

# Press Release



## **Researchers at NCCC Commission New Test Center for Evaluating CO<sub>2</sub> Capture**

WILSONVILLE, Ala., June 7, 2011

Researchers at the National Carbon Capture Center (NCCC) have successfully commissioned a new test center for evaluating improved technologies for capturing carbon dioxide (CO<sub>2</sub>) from coal-based power plant flue gas.

The new center, the Post-Combustion Carbon Capture Center (PC4), is a part of the larger NCCC -- a national testing and evaluation center established by the U.S. Department of Energy and operated and managed by Southern Company. NCCC works collaboratively with third-party technology developers to test and improve their emerging CO<sub>2</sub> capture technologies.

The highly flexible PC4 test center was established to test CO<sub>2</sub> capture under a wide range of operating conditions using flue gas from an actual pulverized coal power plant.

During initial testing at PC4, which began in March, a Pilot Solvent Test Unit was successfully operated on flue gas from a large coal-fired power plant using a CO<sub>2</sub> capture solvent called monoethanolamine (MEA), a baseline reference solvent.

NCCC researchers are determining baseline CO<sub>2</sub> capture performance of the new test center in anticipation of future tests. So far, CO<sub>2</sub> capture efficiency of the pilot solvent test unit consistently exceeded the expected 90 percent CO<sub>2</sub> capture for which the Post-Combustion unit was designed and is now in steady operations capturing about ten tons per day of CO<sub>2</sub>, with a total of about 420 tons captured to date.

Other CO<sub>2</sub> capture solvents from technology developers worldwide will be tested at the PC4 and compared with the MEA baseline data. To-date, the NCCC has entered into testing agreements with Aker Clean Carbon AS (ACC) and Babcock & Wilcox Power Generation Group, Inc. (B&W PGG), a subsidiary of The Babcock & Wilcox Company (B&W), for evaluation of advanced CO<sub>2</sub> capture processes at PC4. Both companies plan to conduct testing of their respective technologies at the NCCC later this year.

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ACC of Norway has 18 years of experience in the CO<sub>2</sub> capture field in Europe. The company plans to test a process for capturing CO<sub>2</sub> from power plant flue gas that will utilize advanced amine solvents. Process advancements developed by ACC are expected to both reduce cost and improve environmental performance over conventional technology.

B&W will also conduct research at the NCCC to further develop commercially viable methods of reducing CO<sub>2</sub> emissions from coal-fired power plants. The company will test its Regenerable Solvent Absorption Technology (RSAT™) process and OptiCap™ advanced solvent.

"These projects with ACC and B&W address one of our main priorities -- working with third party technology developers to evaluate emerging CO<sub>2</sub> capture technologies in a setting big enough to serve as a bridge from the laboratory to commercial demonstration," said Kerry Bowers, NCCC Director.

The NCCC also includes pre-combustion CO<sub>2</sub> capture facilities, which have been in operation since 2009. Discussions continue with numerous other prospective technology suppliers who are interested in testing their CO<sub>2</sub> capture processes at the NCCC.

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