Coal test plant coming to PRB in Nov.

CEO says coal process 'seriously needs to go to the next level'

- By GREG JOHNSON NEWS RECORD MANAGING EDITOR gjohnson@gillettenewsrecord.net
- Oct 30, 2017

After more than a decade of research and testing and about $20 million spent, Clean Coal Technologies Inc. is close to entering the final stages of developing a refining process company executives say could be the next big thing for thermal coal.

"We are very close to starting the commercial designs and already have two licenses and will be seeking to sell further licenses over the next few months to the consumer nations," said Clean Coal President and CEO Robin Eves about how close CCTI is to bringing its process to market, using Powder River Basin coal. "We hope to have the first commercial module producing (treated) PRB coal for export within 18 months."

Part of that process includes moving the company's test plant from Oklahoma to a soon-to-be-announced location in the Gillette area, which will happen sometime next month, Eves said.

"We will commence the move in November and will be making an announcement about the location shortly," he said in an email to the News Record. "There are two short-listed."

Through CCTI's proprietary process, coal is treated in a way that extracts much of its moisture, which makes it lighter. On tests using coal from the PRB, it's also been found to reduce harmful emissions when burned and to produce more energy.

While dehydrating coal isn't a new idea, being able to do it in a way that the coal remains stable is, said Richard Horner, director of special projects and emerging technology with the University of Wyoming's School of Energy Resources. That's why UW has partnered with CCTI to continue its research and development in Wyoming.

"It's one thing taking the moisture out of coal, but if you do not consume that de-watered coal pretty quickly, you have spontaneous combustion problems," Horner said. "What CCTI has done, which makes it intriguing, is that they've taken volatiles out of the coal together with the water, which improves the BTU value. Then, they're taking those volatiles and spraying it back on the coal, which stabilizes it. That's quite original."

He said that UW receives proposals for about three or four energy-related technologies a month. In his time at the university, this is the first time one has offered enough potential to act on.

"For the first time, there's something serious to look at here," he said. "This seriously needs to go to the next level."

While the prospect of CCTI's research is exciting, Horner said there are still several steps that need to be taken before it can be marketed, especially for export.

First is just waiting it out, he said.

"You just have to put it in a big pile somewhere," Horner said. "Normally, it would combust within hours, if not days. So, can they store it for long periods of time? How long is that time? Are we talking about two weeks? Are we talking about months? Are we talking about years?"

For example, if the coal can't remain stable for long periods of time after it's treated, there's a risk of it combusting while on a ship en route to a customer, he said.

What UW hopes to help CCTI accomplish is to not only put its process to the test, but develop marketable applications for it, Horner said.

“What have they got there and what is the potential?” he asked. “We have a responsibility and a mission to bring good technology to PRB coal, but we don’t want another failure on our hands. We want to help build the business case for CCTI.

“We want to maximize both domestic consumption and international consumption. … We need to understand this. To us, it is validated, but now we need to make sure we can achieve exactly the same when we scale it up.”

So far, CCTI has spent about $20 million to get to this point, Eves said, all through private investors. Along with money raised in the United States, he said investors in India and Indonesia also have bought in with the hopes to use the technology to help the energy outlook in those countries.

“To date, we have not received any financial assistance or incentives from either federal or state resources,” he said.

After moving its test plant to the PRB, Horner said he expects to have a good handle on how viable and marketable the technology can be for Wyoming coal.

“I think we’ll have a very good indication of a proper business case by the end of next year,” he said. “I think we have enough information about the PRB coal and about what you can and cannot do with it.”

The bottom line, Horner said, is that there is no better place to complete the type of research Clean Coal Technologies is doing than in Wyoming and no better coal to refine than the high-quality, low-sulfur coal that’s mined from the PRB.

“If this cannot be made to work in Wyoming,” he said, “it cannot be made to work anywhere in the world.”