

“Evaluation of Novel Technologies for CO₂ Capture”

CONTRACTOR: Energy & Environmental Research Center

PRINCIPAL INVESTIGATOR: Brandon M. Pavlish
Energy & Environmental Research Center
University of North Dakota
PO Box 9018
Grand Forks, ND 58202
Phone: (701) 777-5065
Fax: (701) 777-5181
bpavlish@undeerc.org

PARTICIPANTS

<u>Sponsors</u>	<u>Cost Share</u>
CO2 Capture project (CCP)	\$50,000
Nebraska Public Power District	\$75,000
State of Wyoming Clean Coal Program	\$281,000
Neumann Systems Group	\$164,000
ND Industrial Commission	\$50,000
U.S. DOE	<u>\$1,530,000</u>
Total	\$2,150,000

Project Schedule –

Contract Date – 10/15/10

Start Date – 10/1/10

Completion Date – 3/31/12

Project Deliverables

Status Report –

1/31/11 (x); 4/30/11 ();

7/31/11 (); 10/31/11 ()

Draft Final Report 1/31/12 ()

Final Report – 3/31/12

OBJECTIVE / STATEMENT OF WORK:

This project will evaluate technologies that have the potential to dramatically reduce the cost of CO₂ capture from a dilute gas stream produced by combusting fossil fuels. The technology that has been chosen for evaluation and optimization is the Neumann System Group’s (NSG’s) NeuStream™ technology. The system has been proven at the bench scale to have potential to meet or exceed DOE’s targets for cost and efficiency of CO₂ capture. This project will provide larger scale data and work towards optimization of the technology.

STATUS:

July 1, 2010- September 30, 2010. During this quarter, a plan was put in place to secure the remaining cost share to complete the project. Contracts with the industrial sponsors have been sent and negotiations are in place. It was decided to delay the start of the work to October 1, 2010, until the cost share was in place. Status of the activities will be discussed next quarter as the project has been initiated October 1. A revised subtask management plan (SMP) will be sent in early October.

October 1-December 31, 2010. During this quarter (Oct. 1-Dec. 31, 2010), the remaining cost share to complete the project was secured through the state of Wyoming. Contracts with the industrial sponsors have been in place, with the state of Wyoming soon to follow. A project kickoff/design meeting was held at the NSG headquarters in Colorado Springs. A preliminary design was determined and NSG has begun the final design of the pilot-scale system. The system should be finalized and installed in early June 2011. A revised subtask management plan (SMP) was sent in early October. In order to prepare for the new system, the EERC has made the necessary decking modification and is awaiting the delivery of the system.