## Summary of Information Obtained from the January Meeting of the Advanced Coal Technology Work Group

February 8, 2007

## Key Opportunities Identified for the Work Group Process

- Identify suite of technologies to enable the use of coal in an environmentally responsible manner.
- Identify the barriers (including key risks) that limit commercial use of advanced coal technology
- Recognition that management of carbon emissions from coal is a critical component.
- Capitalize on the opportunities that exist. Keep all options on the table.
- Learn from each other to understand more about what we know now and what the future looks like.
- Identify recommendations to accelerate the use of advanced coal technology.

## Concept Discussed for the Six Month Interim (June 2007) and One Year (January 2008) Reports

Development of a set of recommendations and actions to be undertaken by different stakeholders (e.g., EPA, other Federal agencies, States, utilities, public utility commissions, equipment providers and other companies, environmental and health organizations) so that the whole of what is accomplished is greater than the sum of the parts and will accelerate the use of advanced coal technology more quickly.

## Six Focus Areas

- Advanced Coal Technology (ACT)
- Carbon Capture and Storage (CCS)
- Statutory and Regulatory Considerations
- Barriers and Incentives
- Education and Outreach
- Work Group Process

## Advanced Coal Technology (ACT)

- What is considered ACT?
  - ACT to manage CO2
  - ACT for criteria pollutants
- What practical experience is available for use of ACT?
- What are the costs and timeframes for commercial use of ACT?
- What does the concept "carbon capture ready" mean?
- How can the actions of public utility commissions and other Federal and state agencies affect use of ACT?
- What are the life cycle and other environmental impacts of ACT?
- What about polygeneration and coal to liquids projects?

## Carbon Capture and Storage (CCS)

- What opportunities exist for CCS?
- What are the costs and timeframe for CCS technology use and demonstration?
- What practical experience exists for CCS?
- Who is responsible for addressing the public's concerns?
- Are there best practices or international protocols that exist to address regulatory framework, liability and property right issues?
- What options exist to address CO2 from coal-fired electricity generation, other than CCS?
- What is menu of options beyond geologic storage to address mitigation and reduction of CO2 (e.g., ocean sequestration)?

## Statutory and Regulatory Considerations

- What level of emissions for criteria pollutants and CO2 is considered advanced?
- Should we assume that authority exists to address CO2 under the Clean Air Act or simply through other means outside the Act or both?
- What regulations (CAA, CWA , SDWA, others) affect CCS?
- How do current regulations, such as permitting requirements and new source performance standards, advance or impede consideration of ACT and CCS?
- What other actions under or outside of the Clean Air Act will accelerate the use of ACT and CCS?

## Incentives

- Additional information about incentives (what is available, what is needed and why, what are the gaps).
- Process opportunities (prioritize use and timing of existing incentives, coordinate Federal, State and Tribal efforts re: incentives, streamline permitting and regulatory processes).
- Explore further opportunities for PUCs to use rate riders, carbon adders, cost recovery to accelerate use of ACT and CCS.
- Should new technologies be allowed more flexibility in complying with environmental regulations (e.g., in case technology does not work as anticipated).
- Is technology forcing regulations a faster way to accelerate ACT and CCS?
- How do opportunities for co-production, polygeneration, EOR accelerate the use of ACT and CCS?
- What is the role of CO2 credits and opportunities for trading to promote use of ACT and CCS?

## Education and Outreach

- What actions can be taken to educate consumers and create awareness about the importance of ACT and CCS (especially in utility rate cases)?
- Does technical expertise and capacity exist at State and Federal levels to address issues related to ACT and CCS?
- Who is responsible for education and outreach to public on CCS?

## Work Group Process

- How do we progress as a Work Group towards common understanding?
- How do we come up with an objective, non-biased, common set of data to enable the Work Group to discuss what we can and cannot agree to?
- How do we prioritize all of this?
- Should we look at the topics identified and choose not to address some of it?
- How do the pieces we identify get integrated and coordinated to advance goals?
- List groupings and topics, begin to develop a work plan, based on input.
- Possible use of sub-work groups to address certain topics.
- Identify barriers and opportunities sooner, rather than later.
- What framework do we want to use for the six month and one year reports?

## Additional Questions

- Is it possible to get a briefing on the MIT study?
- What in EPA's Environmental Footprints Report needs to be updated?
- Is it possible to get additional information about State's efforts for ACT and CCS (e.g., a chart with carbon credit landscape identified, along with liability issues, approaches to regulating and managing CO2 and providing incentives for ACT and CCS).
- Is it possible to get information on IGCC permits and what IGCC and PC projects are including CO2 management as part of the project?
- Is it possible to get information on NEPA process?
- Do we need PUC representation on the Work Group?
- Would it be useful to engage other Federal agencies in the Work Group process—which ones?

## Future Meetings

- Informational component to each meeting designed to create common level of understanding on the barriers and opportunities associated with ACT and CCS.
- Each meeting will focus on aspect of the Work Group Charge to enable us to develop framework and meet deadlines for the six month interim (June 2007) and final reports.
- Opportunity at the end of this meeting to identify agenda items for upcoming meetings.
- Questions, comments other suggested approaches?