



**Written Statement of  
The National Mining Association**

**Before the  
Committee on Environment and Public Works  
of the  
U.S. Senate**

**October 18, 2005**

**Legislative Hearing on  
S. 1772  
The "Gas Petroleum Refiner Improvement and  
Community Empowerment Act"**

The National Mining Association (NMA) appreciates the opportunity to provide its views on S. 1772, the "Gas Petroleum Refiner Improvement and Community Empowerment Act." NMA is a national trade association representing the companies that mine most of the coal, metals, industrial and agricultural minerals produced in the United States; manufacturers of mining and mineral processing machinery and supplies; transporters; financial and engineering firms; and other businesses related to mining.

As the committee debates how America should rebuild and reform its energy infrastructure in the wake of natural disasters, persistently high energy prices and shortages of some domestic energy resources, it should not limit discussion to expansion of the number of refineries only. The committee also should look at expanding the kinds of refineries built. Coal liquefaction or coal-to-liquids (CTL) refineries can be located anywhere that coal is produced. This proven technology can produce clean transportation fuel using domestic coal thus expanding our supply of transportation fuels while decreasing dependence on overseas sources of energy.

NMA strongly supports S. 1772, but urges the committee to amend the definition of "refinery" to include refineries that can use coal as a feedstock. This amendment is necessary to ensure that facilities that process and refine coal by any chemical or physical process, including

liquefaction, to produce gasoline, diesel or other liquid fuels are afforded the same treatment under the Act as crude oil refineries. Equal treatment with petroleum refineries will encourage the widespread deployment of CTL facilities and promote the economic and national security benefits that modern and existing CTL technology can offer.

According to the Energy Information Agency (EIA), the U.S. now depends on foreign sources of petroleum for 56 percent of its needs. EIA forecasts that share will increase to nearly 70 percent by 2025 if nothing changes. Our dependence on foreign sources extends to both crude oil and refined products, the latter due to the lack of new refinery capacity in the U.S. Our existing refining capacity is stretched to its limits and beyond. America's energy security is challenged by both a dependence on foreign supplies and a geographic concentration of refining capacity.

One solution to these, and other, problems related to the nation's critical need for a reliable and affordable domestic supply of liquid transportation fuels is CTL. CTL fuel technologies are well-established and have been improved by 30 years of U.S. government research and development efforts. These efforts, undertaken directly and through industry partnerships, have produced innovative processes ready for widespread commercialization in the 21<sup>st</sup> century.

CTL is not a new technology. By 1944, Germany had 25 liquefaction plants that produced up to 124,000 barrels daily and met 90 percent of the nation's needs. In the 1950s, South Africa developed a commercial liquid fuels industry using synthesis gas to produce transportation fuels such as gasoline and diesel. Since the early 1980s, the technology has been developed further and has produced more than 700 million barrels of synthetic fuels. CTL is not new, but advancements over the years mean that the CTL plant of today is modern, efficient and environmentally sound.

Our nation, with its abundant and readily available supplies of domestic coal combined with the nation's critical need for reliable and affordable supply of liquid fuel, should be promoting the commercial development of CTL refineries. There are more than 250 billion tons of recoverable U.S. coal reserves, the equivalent of an estimated 800 billion barrels of oil. This is compared to Saudi Arabia's proven reserves of 260 billion barrels. United States coal can be converted into clean, zero sulfur synthetic oil and oil products at a cost of \$35 to

\$40 dollars per barrel compared to current prices that are averaging over \$62 per barrel for oil.

China, which is the world's second biggest consumer and importer of oil after the U.S., is planning a \$6 billion investment in new liquefaction plants that would produce 440 million barrels of liquid fuel annually. While the stage is set for rapid commercialization and deployment in the U.S., China with its vast coal reserves and rapidly growing economy currently is ahead of the United States in developing the capability to use coal as a transportation fuel.

A number of factors have discouraged the development of CTL plants in the U.S. First, if oil prices stay above \$35 to \$40 per barrel, a coal refinery makes economic sense. If the price drops below that range (as it has been for most of recent history), there are no assurances that a coal refinery can remain competitive. The historic volatility of oil prices combined with the relatively steady supply of affordable transportation fuel until now has made the risks unacceptable to investors.

Second, coal refineries are expensive to construct with capital costs in the \$600 million to \$700 million range for a 10,000 barrel per day plant. The technical and financial risks of a "first-of-a kind" plant in the United States have discouraged consideration of this type of investment in the past.

Finally, the lead time for a coal refinery, as with all refineries, is a minimum of five to seven years under optimal circumstances.

But, the many advantages of CTL fuels mean that this committee should take steps to encourage its rapid use. The deployment of CTL facilities can improve national and economic security by lessening dependence on foreign oil and substituting plentiful, more affordable U.S. coal. By using this domestic resource, CTL deployment can produce more jobs for Americans and provide a positive influence on the U.S. balance of trade and the economy in general.

From an environmental perspective, CTL is capable of carbon capture. CTL technology also can serve as a bridge to a hydrogen fuel future by linking multiple types of plants into one, such as co-production of liquid fuels, electricity, hydrogen and other products.

Coal reserves are located in 38 states and coal is mined in 26 states representing every region of the country. This means that CTL

facilities can be constructed across the country providing a geographic diversity which will reduce threats to energy security which may result from natural or other disasters.

Although existing impediments to wide scale deployment of CTL technologies are challenging, they can be eliminated or mitigated through concerted and focused efforts by government, industry and public support. Many of these challenges also confront those who are attempting to refurbish or construct new oil refineries.

Among the hurdles to deployment are those that are addressed in S. 1772, including economic development assistance to encourage refinery activity on BRAC property and the streamlining of the refinery permitting process. Coal state economies as well as the energy consuming public will benefit from the provisions of the bill encouraging coal based refineries on BRAC properties. Needless permit delays will affect the construction of CTL refineries just as they do petroleum refineries.

The mining industry is all too familiar with multiple permit challenges and repeated appeals. The delays caused by repetitive challenges and appeals can make projects unattractive to lenders who require a return on their investment within a reasonable period of time. This is particularly true with a first of a kind facility such as a CTL plant where the potential risks set out above are a considerable hurdle to obtaining project financing.

Failure to afford the same incentives and protections for coal liquefaction refineries made available to petroleum refineries under S. 1772, would deny the nation the opportunity to use its domestic resources to address a significant energy and national security challenge.

NMA appreciates the opportunity to provide the committee its views on S. 1772 and urges it to take advantage of this opportunity to provide a level playing field for coal-to-liquids technology, which could have a significant positive effect on our nation's energy and economic future.