



CCS Alliance Update — January 25, 2011

1. House Energy & Commerce Chairman Implements “CutGo” Rule

- ◆ House Energy & Commerce Committee Chairman Fred Upton (R-MI) announced at his committee’s organizational meeting on January 20, 2011, that the Committee will observe a discretionary rule whereby proposed new programs must be paid for by a reduction in spending among other discretionary programs (known as the “CutGo” rule). This new rule will require any carbon capture and storage (“CCS”) legislation, specifically with respect to risk management, to contain provisions that off-set costs with reductions in other programs in order to make the legislation revenue neutral. Additionally, the Committee will no longer consider bills that authorize spending of “such sums as may be necessary.” Each bill must contain specific cost and authorization figures.

2. DOE Awards PCOR Partnership with Additional Funds for Storage Field Tests

- ◆ The U.S. Department of Energy (“DOE”) has awarded the Plains CO₂ Reduction (“PCOR”) Partnership, one of its seven Regional Carbon Sequestration Partnerships, with \$768,000 to continue a series of geologic sequestration field tests PCOR has been conducting since 2006. The tests have taken place across the U.S. and Canada, with the most recent injection of acid gas at the Zama oil field in Alberta, Canada. The new funding will support two more years of injection at Zama. Since 2006, more than 80,000 tons of acid gas, 74 percent of which was CO₂, has been injected into the Zama oil field, approximately 4,900 feet below the surface. More than 35,000 incremental barrels of oil have been recovered as a result of the injection.

3. Alstom Aims for Commercial Deployment by 2015

- ◆ Alstom SA is developing technology for the first commercial CCS system and hopes to deploy the system by 2015. The company is currently working to retrofit existing coal-fired power plants with CCS technology in order to develop the most efficient methods of capture and storage. Alstom currently has three projects located in the U.S., Canada, and Poland, and is looking toward developing projects in the Middle East, where captured CO₂ can be used to boost oil field production.

4. New CO₂ Pipeline to Revive Texas Oil Field

- ◆ A new \$1 billion CO₂ pipeline built to carry gas from southern Louisiana to one of Texas' oldest oil reservoirs will help to boost production at the 80-year-old Hastings oil field. Operators of the pipeline, which currently transports CO₂ mined in Mississippi, hope the line will ultimately carry CO₂ captured by local industrial sources such as Gulf Coast refiners, chemical plants, and other facilities. If federal regulators create incentives for the capture of industrial CO₂ emissions, the pipeline could be expanded to serve other oil fields.

5. Greencore Proposes Wyoming CO₂ Pipeline

- ◆ Greencore Pipeline Co. LLC has proposed to construct a 231-mile pipeline to carry CO₂ from eastern Wyoming to a Montana oil field for enhanced oil recovery operations. Greencore's line would transport CO₂ that is currently vented into the air from ConocoPhillips' Lost Cabin Gas plant in Fremont County, WY to the Bell Creek oil field in southeast Montana. The capture and reuse of the CO₂ would prevent the emission of approximately 1 million metric tons of CO₂ annually. The U.S. Bureau of Land Management has issued an environmental assessment that is open for public comment until February 7, 2011. The agency anticipates granting Greencore right-of-way access for the pipeline this Spring.

6. Luminant Contributes to University of Texas Carbon Storage Program

- ◆ Luminant Energy contributed \$500,000 to the University of Texas at Austin's Carbon Management Program. The program offers doctoral candidates an opportunity to conduct hands-on research of CCS technology. Since 2007, seven students have graduated from the program and seventeen are currently participating. Through their research, the team has developed a more stable method for removing CO₂ from coal-fired flue gas using aqueous piperazine, an organic compound that acts as a solvent, to absorb CO₂ from the gas.

7. Canadian Study Finds No Evidence of Leak on Family Farm

- ◆ Following allegations that CO₂ from one of the world's largest CCS projects has leaked into the soil of a Canadian family's farm, the Petroleum Technology Research Center ("PTRC") conducted a study to determine whether the CO₂ found in soil samples matched that from the Weyburn-Midale Project. The study concluded that there is no credible evidence that the CO₂ found in the soil is from Weyburn-Midale, despite the conclusion of an independent report by geologist Paul Lafleur paid for by the Kerr Family (owners of the farm) that makes clear the gas came from the project. The Kerr's



had previously complained about dead animals, algal blooms and bubbling water on their property.

- ♦ The PTRC report states that Lafleur's analysis contains technical errors and relies on inaccurate measurement of how much CO₂ existed in the soil before injections began. PTRC concluded that the spike in CO₂ levels in the Kerr's soil can be attributed to natural processes including microbial generation of CO₂ and methane. The concentration of CO₂ is similar to that in prairie soils in the region. Additionally, for CO₂ from Weyburn-Midale to have reached the Kerr's property, it would have had to move against a natural geologic "slant" that moves away from the property, defying the laws of gravity. PTRC also found no evidence of fractures or leaks within the Weyburn-Midale formation.
- ♦ The Kerr's and Mr. Lafleur have rejected the PTRC study and are requesting that the Canadian government conduct thorough testing at the site to resolve the conflict. PTRC manages the Weyburn-Midale project, which transports CO₂ from North Dakota to Canada.

8. Abu Dhabi Considering Proposal for CCS Expansion

- ♦ Abu Dhabi National Oil Co. is studying a proposal to expand the injection of CO₂ into oil fields for enhanced oil recovery operations. The company has completed a successful pilot project using 60 tons of CO₂ per day for injection at the Rumaitha oil field. Abu Dhabi National Oil Co. has identified a larger area of the field in which is plans to increase injection to 1,750 tons of CO₂ per day.