



Fact Sheet on Baard Energy's Coal to Liquids Facility

Background

Baard Energy is proposing to build a \$5.5 billion synthetic-fuel plant known as the Ohio River Clean Fuels LLC ("ORCF") facility that would produce 53,000 barrels of liquid fuels from coal per day and provide at least 250MW of power generation. Every year, the Baard facility, as proposed, would emit at least 12.4 million tons of CO₂ and thousands of tons of other harmful pollutants, and would require the mining of 9.3 million tons of coal. While Baard publicly suggests that it will use carbon capture and sequestration ("CCS") and biomass to reduce such pollution, the company has failed to officially commit to doing so. As such, the proposed plant would have significant public health and environmental impacts in Columbiana County and beyond, and poses substantial economic risks related to the cost of CO₂ emissions and rising coal and construction prices. Instead of subsidizing dirty and expensive fuel, we should be pursuing clean energy jobs and energy independence through efficiency, smart growth, and plug-in hybrid vehicles that are powered by cleaner energy sources.

Environmental Risks of the Baard Project

1. The Baard facility would be a major new source of global warming pollution

Every year, the Baard facility would directly emit at least 12.4 million tons of CO₂ into the air. In addition, the use of the fuel produced by the facility would lead to the emission of up to another 14.19 million tons annually, for a total carbon footprint for the Baard plant of as much as 26.59 million tons per year. While Baard has claimed that it will use carbon capture and sequestration to reduce the amount of direct emissions from the facility, the company has not legally committed to doing so, and Baard's air permit application states that it is "requesting limits that will permit the discharge of the large CO₂ stream initially."

2. Baard has not committed to using biomass as 30% of the facility's feedstock.

If done correctly, biomass could reduce the emissions profile of the Baard facility. While Baard explicitly claimed in its pre-application for Department of Energy loan guarantees that it would utilize biomass as 30% of its feedstock, this no longer appears to be the case for at least the

first 10 years of the facility's operations. According to the company's website, Beard is "currently in discussion with existing area coal companies to supply the entire plant's feedstock need pursuant to 10 year agreements that will match the volumes needed to fulfill the Project's contractual off take commitments." Beard's air permit application also includes no binding commitment to use biomass, and the permit limits are based on the use of coal as the sole feedstock.

3. The Beard plant would require the mining of 9.3 million tons of coal per year

When completed, the ORCF facility will use approximately 9.3 million tons of coal per year, or 186 million tons over a 20 year period. To put that in context, in 2006 a total of 22.7 million tons of coal was mined in Ohio, while total US imports in 2007 were 36.3 million short tons of coal, and exports were 59.2 million short tons. The mining of such coal poses substantial safety risks to miners, destroys natural habitats, pollutes rivers and streams, releases substantial amounts of methane, which contributes to global warming, and can threaten homes and businesses due to mine subsidence.

4. The Beard facility would contribute to elevated fine particulate matter levels in the area.

Fine particulate matter is a harmful air pollutant that can cause shortness of breath, aggravation of respiratory conditions such as asthma and bronchitis, increased susceptibility to respiratory infections, and heart attacks or even premature death in people with heart and lung disease. The Beard plant would straddle the border of Columbiana County and Jefferson County, which is an area that fails to meet public health standards for fine particulate matter. Yet, Beard and the Ohio EPA are not proposing to directly limit the facility's fine particulate matter emissions, and have not taken other steps required by the Clean Air Act to ensure that the facility would not further degrade air quality in Jefferson County and surrounding areas.

5. The Beard plant would be located in an area that is already overburdened with air pollution

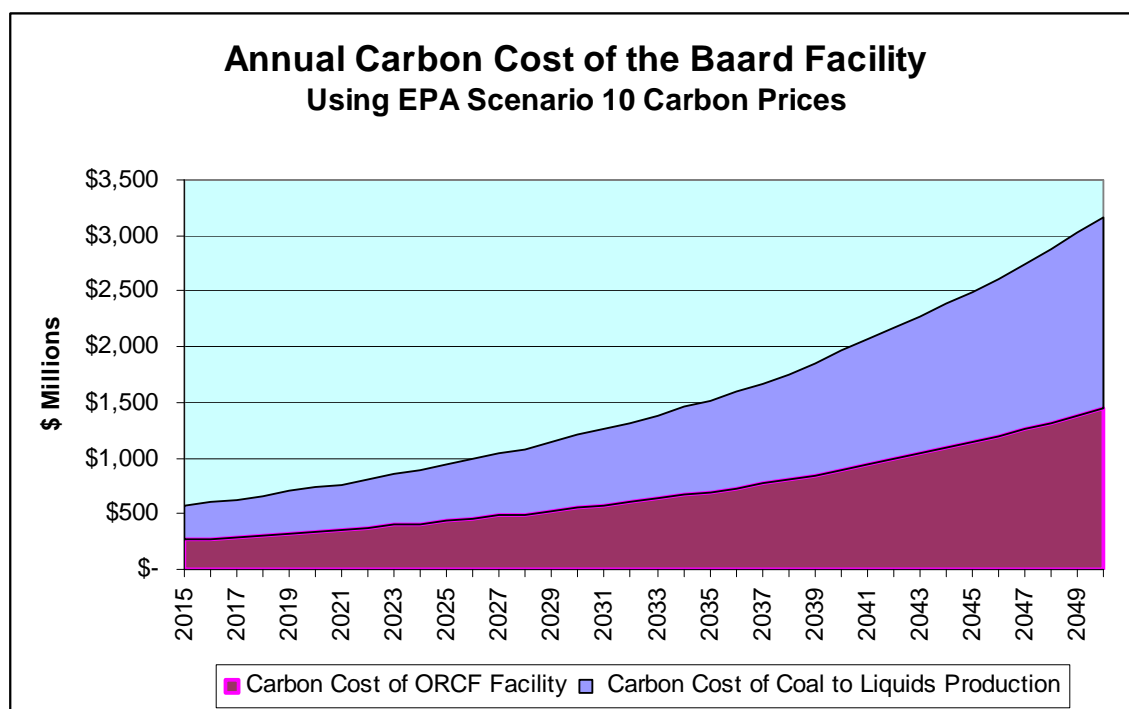
Pollution from the proposed facility would be emitted in an area that is already heavily burdened with pollution. For example, the largest coal-fired power plant in Ohio, the 2,316 megawatt W.H. Sammis plant in Stratton, and one of the largest hazardous waste incinerators in the world, the Waste Technologies Industries facility in East Liverpool, are both located less than 10 miles from the proposed Beard plant. In February 2008, the Ohio EPA found "unacceptably high" levels of chromium and manganese in outdoor air in East Liverpool. The residents of Columbiana and Jefferson Counties should not be subjected to another major source of air pollution.

Economic Risks of the Beard Project

1. Beard has likely not factored the full cost of CO2 emissions into its financial analysis for this facility.

Given that Beard and Ohio EPA have excluded CO2 limits from the permitting process on the incorrect basis that CO2 is not subject to regulation, it is fairly likely that Beard has also underestimated the future cost of CO2 in its financial analysis for the Ohio River facility. Beard states in its air permit application that the "larger CO2 stream is intended for eventual use in enhanced oil recovery (EOR)" but that they are currently "requesting limits that will permit the discharge of the large CO2 stream initially." A Department of Energy sponsored survey of potential for CO2-EOR in Ohio, found that total demand for CO2 for EOR in the state of Ohio would amount to between 4 and 7.7 million tons of CO2 per year.¹ This represents only 32% to 62% of the Beard facility's 12.4 million tons of annual CO2 emissions, raising the question of where the rest of the facility's CO2 would be disposed.

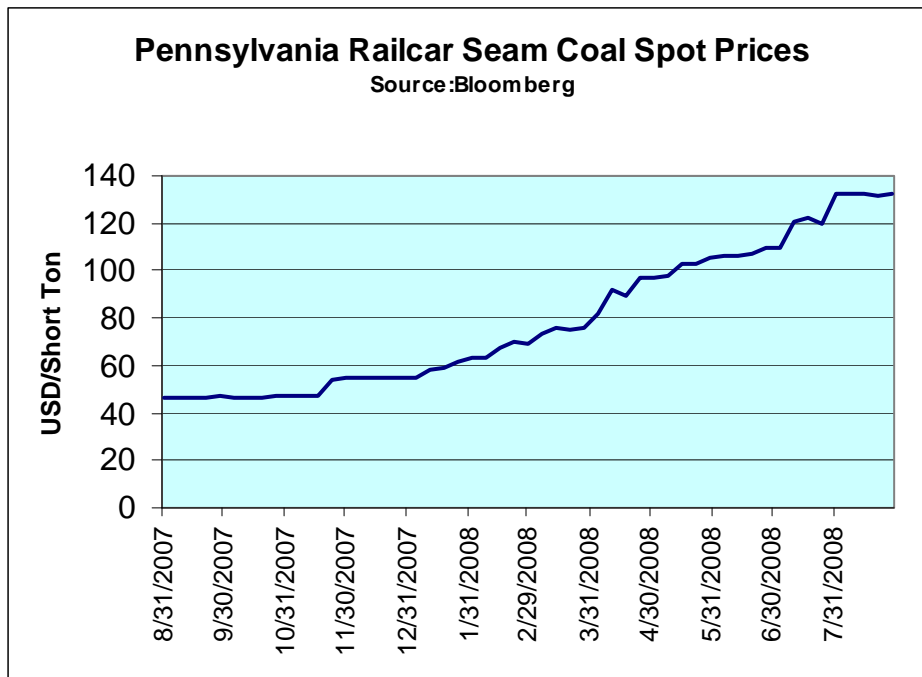
As noted above, the 9.3 million tons of coal used by the facility would lead to the direct emission of 12.4 million tons of CO2 annually from the plant, and a total CO2 footprint of up to 26.59 million tons per year once the use of the fuel produced by the facility is included. Using the EPA's base case forecast for carbon prices (known as Scenario 10), this would result in a cost stream for the CO2 emissions from the plant as follows:



¹ U.S. Dept. of Defense, CO2-Enhanced Oil Recovery Potential of the Appalachian Basin, Advanced Resources International, Inc. (October 2007).

2. The Beard Project would be faced with and contribute to increasing coal costs for US companies.

Prices for Pennsylvania Railcar Coal (which has the same specifications as the Pittsburgh #8 Bituminous coal to be used by Beard) have nearly tripled over the past year (see graph below) due partially to a substantial increase in export demand. The surge in exports has forced many domestic utilities to compete with overseas consumers to secure their long-term coal contracts. With the addition of large non-traditional coal consumers like Beard, who would be looking to enter into 10-year agreements to secure an annual delivery of 9.3 million tons of coal to meet its needs, price pressure on domestic utilities is only expected to rise further. Given that the rise in coal prices during the first quarter of 2008 was primarily driven by a 4 million ton increase in export demand, the impact of Beard's 9.3 million tons of demand should not be underestimated. Indeed, if the Beard coal to liquids plant were classified as a foreign consumer of US coal, its 9.3 million tons of annual demand would currently make it our second largest export customer behind Canada.

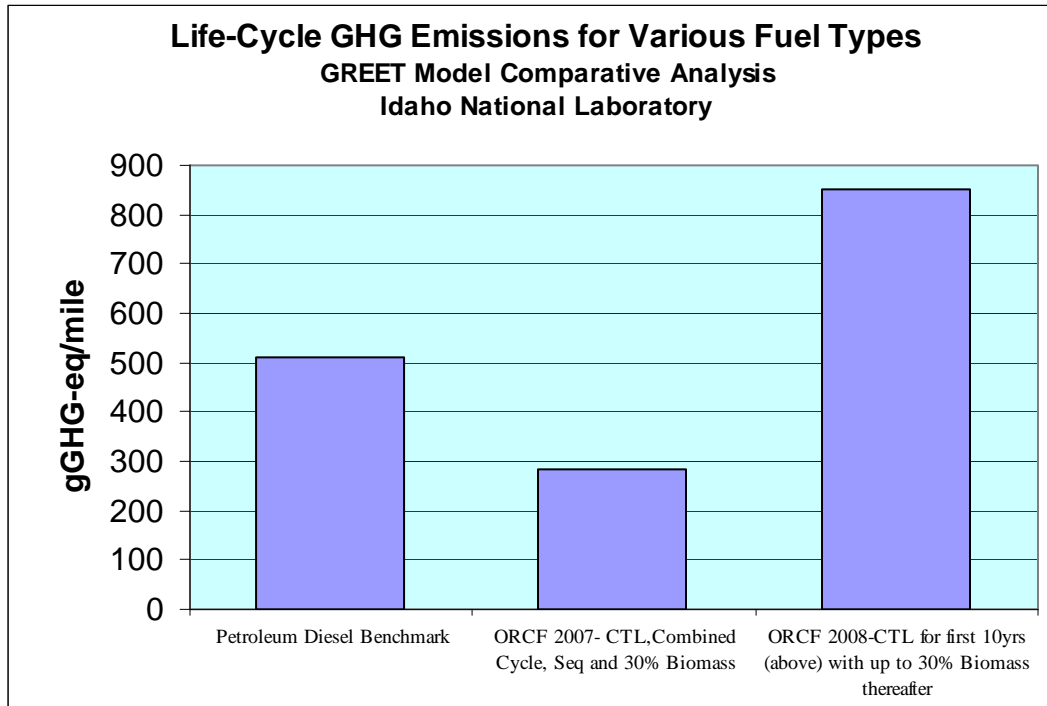


3. Fuel from the Beard project could not be sold to the DOD as it is not in compliance with federal law.

According to Beard, the company has spoken with the Department of Defense (“DOD”) about the sale of up to half of the Ohio River facility’s liquid coal fuel output.² The company contends

² The Department of Defense discussions are only one of many attempts by Beard to get local, state, and federal taxpayers to subsidize the proposed facility. Beard also applied to the Department of Energy (“DOE”) for \$1.2 billion in loan guarantees under Title XVII of the federal Energy Act, but that application was apparently rejected. More recently, Beard filed a Phase I application with the DOE for a \$2.3 billion federal loan guarantee pursuant to DOE’s Federal Loan Guarantee Program for Coal-Based Power Generation and Industrial Gasification Facilities that Incorporate Carbon Capture and Sequestration or Other Beneficial Uses of Carbon (DE-FOA-000008). Beard would

that it has provided the Defense Energy Supply Center with a significant amount of information as the DOD continues its internal development to utilize synthetic fuels. However, the liquid coal fuels produced from the Beard plant without biomass and CO2 sequestration would no longer meet the requirements of federal law. Section 526 of the Energy Independence and Security Act of 2007 allows the DOD to purchase only those dirty fuels (such as liquid coal, tar sands and oil shale) whose lifecycle greenhouse gas emissions are lower than conventional fuels. As such, the currently proposed fuel would not qualify as a candidate for DOD consideration (see graph below):



4. The Columbiana County Port Authority may not have the expertise to manage a project of this type and magnitude.

The Columbiana County Port Authority (“CCPA”), which would be the nominal owner of the Beard facility under a capital or mortgage style lease format, does not have the track record to sufficiently ensure that taxpayer moneys devoted to the program would produce the results intended by the legislature. CCPA has recently issued tax-exempt revenue bonds for two waste disposal facilities (\$41 million and \$20 million respectively) and one salvage facility (\$12.53 million). Not one of these bonds was rated and all came as high yield offerings. That means they were of poor and risky quality, unusual for municipal bonds, reflecting poor judgment on the part of CCPA, and indicating that CCPA is already exposed to high risk transactions. Under the Beard deal, the CCPA could be on the hook for over \$4 billion in debt on behalf of Ohio River Clean Fuels LLC, a limited liability company, which would add a significant amount of additional

still have to file a Phase II application, be selected by DOE as a finalist, and then undergo a complete review pursuant to the National Environmental Policy Act before any decision could be made on its application.

credit risk to CCPA's portfolio. Such risk would be highly dependant on the ability of dirty technology to deliver on its promises.

A careful cost/benefit analysis of the Baard project must first be made to ensure that their achievements in creating new jobs and making investments are commensurate with any federal, state, or local tax credits or subsidies provided to the project.

There Are Better Alternatives

While the proposed ORCF facility poses serious environmental and financial risks, the good news is that there are better alternatives for attracting new, long-term jobs to Columbiana County and the rest of Ohio. Transitioning to a clean energy economy will require rapid growth in many of Ohio's manufacturing sectors. Electricians and carpenters will retrofit our state's buildings to improve their energy efficiency. Millwrights, machinists and steel workers will build wind turbines for use in northwestern Ohio and in neighboring states. Welders and electrical engineers will build solar panels. Agricultural workers and chemists will work to produce cellulosic ethanol from grass, wood or agricultural waste. Unlike the coal industry, these industries represent growth sectors in both Ohio and nationwide. Instead of bucking the national trends, Columbiana County can lead the way by embracing such green jobs.

There are also better alternatives for achieving energy security than turning coal into fuels. Higher automobile efficiency, smart growth, and renewable fuels could all reduce our dependence on oil while saving consumers money and protecting the environment. In addition, high efficiency plug-in hybrids are a far superior strategy to liquid coal given that electricity can be formed from a wide array of resources. Even if some of the electricity needed for plug-in hybrids was generated from coal with carbon capture and sequestration, the pollution footprint would be much lower than that of fuel from Baard's proposed liquid coal facility. We should invest in these cleaner, more efficient, and more economical alternatives rather than continuing to subsidize the use of dirty coal.