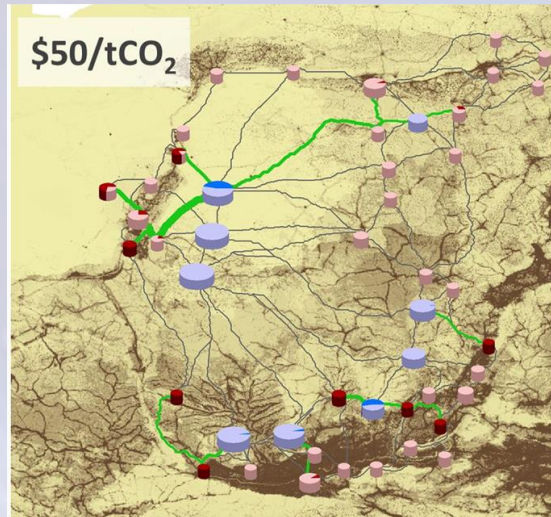
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Important Progress: Sequestration

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



Important progress: Sequestration



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Important progress: Sequestration

Yanchang Oil Field, Ordos Basin



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Important progress: Utilization

- ▣ Demonstrated flue-gas fed microalgae photo bioreactor and postprocessing



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Important progress: Clean coal technology - generation and conversion

- ▣ Polygeneration with waste coal and low rank fuels to produce CaC_2
- ▣ Novel processes for coal to chemicals
- ▣ Process efficiency improvement



Important progress: Conversion and Generation

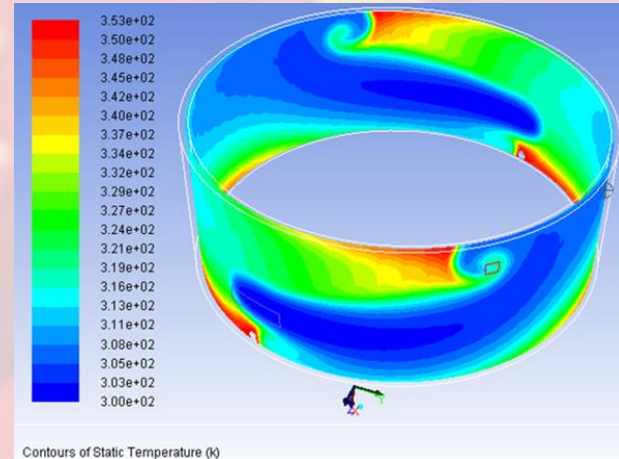


Figure 2.1.2: Cooling water temperature contours for slag collector radial wall cooling jacket.



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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!

Jim Wood

jfwood@mail.wvu.edu

304-293-4236



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