Energy Facts

Limit to Producing "Cheap" Coal Makes Liquid Coal Plans Unworkable

While the coal industry has been aggressively promoting the development of a large liquid coal industry in the United States, it is unrealistic to expect that customers could be supplied with domestic coal at reasonable prices. According to the most recent Energy Information Administration Annual Energy Outlook report, if the liquid coal industry grew to the size proposed by industry lobbyists, the United States would have to import coal beginning in just six years.[1] The increased demand created by a liquid coal industry could raise electricity rates as well as increase emissions of global warming pollution, bringing costs that far outweigh the benefits that would come from a large domestic liquid coal industry.

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Fueling Higher Energy Prices with Liquid Coal

For liquid coal to be competitive in the market, and for it to make economic sense to invest in a liquid coal plant, oil prices need to be above $95 per barrel. Recent fluctuations in the price of oil make clear that relying on oil to remain at or near a given price is extremely risky. Even if the liquid coal industry were able to remain competitive against oil, achieving production targets of 300,000 barrels per day of liquid coal by 2015 would require an additional 58 million tons of coal annually. Such an increase in demand would require the United States either to import 30 million tons of coal in 2015 or raise prices enough to make it profitable to mine the harder-to-reach domestic coal.[2]

Given last year's spike in coal prices—caused primarily by a 20 million ton increase in coal exports—it is unlikely that domestic coal suppliers could cover such a large increase in coal demand at a reasonable cost. The higher cost of coal would not only affect the economics of producing liquid coal, but it would also affect the cost of producing electricity from coal, which is already becoming less competitive when compared to natural gas due to recent declines in natural gas prices.

Reassessing the Long-Term Security of Coal

Even if producers could supply enough coal to meet the demands of the liquid coal industry there are concerns about the long-term potential of domestic coal supplies. The coal industry has gone to great lengths to persuade the American consumer that coal is our best and only "cheap" long-term energy solution. However, the 250 years of supply figure they have been using to support this statement comes from a report written more than 35 years ago; more recent research on our coal reserves suggests that we would exhaust our economically recoverable coal reserves much sooner.

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According to a National Academy of Sciences report from 2007, which considers important factors like rising coal production and consumption rates, transportation costs, and other environmental and economic considerations, amount of coal that can produced and sold at a profit at current prices would meet the nation's energy needs for only the next 100 years.[3] While 100 years of supply might still sound like a long time, that number could fall to just 75 years if we take into account the 0.8 percent rise per year in coal consumption predicted by the EIA, and to just 50 years if the liquid coal industry were meeting its production targets.

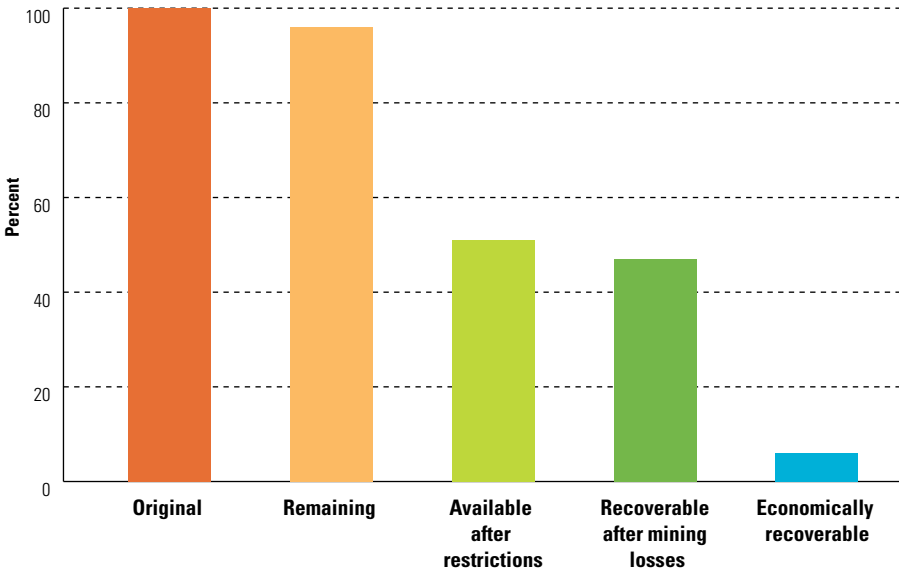
Correcting Out-of-Date Estimates of Recoverable Coal

Taking a look at the Gillette Coalfield, which produces 37 percent of the nation's coal, reveals more clearly the gap between the coal industry's wishful thinking and the realities under the ground. According to a recent assessment by the U.S. Geological Society (USGS) of the Gillette Coalfield, after accounting for restrictions on mining under certain lands, and losses during the coal mining and production processes, the amount of economically recoverable reserves at current prices is only 10.1 billion tons of coal—or less than 6 percent of earlier total projections (see graphic).[4]

The recent finding that economically recoverable coal represents a small fraction of earlier estimates calls into question the wisdom of assuming we can always and everywhere recover 25 percent of identified coal. And beyond the Gillette Coalfield, USGS studies of coal reserves in other parts of the country have documented that the economically recoverable portions of coal reserves are also far below 25 percent.

While it is true that we could produce more coal if the price were higher, this additional coal could no longer be referred to as "cheap." And the price of burning that coal could be even higher when factoring in the environmental costs associated with regulating carbon emissions. Once regulations to limit emissions of carbon and other global warming pollution are in place, the marginal cost advantage of burning coal to generate electricity (when compared to cleaner fuels such as natural gas) may disappear.

Percent of Gillette Coalfield Reserves Available for Extraction
(based on price of $10.47 per ton)



Liquid Coal Will Not Secure Energy Independence

There has never been a better time to invest in clean, renewable, affordable, and secure sources of energy—and liquid coal fails on all counts. Liquid coal fuels increased demand for a finite resource to feed an industrial process that emits far more carbon pollution than even other fossil fuel energy sources. While increasing coal production to the level needed to sustain a liquid coal industry may be technically possible, doing so would raise the cost of coal far above its current "not so cheap" price. Given the higher energy prices and pollution levels that could follow, there is no justification for subsidizing an uneconomic liquid coal industry in the United States.

[1] U.S. Department of Energy, Energy Information Administration, *Annual Energy Outlook 2009 Early Release Overview*, http://www.eia.doe.gov/oiaf/aeo/overview.html#production.

[2] Ibid.

[3] http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=11977

[4] United State Geological Survey, *Assessment of Coal Geology, Resources, and Reserves in the Gillette Coalfield, Powder River Basin, Wyoming*, http://pubs.usgs.gov/of/2008/1202/.

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