

Neumann receives federal grant for CO2

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The Neustream, pictured above, is 90 percent smaller than conventional scrubbers. The smaller size allows Colorado Springs Utilities to continue using the aging Drake power plant.

Neumann Systems Group, based in Colorado Springs, is getting help from the federal government to test its carbon sequestration system.

The Department of Energy is giving Neumann \$7.2 million to test carbon dioxide removal from coal fired power plants. It is one of four projects nationwide chosen for further development to reduce the cost and improve the efficiency of advanced carbon capture techniques.

Called the Neustream, the system has already proven effective at capturing sulfur dioxide in years of testing at Colorado Springs Utilities' Drake Power Plant. The two companies are now in discussions for a contract to continue the SOX capture program. A deal is expected by the end of the year, said CSU chief energy services officer Bruce McCormick.

The new tests will also take place at the downtown Drake Power Plant, but McCormick says CSU will only provide the location – all construction and development costs are being borne by Neumann.

The Neustream system – a wet coal scrubber – uses less water, less electricity and less space than traditional methods of removing sulfur dioxide from the air.

Officials at Colorado Springs Utilities, which has been testing the Neustream for local company Neumann Systems Group, have labeled it the sort of “disruptive technology,” that can change an entire industry.

The DOE seems to think so too – giving Neustream part of \$67 million set aside to help develop ways to capture carbon dioxide.

The goal is to find a way to capture 90 percent of carbon dioxide emitted at coal-fired power plants and only raising the cost of the electricity no higher than 35 percent. The Neustream, because of its smaller footprint, can do that, at least with SOX emissions.

It also has the potential to save money by prolonging the life of coal-fired power plants. It doesn't require much space – so even places like Drake, which has outgrown its downtown footprint – can find a place to squeeze it in.

Utilities officials are pleased with the additional funding for Neustream, but say their contract talks deal solely with SOX emissions.

“They've always believed they can use the same technology for carbon,” McCormick said. “So now they can prove it. We're pleased to be a part of it.”

Other projects chosen by the DOE: A post combustion capture technology system that is being used at the National Carbon Capture Center and produced by Linde LLC. The technology aims to reduce the regeneration energy requirements by using solvents that are more stable in coal-fired plants. This project received \$15 million from the federal government.

Southern Company of Atlanta received \$15 million to develop waste heat integration for more

efficient removal. The technology will be integrated into an existing 25 megawatt pilot project at Southern Company's Plant Barry. The technology will improve by 26 percent the thermal energy performance of the plant.

Finally, the University of Kentucky Research Foundation will receive \$14.5 million for its heat integration method that uses waste heat while improving steam turbine efficiency to capture carbon. The process implements a concept that increases solvent capacity and capture rates for carbon dioxide.

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