

Comments to

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on the

**Supplement to the Draft Environmental Impact
Statement for the Gilberton Coal-to-Clean Fuels
and Power Project (DOE/EIS-0357D-S1)**

by

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1) Capacity factor is likely inflated.

The DEIS assumes an 85% capacity factor. Where is this number coming from? Is there a solid basis to assume an 85% capacity factor for a new, experimental plant that will be testing out a variety of fuels? According to the Project Abstract (referenced in my 2/8/2006 comments on the DEIS), the plant will be processing "coals and/or coal wastes, petroleum coke, biomass, and selected industrial/municipal wastes." With this amount of experimentation, a capacity factor as high as 85% doesn't seem warranted.

2) Lifetime of the Plant: 26 or 50 years?

Pages 5-1 and 6-1/6-2 of the initial DEIS state that the lifetime of the proposed refinery would be 26 years. Now, this partially amended DEIS claims a 50 year operating life. Which is it? These parts need to be made consistent. Either the rest of the DEIS has to be adjusted to account for a 50 year lifetime, or this new section must be adjusted to the previous 26 year assumed lifetime. A shorter lifespan is more realistic if one does an honest assessment of the availability of waste coal, the economics of the peaking in U.S. coal production (projected for 2032) and of coal production capacity (which peaked in 1999), the limitations of carbon sequestration, the carbon constraint policies likely to be passed in the next 50 years, and/or the viability of the competition for burnable fuels (i.e. the likelihood of a major shift to electric-powered vehicles within the next 10-50 years).

See the following for references on peak coal production and production capacity:

"The Peak in U.S. Coal Production," Gregson Vaux, 2004.
http://www.fromthewilderness.com/free/ww3/052504_coal_peak.html

"Despite Being the "Saudi Arabia of Coal," Could U.S. Coal Supply Fall Short of Surging Demand? -- Study Finds Major New Investments in Coal Supply and Transportation Capacity Required" December 14, 2006.
<http://biz.yahoo.com/iw/061214/0194797.html>

3) Not all greenhouse gas emissions are being counted

Page 3 states: *"The total emissions from WMPI would include CO2 emitted directly to the atmosphere by facility operations (832,000 tons per year) plus the concentrated CO2 stream separated in the gas cleanup system (1,450,000 tons per year; Radizwon 2006), which would be emitted at the site."*

This fails to count emissions associated with transporting and burning the fuel.

Also left out of this analysis are the CO2 emissions associated with carbon sequestration activities. Carbon sequestration processes themselves are very energy intensive and there will be emissions associated with CO2 separation, transporting the CO2 to sequestration sites (and the emissions associated with building any related pipelines – including the emissions associated with the materials used), and those associated with the sequestration/injection sites themselves.

If the sequestration method involves extracting and burning natural gas, coal-bed methane or oil, the ultimate burning of those fossil fuels needs to be considered in the greenhouse gas emissions analysis, as these would be a direct result of the CO2 sequestering operations of the WMPI

facility - a result which wouldn't happen otherwise. Natural gas and coal-bed methane will release some unburned gas from leaks in the process from extraction to ultimate use, and these need to be factored in as well.

The DEIS also fails to count non-CO2 greenhouse gas emissions (including water vapor, which is recognized in the DEIS as a greenhouse gas).

4) Geologic sequestration is not a “promising” technology

Page 4 claims that “underground storage, or geologic sequestration, of CO2 is a promising technology.” This sounds more like wishful thinking and public relations than reality. This needs to be reworded to be more objective. To temper the hype with some doses of reality, the information in the following studies and articles (most of which are attached as part of these comments) ought to be evaluated:

"Health, safety and environmental risks of underground CO2 sequestration – Overview of mechanisms and current knowledge"; Kay Damen, Andre Faaij and Wim Turkenburg, Climatic Change 2006; 74(1-3): 289-318.

<http://www.energyjustice.net/carbon/carbonsequestrationrisks.pdf>

"Important! Why Carbon Sequestration Won't Save Us"; Richard, Michael Graham, July 31, 2006. http://www.treehugger.com/files/2006/07/carbon_sequestration.php

"Carbon Sequestration: Speed Bump or Wall?"; Richard, Michael Graham, June 5th, 2006. http://www.treehugger.com/files/2006/07/carbon_sequestration2.php

"Potential Leakage and Toxicity Problems with CO2 Sequestration," July 31, 2006.

http://www.greencarcongress.com/2006/07/potential_leaka.html

"Sequestered CO2 May Erode Absorbing Sandstone -- A Possible Snag in Burying CO2"; Kerr, Richard A., June 30, 2006. <http://tinyurl.com/25rk4e>

(full URL is:

<http://www.heatisonline.org/contentserver/objecthandlers/index.cfm?ID=5992&Method=Full&PageCall=&Title=Sequestered%20CO2%20May%20Erode%20Absorbing%20Sandstone&Cache=False>)

"Gas-water-rock interactions in Frio Formation following CO2 injection: Implications for the storage of greenhouse gases in sedimentary basins"; Y.K. Kharaka, D.R. Cole, S.D. Hovorka, W.D. Gunter, K.G. Knauss, B.M. Freifeld; Geology: Vol. 34, No. 7, pp. 577–580 doi: 10.1130/G22357.1 <http://www.gsjournals.org/perlserv/?request=get-abstract&doi=10.1130%2FG22357.1>

"The Weather Makers: How Man Is Changing the Climate and What It Means for Life on Earth"; Flannery, Tim, Grove Atlantic, 2005. <http://www.theweathermakers.com>

Oil and gas production in Pennsylvania and the U.S. in general will be past-peak by the time the facility starts operation. With limited and declining oil and gas extraction, it's unrealistic to assume that these methods for sequestration will be able to last for such long periods of time.

Schuylkill County's coal fields are too geologically unstable from over a century of mining practices to be reliable sequestration sites.

5) Competition and economics not considered in western PA sequestration capacity

Pages 4-5 state that western Pennsylvania sequestration capacity "would be more than sufficient."

This didn't factor in competition from many other existing and proposed coal burning facilities that will be even closer to the sequestration sites. This proximity will make WMPI's competition more economically viable and could affect the availability of these sequestration sites while increasing the financial cost associated with using those sites.

The DEIS is also not factoring in the incredible financial costs, energy losses and carbon emissions associated with transporting and sequestering the CO₂, making it impractical. Financially, a CO₂ pipeline can cost in the realm of \$1 million per mile.

6) Coal-bed Methane impacts not thoroughly examined

Pages 5-6 begin to examine the impacts of coal-bed methane, but only scratch the surface. If this is being considered, the environmental impacts need to be more fully described.

"Oil and Gas at Your Door? – A Landowner's Guide to Oil and Gas Development," Oil and Gas Accountability Project, 2005. <http://www.energyjustice.net/naturalgas/cbm/>