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By DUSTIN BLEIZEFFER - Star-Tribune energy reporter | Posted: Monday, April 5, 2010



Product specialist Rob Schneider uses a pneumatic controller to demonstrate the new 'Mizer' valve at the MPI Warehouse Specialty Co. recently in Casper. The new valve can dramatically reduce methane gas waste at gas fields. (Dan Cepeda/Star-Tribune)

Curbing greenhouse gas emissions from oil and gas production facilities could earn valuable carbon offset credits for the industry, and support a lot of jobs in the service industry.

That's the incentive behind the collaboration of Oklahoma-based Devon Energy Corp. and Verdeo Group Inc. The companies have set out to retrofit many of Devon's Wyoming well locations with "low-bleed" pneumatic controllers to curb methane emissions, sell more gas and hopefully earn carbon credits.

Devon officials say the company's Wyoming project is the first in the oil and gas industry to be certified by American Carbon Registry, a carbon-trading group.

"This methodology allows us to quantify and verify (greenhouse gas) reductions in a credible and transparent manner, and sets the stage for us to pursue additional offset project development," Darren Smith, manager of environmental health and safety for Devon, said in a prepared statement.

John Savage, managing director of Verdeo Group, Inc., said nearly every oil and gas producer has the ability to take on similar retrofit projects to earn carbon credits. He estimates the value of carbon credits that the oil and gas industry could earn exceeds \$1 billion.

"We're preserving a valuable resource and doing something good for the environment at the same time," Savage said in a phone interview.

How it works

Pneumatic controllers are used to regulate numerous mechanical operations on oil and gas production sites, such as shut-off valves on liquid separators. The controls use pressurized gas -- typically methane from the wellhead -- simply because the gas flow is readily available.

But the pneumatic controls only kick in intermittently. So most of the time, methane gas simply bleeds into the atmosphere. That's a major concern because methane is 24-times more potent than carbon dioxide as a greenhouse gas.

Rob Scheider is a product specialist for MPI Warehouse Specialty Co. in Casper. He recently demonstrated how simple it is to retrofit a pneumatic controller.

In less than a minute, Schneider unscrewed and removed an old skinny sparkplug-looking "mizer" from a pneumatic controller and replaced it with a new one. He hooked up an air hose to simulate methane gas pressure, and voila. What used to bleed 960 cubic feet of methane gas per day now only vents 6 cubic feet of methane per day.

Schneider estimates there are thousands of these "high-bleed" pneumatic controllers in each oil and gas field that can be easily replaced with "low-bleed" controllers. The savings in gas alone pays for the \$250 per unit cost in six months to a year, Schneider estimated.

However, it can be a big upfront capital cost.

Incentives

Beginning in 2011, the U.S. Environmental Protection Agency will require rigorous reporting of methane emissions from oil and gas facilities. Already, federal agencies are asking industrial developers to submit plans in their permit applications explaining how they will curb methane emissions.

Savage said the EPA's Natural Gas STAR Program has long advocated retrofits of high-bleed pneumatic controllers, but the industry has resisted. The controllers are reliable, and such wide-spread retrofits have not been looked at as a good return on investment compared to other capital endeavors.

But that view is changing, said Savage. With the methodology in place to measure baseline methane emissions then verify emission reductions after retrofitting the equipment, oil and gas producers have a viable way of earning carbon credits.

And carbon credits can be a major asset for companies that will have to curb greenhouse gas emissions under proposed climate legislation.

Savage said some underground mining operations could implement similar methane emission reduction efforts that qualify for carbon credits under the American Carbon Registry.

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Carbon credits

A carbon credit is created when the equivalent of one metric ton of carbon dioxide is prevented from entering the atmosphere, and is verified through a reputable carbon registry, according to Carbon Futures.

For more info

* To find out more about EPA's Natural Gas STAR Program: www.epa.gov/gasstar

* To find out more about the American Carbon Registry: www.americancarbonregistry.org