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By DUSTIN BLEIZEFFER - Star-Tribune energy reporter | Posted: Monday, January 25, 2010 12:15 am



A loaded coal truck moves along the pit in the Black Thunder Mine late last year. A controversial report by the University of Wyoming says Powder River Basin coal helps make the U.S. industrial manufacturing sector competitive internationally. (Dan Cepeda/Star-Tribune file)

For an overview of the study, go to the Wyoming Mining Association's Web site, [www.wma-minelife.com](http://www.wma-minelife.com), and click on "coal."

The new edition of the Wyoming Energy Journal examines Wyoming's coal industry, which in 2009 saw production decline for the first time in more than a decade.

A new study by a University of Wyoming economist boasts, "The Powder River Basin contains the largest reserve of low cost hydrocarbons on the planet."

During the past 15 years, expansions of the Powder River Basin mining complex achieved such an economy of scale that coal from the basin is "unrivaled in the world energy complex," according to the study's author, economist Tim Considine of the UW School of Energy Resources.

The study, "Powder River Basin Coal: Powering America," was commissioned by the Wyoming Mining Association. And it wades into controversial territory.

Considine wrote that cheap electricity -- which Powder River Basin coal provides throughout much of the United States -- helps make the U.S. industrial manufacturing sector competitive internationally. Additionally, it is "an essential factor in propelling the economy forward with lower carbon intensity," Considine wrote.

He noted that "real electricity prices" in the United States declined during the 1980s and 1990s as the use of Powder River Basin coal increased.

Considine added that the growth of the nation's greenhouse gas emissions since the 1980s was less than the rate of growth in gross domestic product. "So as the economy grows, carbon intensity, defined as CO<sub>2</sub> per dollar of GDP, falls," he concluded.

"Lower electricity costs encourage the adoption of advanced electricity-using technologies that reduce the direct use of fossil fuels and increase end-use energy efficiency in a wide range of applications."

In a phone interview, Considine explained that productive outputs tend to increase compared to the amount of energy put in. The modern example, he said, is the Internet and small portable electronics.

Other experts say that line of reasoning just doesn't jibe, and the opposite may be true.

### Coal critique

"I don't see how burning more (Powder River Basin) coal promotes clean energy innovation. That's like saying more crime promotes better crime-solving abilities. The real innovation drivers are climate, environmental, and economic policies that favor clean energy," said Jeremy Nichols, climate and energy program director for WildEarth Guardians.

And there's a large omission in the study. Nowhere in the 33-page report does Considine analyze the potential economic impacts of greenhouse gas emissions, or the economic impacts of other pollutants such as the cumulative build-up of mercury in rivers and lakes.

"Of course, with our own report calling for an eventual transition away from (Powder River Basin) coal, I could just be the pot calling the kettle black," Nichols said. "Still, I think we've tried hard to take an objective step back and to be reasonable about calling for some anticipation of future climate and energy policies."

Considine said he narrowed the scope of his study to measure the role of Powder River Basin coal in the U.S. economy. He calculates that by using Powder River Basin coal, the U.S. economy avoids \$280 billion per year in higher energy costs.

Considine said there are plenty of other studies that contemplate the economic impacts of coal-based energy on human health and the environment.

"I didn't want to open up that can of worms, because the estimates of those costs vary greatly," he said.

### Coal consequences

In fact, Considine said his study underscores the competitiveness of Powder River Basin coal. He said even if a cost of carbon -- say \$10 to \$20 per metric ton of CO<sub>2</sub> -- were attached to Powder River Basin coal, it wouldn't completely negate its competitive cost when compared with other fuels.

"When you look at those mines up there, how efficiently they run, and actual cost of producing that coal, it is very competitive," Considine said. "The challenge will be to implement, in a cost-effective way, the cost of carbon emissions."

Marion Loomis, executive director of the Wyoming Mining Association, said the study underscores the key economic role of Powder River Basin coal in the nation's economy. And, just as Considine does in the study, Loomis offered the no-coal scenario.

"What are the human health costs of people who don't have electricity and don't have refrigeration and don't have heat and don't have light?" he said.

Nichols said the no-coal argument is a false choice.

"Obviously if the PRB coal tap was shut down today, it would pose some serious economic consequences, but nobody is proffering that course of action," Nichols said.

In arguing other societal benefits of coal-based electrical generation, Considine wrote, "Indeed, China is providing a template of how coal can be used to pull people out of poverty and lift an entire society to higher living standards."

Although coal has fueled an expanding middle class in China, Considine's statement isn't entirely accurate, said David Wendt, president of the Jackson Hole Center for Global Affairs. Millions upon millions of Chinese still live in poverty and suffer from pollution from coal.

"Coal in China is a very two-edged sword, as you know, providing both a source of wealth and a source of pollution, illness, loss of life," Wendt said.

Wendt said that China's Shanxi Province Vice Governor Niu Renliang has been underscoring this point since he began collaborating with the Jackson Hole Center for Global Affairs in November 2003.

"Vice Governor Niu has consistently emphasized the issues of water depletion and water pollution arising from coal mining and use in his province," Wendt said.

### Big money

Loomis said that when commissioning the study, the Wyoming Mining Association wanted to find out how much coal companies spend on goods and services in Wyoming and throughout the nation.

The study found that Powder River Basin coal producers spent more than \$2.27 billion on supplies from other businesses in 2008 -- a year when basin mines produced a record 451.5 million tons of coal.

The same coal producers spent \$1.7 billion on taxes and royalties in 2008, and they spent about \$601.7 million on payroll and benefits, according to the study.

The biggest share of the \$2.27 billion spent on supplies and services went to Wyoming businesses -- 31 percent. The study breaks down just how much was spent in 46 other states, and that is useful information for the Wyoming Mining Association, Loomis said.

"If somebody from Utah is going to vote on something that has an impact on Powder River Basin coal, we can go to them and say, 'What happens to this industry is important to you, because this is how much we spend on vendors and supplies from Utah,'" Loomis said.

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