US-China CERC
Advanced Coal Technology Consortium
Highlights

2017 CO₂ & ROZ Conference

U.S. - China Clean Energy Research Center
中美清洁能源研究中心
Initiating Phase 2
2016-2020

Beijing July 2016
Joint Research Meeting
Jackson, Wyoming
October 2-4, 2016

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Important progress:
Pre and Post CO$_2$ capture

- Huaneng-Duke amine capture technical and economic valuation
- New solvent and sorbent development
- Dynamic modeling of solvents
- HUST oxy-fired CO$_2$ capture project
Important progress: CO2 capture
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

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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 Remaining Years

- Identified new key projects: Pressurized Oxy-combustion; UWy dosed solvent
- Identified more joint efforts: EWR
- Expand student/staff exchanges
- Seminars and Press conferences for public awareness; Weekly Webinar
- Increasing industrial (private sector) members: added GTI and EPRI in 2017
Huaneng (on behalf of China ACTC) and WVU (on behalf of U.S. ACTC) sign an MOU to collaborate on a EWR project.
THANK YOU

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