

Alternative Uses for Coal Stuck in Neutral

Natural Gas is just too cheap

Ken Silverstein | Mar 27, 2012

Applying new technologies is admirable. But sticking businesses with huge bills to pay that progress is not. That's what Exelon and other critics are saying about a proposed plant to convert coal to a synthetic natural gas.



In this particular case, Exelon is taking on Tenaska, which needs Illinois legislators to force the state's utilities to buy power from its proposed \$3.6 billion generator -- one that would take coal and gasify it for the purposes of making electricity. Exelon is emphasizing that it is cheaper and easier to just burn the natural gas, noting that its own studies show that the state's taxpayers would pay heavily for this facility, about 40 percent more than just two years ago.

"It makes absolutely no sense to take coal and make synthetic natural gas out of it," says Paul Grimmer, chief executive of Eltron Research in Boulder, Colo., in a talk with this reporter. "The processes are too expensive. But if you see a huge run-up in natural gas, it may make sense then."

The developers of that power plant, Tenaska, acknowledge that the current low price of natural gas makes the investment look expensive. But the company goes on to say that such pricing is an anomaly and that over the 40-year lifespan of the investment, the financing would make sense. It is adding that Exelon has a vested interest in stopping construction: Capacity from the unit would be bid into the system and therefore make Exelon's energy offerings less valuable.

Moreover, Tenaska is saying that older coal-fired power plants are closing and that if coal is to remain viable then modern uses of it must be found. The Illinois state legislature is now debating the issue.

A similar discussion is occurring in the U.S. Congress. Lawmakers from coal-producing states are trying to make the case that the abundance of coal supplies could be used to not just generate electricity but to also make transportation fuels. To their dismay, however, the Obama administration has eliminated funding for such "coal-to-liquids" technologies.

That, in turn, has severely slowed a West Virginia project where such a plant is "underway." It would be modeled in part after South Africa's Sasol Co. that now produces about 150,000 barrels a day of oil from coal.

“Last year, when you came before us, you said that the Department of Energy was eager to promote research on coal-to-liquids,” says [Senator Joe Manchin](#), D-WV, at a recent congressional hearing to Energy Secretary Steven Chu. “Why would you have such a reversal?”

Expensive Process

Let’s answer that question. For starters, the process is expensive and when combined with a global credit crunch, such projects are out-of-reach for all developers -- unless the government pitches in.

The start-up costs of a coal to liquids plant is high at about \$1 billion. Besides that capital costs, there’s the price of removing all the contaminants from the solid product before it can be gasified and converted to oil. Meantime, the process of turning natural gas into liquids is a possible competitor to turning coal into liquids. Not only is gas-to-liquids a cleaner process but is also less capital intensive.

Environmental worries are also a part of the equation. While the United States is seeking to limit its foreign oil consumption, it is also trying to cut its carbon emissions. The conversion process whereby coal is transformed into gasoline is a double-whammy: During the alteration, greenhouse gases are produced and then again after the newly-formed gas is burned. And in a typical coal-to-liquids plant, about 40 percent of the energy is lost in the conversion process.

That’s why a Wyoming-based developer has dropped its plans to use coal to make transportation fuels. It will, instead, use natural gas a feedstock. [Nerd Gas](#) expects to spend between \$700 million and \$1 billion on a “gas-to-liquids” project in Wyoming that would make 10,000 to 15,000 barrels of a day of gasoline.

Eltron’s Grimmer says that is a much smarter bet in today’s environment. “Coal to synthetic natural gas is dead (for now) and I believe coal to liquids is too expensive to be viable even with crude over \$100 a barrel.” On the other hand, “There is a huge incentive to increase the value of natural gas, especially by the gas producers who have large gas reserves that they thought would be worth a lot when they got the leases but aren’t worth so much now.”

Coal is trying to reinvent itself. That’s a noble goal. But such a transformation is impractical right now given that the technologies to achieve that mission are prohibitively expensive at a time when the nation has other options.

EnergyBiz Insider is the Winner of the 2011 Online Column category awarded by Media Industry News, MIN. Ken Silverstein has also been named one of the Top Economics Journalists by Wall Street Economists.

Twitter: @Ken_Silverstein | energybizinsider@energycentral.com