

For seven years now a Texas energy company, DKRW Advanced Fuels, has had plans in the offing to build a coal-to-liquid plant in Wyoming via its wholly-owned subsidiary, Medicine Bow Fuel and Power. It recently asked for a \$300 million loan from the state of Wyoming, the largest in state history. The Wyoming Business Council is considering the loan and will make recommendations to Governor Mead and the State Legislature, who will then decide whether or not to approve it. DKRW is partially owned by the second-largest coal company in the United States, Arch Coal, whence it plans to derive what's called "feedstock" for the plant's operations.

I recently downloaded Medicine Bow Fuel and Power's "Carbon County Industrial Siting Permit Application" which, at 97 pages, is a hefty read. Nevertheless, what the company proposes sounds reasonable and convincing. Yes, there will be human and environmental hardships: overcrowding, lack of adequate medical services and facilities, evaporation ponds, slurry residue. Still, the application claims that the company will be able to reduce any "environmental concerns associated with coal combustion." The company seeks to circumvent CO<sub>2</sub> pollution by piping the carbon dioxide into northern Wyoming for use in "enhanced oil" extraction, with suggestions that the CO<sub>2</sub> will be sequestered underground eventually.

The problem is, coal-to-liquid technology is unproven. Gary Stiegel, a coal gasification expert at the US National Energy Technology Laboratory in Pittsburgh, is quoted on *Wired.com*, the internet version of *Wired Magazine*, that "The lack of large demonstration projects out there makes the economics speculative at this time . . . what the commercial potential is at this point in time, it's hard for me to say."

One other US company has been on the books since 2008 for wanting to build a coal-to-liquid plant: TransGas of Charleston broke ground in Mingo County, West Virginia, in May of this year. It hopes to sell taxable bonds to fund the project and repay the bonds with revenue generated by the plant. Company officials have said that private investors will provide the bulk of the project's financing, however, the project would be eligible for at least \$600 million in state tax breaks, write Eric Eyre and Ken Ward, Jr., in an article available on *WVGazette.com*. That chunk of change is worth a lot of entrepreneurial risk-taking and speculation.

However, in the wake of a Sierra Club appeal to West Virginia's Air Quality Board, the board ruled that the state's DEP didn't have enough evidence to support its conclusion that the plant's pollution controls were sufficient enough to warrant its designation as a "minor source" of emissions. The permit was sent back to DEP's Office of Air Quality for revisions and the plant's forward movement has been stalled.

In 2008, TransGas said the plant would be a "near-zero emissions facility" that would capture carbon dioxide. Later its developer, Adam Victor, said the company would seek federal approval to send carbon dioxide through interstate pipelines to the Texas coast, where it could be pumped underground. The operative word here is "could." No carbon sequestration process is in place anywhere in the U.S., although its possibilities have been extensively examined, including by a Wyoming study with testing that spanned several years. The bottom line: it's enormously costly and way too speculative. No one knows if large-scale success can be adduced from small-scale testing.

To add to its troubles, West Virginia Sierra Club officials claim that TransGas developer Adam Victor has a poor track record with projects. Last year, one of Victor's companies, Project Orange, filed for bankruptcy after the firm's natural gas-to-steam electricity generating plant in Syracuse, N.Y., became mired in multiple lawsuits. That plant is scheduled to be demolished.

Two DKRW CEOs are former Enron executives. Chief Executive Thomas E. White's profile on *Bloomberg Businessweek's* website states among other things that "Mr. White serves [*sic*] as Chairman and Chief Executive Officer of Enron Ventures Corp. Mr. White served as Chief Executive Officer and Chairman of Enron Power Corp., a wholly-owned subsidiary of Enron since 1991 and served as its Vice Chairman of Enron Operations Corp. since 1993."

The founder of the company, Jon C. Doyle's profile states that "Mr. Doyle . . . co-founded DKR Development LLC in January of 2002. He served as President of IES Communications, a \$145 million revenue communications contracting company. He served [*sic*] as Chief Operating Officer of DKRW Advanced Fuels, LLC. From 1996 to 2000, he was employed with Enron Corp."

Jeff Goddell in his book *Big Coal* documents the histories of coal-mining companies and coal-transporting railroads as well as of the utilities that burn it. Some of these megacorporations have become powerful enough to determine legislation. Energy brokers such as Peabody Energy and Enron were "particularly well represented in the Bush Administration," comments the author. In another context, he refers to Enron as "a den of thieves." Goddell shows that coal-based power plants are huge polluters. "Even the cleanest new coal plant is significantly dirtier than a gas-fired plant." And he shows how legislation has ensured that the environmental and health-care costs of coal production and combustion have been borne primarily by consumers, particularly the people unlucky enough to work in the mines or live near the power plants.

Environmental scientists remain skeptical about the coal-to-liquid technology, and about "clean coal" in general. "There are a slew of technologies being proposed as a way of continuing to meet our energy needs, including coal gasification with carbon capture. Our response is that it's not ready for prime time yet. We need the answers today," says Bruce Nilles, the national coal campaign director for the Sierra Club. And Pushker Karecha of NASA's Goddard Institute for Space Studies comments in an e-mail to *Wired.com* on what he considers the "fatal flaw in their proposed process from a climate protection standpoint." What worries NASA scientists is that developing the technology "would allow liquid fuel CO<sub>2</sub> emissions to continue increasing indefinitely." Most energy experts agree that without carbon-dioxide controls, coal-to-liquids plant will emit twice the greenhouse-gas pollution of gasoline: first, when the coal is turned to liquid and second, when the fuel is burned as gasoline.

Wyoming may want to wait until demonstration projects have proven themselves before endorsing the Medicine Bow venture. The state is in no urgent need to bankroll a project that appears dubious thus far.