



Researchers license methane technology for coal seams

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Casper Star-Tribune

| Posted: Sunday, April 3, 2011 11:30 pm

CASPER, Wyo. — Wyoming researchers have licensed a process that feeds microbes in coal seams and oil shale to speed up coalbed methane production.

Regal Resources Ltd. of Melbourne, Australia, has licensed the process from Western Research Institute of Laramie for use in Australia and Northern Ireland, the company announced late last week.

It's the first time the institute has licensed the process for use, said Alan Bland, vice president of waste and environmental management at the nonprofit institute.

"This is the first one," he said, referring to the licensing agreement. "We've had talks with other companies."

One of those companies is based in Wyoming, he said.

The method, known as biogenic methane enhancement, involves feeding microbes that live underground, consume some types of coal and oil shale, and produce methane gas as a byproduct.

While the conversion process happens naturally, Western Research Institute's patented method significantly speeds up methane production. The process will be used in both old coalbed methane wells as well as coal and oil shales not typically considered as sources for commercial quantities of methane gas.

The institute's process, and others like it, could breathe new life into fields of coalbed methane wells that might otherwise be capped and abandoned.

"It's going to be interesting to see how that plays out, if these processes work in the field," said Bruce Hinchey, president of the Petroleum Association of Wyoming. "If so, that would be really nice thing to see."

Bland said research on the process took four years and while researchers have conducted in-laboratory tests, the institute is in talks to license the technology to other companies, including one in Wyoming. Researchers from the institute would assist and advise companies who license use of the process.

"Typically they're putting up the vast majority of the funds for demonstrations," Bland said. "We're in a technical advisory capacity."

This kind of technology is not new to the state. Two Colorado companies with similar but proprietary methods to boost methane gas production have been in the news in recent months for their efforts in Wyoming.

Luca Technologies of Denver has tested its process in 400 depleted coalbed methane wells in the Powder River Basin and company representatives have said they're ready to use the process on a commercial scale. Luca's process is similar to the one developed by Western Research Institute.

Ciris Energy, also of Denver, uses a process that breaks down coal, making it easier for microbes to consume. Ciris is moving forward with plans to use its process both underground and above ground.

Last month Ciris agreed to pay a \$1,500 Wyoming Oil and Gas Conservation Commission fine, on top of a \$25,922 fine to the Wyoming Department of Environmental Quality, for injecting chemicals used in its process into Powder River Basin well sites without permission. An anonymous caller reported the injections in October.

Both companies pushed this year for legislation that would set up a state permitting structure for what they do. The legislation was approved by lawmakers and signed into law. A representative of Ciris said that law would help clarify procedures for approving and using its process.

Powder River Basin Resource Council, a landowners group, has expressed concern about the scale of Luca's testing of its method

and the contents of the “feed” injected into the ground by Ciris, among other aspects of biogenic methane production.

“This technology is still very experimental and has not been field-tested to know how the process will impact water,” said Shannon Anderson, a community organizer for the group. “We hope the companies work with us to develop a robust system of regulations that will protect people and the environment.”