

# Liquid Coal: A Bad Deal for Global Warming

Liquid coal, or coal that has been converted to liquid fuel, is being promoted as a cure-all to our nation's energy problems by Big Coal and its allies. However, these polluting giants fail to tell the real story. The truth is that liquid coal is plagued with economic and environmental downsides from the time the coal is mined until long after the liquid is burned. Beyond the conventional pollution long associated with coal, liquid coal also releases almost double the global warming emissions per gallon as regular gasoline. In addition to being a global warming snafu, the powers behind liquid coal want the government to funnel billions in subsidies and tax breaks to artificially create an entirely new industry. At a time when we need to be reducing our carbon emissions, liquid coal represents perhaps the dirtiest, most expensive, and most dangerous energy gamble we could take. Fortunately, however, there are real solutions like efficiency and renewables that can lead us to a cleaner, healthier energy future.

Liquid coal, touted as a solution to our dependence on oil, is arguably the dirtiest, most expensive energy gamble we could take.

water shortages is even greater in the West where water is scarcer, and where unfortunately there has been a growing interest in building coal-to-liquid plants.

Beyond water problems, liquid coal requires vast inputs of coal that would limit the amount of fuel that could be produced. If we were to replace only 10 percent of our nation's transportation fuels with liquid coal we would have to increase coal mining by over 40 percent.<sup>6</sup> Coal mining in our country

## Double the Carbon Dioxide Emissions of Regular Gasoline

Liquid coal is produced when coal is converted into transportation fuels. Manufactured by converting coal into a gas and then into a synfuel, liquid coal requires huge inputs of both coal and energy. In fact, one ton of coal produces only two barrels of fuel.<sup>1</sup>

Due to the inefficient conversion process, the properties of dirty coal, and the large amounts of energy required to convert coal to liquids, liquid coal produces almost double the global warming emissions as regular gasoline.<sup>2</sup> Put another way, driving a hybrid on liquid coal makes it as dirty as a Hummer H3 filled with regular gasoline.<sup>3</sup> Even if the carbon released during production was somehow captured and stored—a technology known as carbon capture and sequestration that remains unproven at any meaningful scale—liquid coal would still release 4 to 8 percent more global warming pollution than regular gasoline.<sup>4</sup>

## Other Environmental Costs

In addition to the serious implications of liquid coal for global warming, liquid coal would cause a range of other environmental problems. More than 4 gallons of water are needed for every gallon of transportation fuel produced, threatening our limited water supplies.<sup>5</sup> The potential for



Liquid coal would require billions in government support to produce fuels dirtier than regular gas.

already relies on destructive techniques, like mountaintop removal mining. Destructive mining practices put communities at risk by contaminating drinking water supplies, destroying streams, and permanently reshaping and damaging the ecosystem and landscape. And, despite industry claims to the contrary, reclamation of coal mines and clean up of coal wastes only lead to other environmental problems.

An increase of coal mining on a scale this large would also jeopardize the long-term prospects for coal, including its use as a source of about half our electricity. Doubling or tripling our use of coal would quickly deplete our reserves.

## Bad Investment in our Energy Future

Liquid coal is also a bad economic choice. There are currently no operating liquid coal plants in the U.S., which means this new industry would require huge government incentives to develop the technol-

ogy and build plants that would operate with a meaningful capacity. These incentives range from subsidies to long-term purchasing contracts to price guarantees that eliminate any financial risk to investors.

Estimates by the Department of Energy put the construction cost of each liquid coal plant at \$7 billion in 2004.<sup>7</sup> However, since then the costs of construction and materials have rapidly grown. Additionally, these initial figures did not even factor in the costs of transportation, which have been growing at an even faster rate. In other words, each plant would cost up to \$100,000 for each barrel of output per day at a plant.<sup>8</sup> Alarming, these estimates also do not include estimates for mandatory carbon capture and storage, which would only add to the construction and operating costs for each plant. Taxpayers gambled on liquid coal synfuels once and lost billions of dollars 30 years ago.

## Real Solutions for Energy Security and our Future

Instead of spending billions to subsidize a massively polluting industry, it's time to invest in clean energy solutions like vehicles that go farther on a gallon of gas. The serious economic and environmental downsides of liquid coal prevent it from being a good option for a cleaner, healthier energy future. Instead of doubling our global warming emissions and funneling billions into a new, dirty industry, we should be investing in efficiency and renewable energy technologies that exist today and can help us solve global warming. It's time to invest in the clean energy industries that will fuel the economy of tomorrow and create hundreds of thousands of new good-paying jobs across the country. Liquid coal is simply not a smart answer for our energy future.

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### FOOTNOTES

[1] NETL, "Economic Impacts of U.S. Liquid Fuel Mitigation Options," July 8, 2006. DOE/NETL-2006-1237.

[2] Williams, Robert et al., "Synthetic fuels in a world with high oil and carbon prices," 8th International Conference on Greenhouse Gas Control Technologies, June 2006.

[3] Based on comparisons of greenhouse gas emissions of a Honda Accord Hybrid and a Hummer H3 ([www.fueleconomy.gov](http://www.fueleconomy.gov)), and where liquid coal produces 47 lbs CO<sub>2</sub> per gallon and regular gasoline 25 lbs CO<sub>2</sub> per gallon (see Williams et al. above).

[4] U.S. EPA, "Greenhouse Gas Impacts of Expanded Renewable and Alternative Fuels Use," April 2007 and Williams, Robert et al. above.

[5] U.S. Department of Energy, "Report to Congress on the Interdependency of Energy and Water," December 2006, page 60.

[6] The National Coal Council, "Coal: America's Energy Future, Volume I," March 2006.

[7] NETL, "Economic Impacts of U.S. Liquid Fuel Mitigation Options," July 8, 2006. DOE/NETL-2006-1237.

[8] Stanford Group Company, "Coal-to-Liquids—Potential Lurks Beyond the Hurdles," December 13, 2006.