



Carbon Absorber Retrofit Equipment (CARE)

Performer: Neumann Systems Group, Inc.
Project No.: DE-FE0007528
Award Value: \$9,365,822
Project Term: 05/01/2012-0/27/2014
Location: Colorado Springs, CO
Technical Area: Carbon Capture
Website: www.neumannsystemsgroup.com



Spray Jet Array for Neustream™-C
Nozzle Technology

Description

Neumann Systems Group will be designing, constructing and testing their patented novel absorber in order to establish that the absorber will significantly reduce process equipment footprint and the cost of full scale CO₂ capture systems. The absorber will employ proven nozzle technology and an advanced solvent that efficiently captures CO₂. A module of the absorber will be inserted post-baghouse into a 0.5MWe slipstream at Colorado Springs Utilities Drake #7 power plant. The slipstream will be equipped with SO_x scrubbing and amine washing equipment.

Benefits

A full-scale NeuStream-C system holds potential to reduce the cost of CO₂ capture by 46 percent compared to a conventional monoethanolamine system. The system is also estimated to have approximately 10 percent the volumetric footprint of current best available technology. This absorber technology is applicable to a variety of solvents and can be retrofitted to existing pulverized coal power plants at a reduced cost and footprint. The modularity of the technology enables it to be easily scaled to larger size systems and retrofitted to existing plants with little risk.

Contacts

Federal Project Manager: Andrew O'Palko
Technology Manager: Shailesh D. Vora
Principal Investigator: Jay Brasseur

andrew.opalko@netl.doe.gov
shailesh.vora@netl.doe.gov
rsears@neumannsystemsgroup.com

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Size Comparison of a NeuStream™-C Capture System With a Conventional Amine-Based System. (click to enlarge)

Website: <http://www.netl.doe.gov/research/coal/carbon-capture/post-combustion/fe0007528>