

BEREA COLLEGE

Coal-to-Liquid and Coal-to-Gas: Repeal of Federal Funding for CTL/CTG Production

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To: Proposal Action Committee

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Problem: In the spring of 2007, an energy bill was proposed in the U.S. Congress to encourage the commercial production of alternative fuels. Coal-producing states rallied behind a bill that would provide \$200,000,000¹ dollars in subsidies to private firms attempting to establish Coal-to-Liquid or Coal Gassification plants across the South and Mid-West. In particular, Republican Senator Geoff Davis introduced H.R. 370, also known as the Coal-to-Liquid Fuel Promotion Act, designed to promote several key economic incentives to build “CTL” plants by (1) making loan guarantees to certain large-scale coal-to-liquid facilities to produce liquid transportation fuel; (2) establishing a loan program to pay the federal share of the cost of obtaining services necessary for the planning, permitting, and construction of a coal-to-liquid facility; and (3) promulgating regulations for development of coal-to-liquid manufacturing facilities on federal land².

Though the technology (particularly the Fischer-Tropsch process outlined in the bill, a process developed by Nazi scientists during WWII for tank fuel³) for converting biomass into liquid fuel is well-established, the conversion of coal through this method produces twice the carbon dioxide of fuels like petroleum⁴. Likewise, the liquid coal produced is only slightly less harmful to the ozone than traditional diesel and petroleum use. As a matter of fact, for each barrel of liquid coal produced, more than a ton of carbon dioxide is released into the atmosphere.⁵ Solidifying the environmental effects caused by the CTL process, the Department of Energy (DOE) released its environmental impact statement in 2007 which states that each CTL plant built will produce 114 million tons of carbon dioxide (the equivalent of 450 thousand vehicles) and 200 tons of deadly pollutants like arsenic, mercury and sulfuric acid.⁶

Despite the environmental concerns, proponents say that the expansion of commercial CTL plants would significantly lessen American dependence on foreign oil⁷, and according to the Southern States Energy Board it could potentially replace up to one-third of oil imports by 2030. However, even though significant claims are being made about the coal conversion process, the underlying problem is that no viable technology has been produced to offset the resulting carbon dioxide emissions, or to “clean up” up the CTL process, especially as it pertains to commercial-sized CTL operations needed for any real change in oil dependency to occur. The only cleaning method that has been explored is carbon sequestration, but research on the required development to make it a workable technology has been grossly underfunded, when compared to the funding provided by the federal government to construct the CTL plants. The sequestration process requires plants to extract the carbon emissions and sequester

¹ <http://www.govtrack.us/congress/billtext.xpd?bill=h110-370>

² <http://www.washingtonwatch.com>

³ www.npr.org

⁴ www.industrywatch.com

⁵ www.nrdc.org/globalWarming/coal/liquids.pdf

⁶ www.worldwatch.org

⁷ www.futurecoalfuels.com/documents/032307_ctl_enviro_fact_sheet.pdf

them via oceanic sequestration or terrestrial sequestration. As an example of the government's misguided efforts, a recently proposed private-Federal energy alliance attempted to construct the world's first clean-burning CTL center, FutureGen, in Illinois but funding was revoked in late January due to the continually rising cost projections for building the plant, not because of the environmental impact of the process.⁸ Federal and state governments continue to pledge funding to the development and expansion of the synthetic fuel industry on the promise companies will use green methods of production but no such efforts are evident at this time.

As governmental funding increases for the construction of CTL plants, only minimal governmental funding is provided to enhance carbon sequestration research. Until such technology becomes economically viable, the government is investing millions in an industry that promotes eco-terror, not just from the effects of CTL production itself, but through the means by which this coal is harvested, such as Mountaintop Removal, the method of coal mining that now powers coal extraction in the Appalachian region and beyond, predominantly within Eastern Kentucky and West Virginia. This harmful practice has devastating effects on the environment, using explosives to blast away thousands of vertical feet in terrain to expose coal seams and then fill surrounding valleys with the debris. Not only does this ruin local ecosystems and water sources, but the structures of waste and run-off storage areas and sludge ponds have been documented as immensely unstable and destructive to local communities and even state water supplies. Additionally, explosions used to propel MTR activities result in copious amounts of dust settling on residential properties for miles in the surrounding area—dust infused with highly toxic and even carcinogenic sulfur compounds that pose a dangerous threat to citizens. At current rates, projections indicate that nearly 1.4 million acres of land in the U.S. will be mined through this method by 2010, and company commitments to CTL would drastically increase demand for coal and this method of mining—much to the devastation of local communities⁹.

Solution: Congress will immediately place a moratorium on any new or additional government funding of CTL plant construction until such time that carbon sequestration technology is adequately researched and made available at the commercial level. To hasten the production of such technology, the Department of Energy will reallocate half of its \$200,000,000 CTL budget to research and development in coal-producing states to develop viable commercial-level coal sequestration technology. Those energy and utilities corporations who have already received federal funding for CTL technology may retain those subsidies only if they choose to convert existing CTL plants into corn or sugar based ethanol production facilities. In this way, the federal government would ensure that current efforts to combat the catastrophic effects of climate change are not countered by the use of a fuel that is twice as harmful as petroleum. The other half of the DOE's \$200,000,000 budget will be reallocated to developing other renewable fuel sources like solar, geothermal, hydroelectric, and wind energy. The real-world feasibility of this solution is high given that all three 2008 Presidential candidates have vowed support for clean coal technology but only if restrictions are placed on the levels of pollution associated with the technology. This proposed plan will reduce such levels and provide research for alternative fuel sources as well. In addition, even the DOE has expressed interest in furthering carbon sequestration research, citing large-scale projects such as Sleipner in the North Sea, In-Salah in Algeria, and Snøhvit in the Barents Sea as evidence that it is practical; however, DOE representatives note that they cannot commit to such research because under the 2007 Clean Coal Power Initiative, they have no authority to suggest

⁸ www.dailyillini.com/media/paper736/sections/20080129News.html

⁹ <http://www.nrdc.org/globalWarming/coal/liquids.pdf>

project modifications, only to fund or not fund. Under our proposal, Congress will give the DOE authority to make afore-mentioned modifications¹⁰.

Sources: Additional information and dialogue gathered for this proposal was obtained from the following individuals and organizations.

- Dr. Billy Wooten- Assistant Professor of Communication, Director of Forensics at Berea College, and campus D4D advisor.
- Dr. Meta Mendel-Reyes- Director Center for Excellence in Learning and Teaching through Service (CELTS) of Berea College
- Dr. John Heyrman- Chair of Berea College Political Science Department
- Kentuckians for the Commonwealth
- Alex Gibson- Student Government President of Berea College, along with the SGA Senate
- Dr. Chad Berry- Berea College Center for Appalachian Studies
- KY State Senator Ed Worley (D-Madison, Lincoln, Rockcastle counties)
- KY State Senator Gerald Neal (D-Jefferson County)
- KY Rep. Harold Rogers (R-5th district)
- KY Senator Mitch McConnell (R-Minority Leader)
- Madison Co. League of Women Voters

¹⁰ www.sourcewatch.org