



**ACT Work Group
Recap of September 18 Meeting**

October 16, 2007

Contents

- ▶ September 18 meeting
- ▶ September 20 CAAAC meeting
- ▶ Subsequent activity

Discussion topics

- ▶ Review of Santa Fe meeting
- ▶ Deseret permit
- ▶ Stationary source authorities under Clean Air Act

Panel: Coal-to-liquids

- ▶ Paul Bollinger, Dept. of Defense/USAF
 - ▶ Energy security issue: secure, domestic sources of fuel
 - ▶ Fuel conservation measures in place, but demand is still large
 - ▶ USAF to require CCS; working with multiple groups
- ▶ Liz Martin-Herrera, NRDC
 - ▶ Concerns re: subsidies when price of oil is high
 - ▶ Higher emissions from CTL would offset gains elsewhere (e.g., CAFE)
 - ▶ Support for low-C fuels, plug-in hybrids

Stan Rhodes, Karen Obenshain: LCIA

- ▶ ASTM developing standard for power generation based on lifecycle impacts analysis
- ▶ Establish baseline, compare impacts of various generation technologies
- ▶ GHG loadings (and tipping point): early reductions more valuable
- ▶ “Nutrition label,” wind example
- ▶ Integrating wind with coal power

Subgroup work

- ▶ Initial discussions: CCS and Incentives
- ▶ Identified
 - ▶ new options
 - ▶ concerns with current options
 - ▶ Areas on which to move forward
- ▶ Process for subgroup activity through October meeting (further development of options – conference calls)

Presentations

- ▶ EPC
- ▶ Alternative approaches (DSM, etc.)
- ▶ Further information on PUC role
- ▶ EPRI: deployment of ACTs
- ▶ Various experts on CCS subtopics (property, insurance, Schlumberger)
- ▶ Incentives for labor expansion

- ▶ CAAAC meeting

Recent developments

- ▶ EPA announcement on UIC
- ▶ IOGCC information on sequestration (Sep 25, 2007)
- ▶ Carnegie Mellon paper: “Incentives for Near-Term CO₂ Geological Sequestration” (Oct. 9, 2007)
- ▶ IGCC projects
- ▶ Other developments?



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Additional slides for discussion**

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Incentives: ACT new items

Investment incentives by private parties

- ▶ An industry-funded entity that provides support to early commercial applications of ACTs

Production incentives

- ▶ Off-take agreements with government agencies and creditworthy companies

Government cushions for project failure

- ▶ Buttressing for private performance insurance (such as performance warranties)

Other (by government agencies or industry)

- ▶ Employment incentives for ACT facilities
- ▶ ACT facility workforce development assistance

Incentives: CC/CCS-specific new items (1)

Investment incentives by Fed/S/L government

- ▶ Investment tax credits
- ▶ Accelerated depreciation and expensing of capital investment
- ▶ Tax-exempt bond financing
- ▶ Actions by PUCs (rate-basing, assured returns, early cost recovery, allowance of higher returns, dispatch preference)
- ▶ Acceleration of environmental permits (e.g., under the Clean Air Act, Clean Water Act)
- ▶ Property tax and local tax exemption
- ▶ Sales tax waiver for qualifying equipment
- ▶ Grants and co-funding

Incentives: CC/CCS-specific new items (2)

Incentives for capture and/or actual sequestration

- ▶ Tax credits/payments per ton of CO₂ captured or sequestered
- ▶ Purchase of or payments per ton of CO₂ captured or sequestered
- ▶ Actions by PUCs (including rate-basing, assured returns, early cost recovery, allowance of higher returns, dispatch preference for electricity produced with CC or CCS)
- ▶ Incentives for landowners who provide pore space

Investment incentives for CCS projects by private parties and/or through a Federal charge

- ▶ One or more entities that underwrites several early commercial large-scale CO₂ sequestration projects (e.g., through payments per ton of CO₂ sequestered)

Incentives: CC/CCS-specific new items (3)

Cushions for failure

- ▶ Buttressing for private performance insurance (e.g., performance warranties, limited liability for carbon transportation and long-term storage of CO₂)

Other

- ▶ Employment incentives
- ▶ Workforce development assistance

Standstill agreement

- ▶ Agreement under which a project with partial CCS could be built and operate under certain conditions regardless of future carbon regulations