

NCC Study Demonstrates Maximizing Coal Use Will Reduce Energy Costs and Create Unprecedented U.S. Socio-Economic Benefits

PRNewswire
WASHINGTON

The National Coal Council (NCC) today released "Coal: America's Energy Future," a study that contains recommendations to the U.S. Secretary of Energy to maximize use of abundant coal for clean electricity generation, transportation fuels, natural gas, hydrogen and ethanol over the next 20 years.

The study recommends the additional use of coal to reduce U.S. energy costs 33 percent while creating more than 1 million new American jobs per year and an aggregate gain of more than \$3 trillion in gross domestic product (GDP), which increases to \$4 trillion with enhanced oil recovery.

The study identifies ample amounts of U.S. coal reserves to support 100 gigawatts of new electricity generation, 2.6 million barrels per day of refined liquid products, and 4 trillion cubic feet (TCF) per year of natural gas production for all applications, in addition to support for ethanol, enhanced recovery of oil and coalbed methane, and hydrogen production.

The study also looks at supply challenges associated with imported oil and imported liquefied natural gas in addition to the explosive economic growth in China and India. To meet increased energy needs, an additional 1.3 billion tons of U.S. coal would be used annually, more than doubling current use.

"We have a vast supply of domestic coal resources to meet soaring energy needs while improving energy security, lowering costs and maintaining the U.S. economy as the premier world economy," said Thomas G. Kraemer, Chairman of the National Coal Council and Coal Group Vice President for Burlington Northern Santa Fe Railway Co.

According to the study, the U.S. Energy Information Administration (EIA) projects that energy consumption will increase 27 percent through 2030. Coal is the only domestic fuel that has the flexibility and reserve base to meet this escalating demand, with enough reserves to last more than a century, even at elevated levels of use.

"Our vision for future coal development in the United States is to use clean coal technology for greater use of our most secure and affordable domestic energy resource to meet the energy needs of the American people," said Gregory H. Boyce, Chair of the NCC Study and President and Chief Executive Officer for Peabody Energy.

"By creating a new energy manufacturing industry in the United States that will generate millions of new jobs, ensure our economic competitiveness and enhance our national security, we will improve the quality of life for Americans while providing a foundation for sustainable economic growth in the decades to come," said Boyce.

The year-long study was conducted by National Coal Council members following a request by U.S. Secretary of Energy Samuel Bodman. The Council identified eight priority findings and developed a suite of proposed policy, fiscal and legislative recommendations to address the findings. The implementation of these proposals would strengthen the nation's energy security and meet the significant increase in demand for energy over the next several decades using clean coal technologies.

"The study is especially timely given recent geopolitical events and the hurricane devastation in the Gulf, which demonstrates the fragile balance between energy supply and demand," said Jeffrey D. Jarrett, U.S. Assistant Secretary of Energy. The report addresses the Secretary's request in the context of the Administration's focus to keep America competitive through affordable energy.

Research by Pennsylvania State University economists highlighted in the report indicates that transforming the Btus in coal for other energy needs generates profound socio-economic benefits:

- By converting coal to transportation fuels and natural gas, energy prices will decline by nearly 33 percent as a result of Btu Conversion.
- Lower energy prices resulting from coal energy conversion and the

stimulus from plant construction and operation would result in a GDP that is more than \$600 billion higher in 2025 and total employment increases of 1.4 million per year.

- The present discounted value of the cumulative gains in GDP from 2007 to 2025 is \$3 trillion. These gains increase to \$4 trillion if carbon dioxide from clean electricity generation, transportation fuels, natural gas, hydrogen and ethanol is used to enhance domestic oil production.

The National Coal Council is a private, nonprofit advisory body chartered by the U.S. Secretary of Energy in 1984 under the Federal Advisory Committee Act. Members of the National Coal Council are appointed by the Secretary of Energy and reflect diverse interests from business, industry, academia and other groups. Upon final publication in April, the study may be downloaded at <http://nationalcoalcouncil.org/>.

"COAL: AMERICA'S ENERGY FUTURE" NATIONAL COAL COUNCIL FINDINGS

COAL-TO-LIQUIDS

Application of coal-to-liquids technologies will move the United States toward greater energy security and relieve cost and supply pressures on transportation fuels by producing 2.6 million barrels per day of ultra clean coal-derived diesel fuel while utilizing an additional 475 million tons of coal per year. This will enhance the U.S. oil supply by 10 percent.

The United States continues to increase its dependence on foreign oil as domestic production declined 11 percent from 2001 to 2005. Global demand is increasing, led by a growing middle class and the forces of industrialization and urbanization in China and India while concerns are mounting that world oil production is depleting reserves at rates faster than replacement reserves can be deployed.

COAL-TO-NATURAL GAS

Using coal to produce natural gas would ease supply pressures by providing an alternative to at least 15 percent of America's annual consumption, or 4 trillion cubic feet (TCF) per year. The additional supply would moderate natural gas prices and use an additional 340 million tons of coal per year. This natural gas could be used for home heating and all other applications that use natural gas, including repowering existing underutilized combined cycle units. The amount is also roughly equal to EIA's projection of liquefied natural gas (LNG) imports in 2025.

Conventional natural gas production in the United States is in decline, leading to supply and deliverability issues, higher prices and increasing dependence on foreign sources. These problems will become far more serious as domestic supplies continue to decline and natural gas demand increases. LNG presents the same economic cost and national security challenges as imported oil.

COAL-TO-CLEAN ELECTRICITY

Construction of 100 gigawatts of coal-to-clean electricity plants by 2025 would mean that coal could satisfy more than 60 percent of the expected increase in electricity generating capacity by using an additional 375 million tons of coal per year. Increased coal-to-clean electricity capacity would relieve price pressures on natural gas and allow it to be used in more cost-efficient and productive ways.

The nation's focus on relatively expensive and price volatile natural gas to meet incremental demand for electricity has not served the public interest. Reserve margins of inexpensive baseload coal electricity generation capacity have been rapidly depleted. America must develop new coal-fueled generating capacity to avoid additional increases in natural gas demand that would further strain supplies and lead to much higher prices. The administration's proposed FutureGen project is a major step toward developing the next generation of coal-based electric power plants targeting zero emissions.

COAL TO PRODUCE ETHANOL

Increasing the use of coal for heat and electricity to produce ethanol would reduce costs and displace oil and natural gas by significant amounts while utilizing an additional 40 million tons of coal per year, thereby freeing up natural gas for other uses and relieving price pressures. The United States is committed to expanding the use of ethanol to displace a significant amount of foreign oil as a transportation fuel. Currently, natural gas, diesel fuel and electricity are used to produce ethanol.

COAL-TO-HYDROGEN

The United States has identified the Freedom Fuel and Freedom Car Initiatives as ways to transition the country to a hydrogen economy and use coal-fueled energy to power fuel cells. Development of a fleet of coal-to-hydrogen plants would mean that coal could satisfy at least 10 percent of the nation's transportation needs with Freedom Car efficiencies. This application would use an additional 70 million tons of coal per year.

ENHANCED OIL AND GAS (COALBED METHANE) RECOVERY AS CARBON MANAGEMENT STRATEGIES

Major regional carbon storage projects and partnerships are under way around the country. One promising carbon management opportunity is enhanced oil recovery, which could potentially lead to production of an additional 2 million to 3 million barrels of oil per day, assuming a technically recoverable reserve base of up to 89 billion barrels in 10 basins.

Captured carbon dioxide can also be used to produce methane from coalbeds. This increase in domestic production would be an important step toward energy security and would help moderate price pressures on imported oil and natural gas. Other carbon capture and storage technologies should be developed to complement advanced coal utilization technologies.

DELINEATE U.S. COAL RESERVES AND TRANSPORTATION CONSTRAINTS AS PART OF AN EFFORT TO MAXIMIZE U.S. COAL PRODUCTION OVER THE NEXT 100 YEARS

The National Coal Council has conducted an in-depth survey of existing data and finds that the mining industry and U.S. transportation infrastructure can be expanded to accommodate growth in coal production by over 1.3 billion tons per year by 2025. Maximizing coal production would build a platform for strong new job creation and economic growth for Americans.

STIMULATE ECONOMIC GROWTH AND ENHANCE NATIONAL SECURITY THROUGH THE DEVELOPMENT OF U.S. COAL RESERVES

The National Coal Council finds that the United States could increase coal production by over 1.3 billion tons per year by 2025 for Btu conversion technologies and still have a supply that would last at least 100 years. Maximizing coal production would reduce dependence on imported energy and the economic benefits for the United States would be enormous.

An independent analysis highlighted in the NCC report shows that using 1.3 billion tons of additional coal for Btu conversion technologies would result in more than \$600 billion in increased annual economic growth and 1.4 million new jobs per year by 2025. The present value of these cumulative gains in GDP would total almost \$3 trillion, which increases to \$4 trillion with enhanced oil recovery. The capital investment needed for large-scale coal conversion projects would be approximately \$515 billion (present value of \$350 billion).

Media Contacts

Robert Beck	Fred Palmer, Peabody Energy
Executive Vice President	Technical Work Group Chair
National Coal Council	National Coal Council
202-223-1991	314-342-7619

SOURCE: National Coal Council

CONTACT: Robert Beck, Executive Vice President of National Coal Council,
+1-202-223-1991, or Fred Palmer of Peabody Energy and Technical Work Group
Chair of National Coal Council, +1-314-342-7619

Web site: <http://nationalcoalcouncil.org/>
