

Green Car Congress

05Jan07 http://www.greencarcongress.com/coaltoliquids_ctl/index.html

COAL-TO-LIQUIDS (CTL)

[Due to the increasing size of the archives, each topic page now contains only the prior 365 days of content. Access to older stories is now solely through the Monthly Archive pages or the site search function.]

Senators Re-Introduce Coal-to-Liquids Legislation

January 05, 2007

US Senators Jim Bunning (R-KY) and Barack Obama (D-IL) have [re-introduced](#) a piece of legislation that would help create the infrastructure needed for large-scale production of Coal-to-Liquids (CTL) fuel in the US.

The proposed "Coal-To-Liquid Fuel Promotion Act of 2007" is based on the bill first introduced by Senators Bunning and Obama last spring and expands tax incentives, creates planning assistance, and develops Department of Defense support for a domestic CTL industry.

[More...](#) | [Comments \(2\)](#) | [TrackBack \(0\)](#)

India to Prepare Action Plan for Coal-to-Liquids Industry

The Indian government's Investment Commission has [concluded](#) that Coal-to-Liquids (CTL) is feasible in India and recommended to the Prime Minister, Dr. Manmohan Singh, that it should become an integral part of India's strategy for oil security.

The Prime Minister has decided to set up an Inter-Ministerial Group within the Planning Commission to further examine the proposal and recommend a timebound action plan.

[More...](#) | [Comments \(3\)](#) | [TrackBack \(0\)](#)

Japanese Company Investing in New Coal Liquefaction Project in China

December 26, 2006

[Interfax](#). Universe Gas and Oil Co. (UGO), a Japanese energy development company, plans to invest RMB 400 million (\$51.28 million) in a coal-to-liquids project in northeastern China's Jilin Province.

Zhang Shuang, an official with the company, said the plant will have an annual capacity of 500,000 tonnes (about 3.7 million barrels—10,000 barrels per day) of fuel oil production capacity after three phases of construction.

[More...](#) | [Comments \(17\)](#) | [TrackBack \(0\)](#)

Albemarle Creates Alt-Fuels Division

December 22, 2006

Albemarle Corporation, a leading global catalyst and specialty chemical maker, has [created](#) a new division focusing on alternative fuel technologies.

To be led by Ray Hurley, formerly vice president for catalysts, the new division will focus on developing the market for Albemarle's catalysts in Canadian oil sands, coal-to-liquids (CTL), gas-to-liquids (GTL) and biomass-to-liquids (BTL) technologies. In addition, he will focus on alliance opportunities in alternative fuels.

[More...](#) | [Comments \(1\)](#) | [TrackBack \(0\)](#)

China to Invest \$128 Billion to Develop Coal-Based Synthetic Fuels

December 14, 2006

[Xinhua](#). China will invest more than one trillion yuan (US\$128 billion) to develop alternative coal-based synthetic fuels to ease the country's dependence on oil imports, according to the National Development and Reform Commission (NDRC).

The project aims to produce 30 million tons of liquefied coal and 20 million tons of dimethyl ether (DME) by 2020. Coal-to-olefin (CTO) output is expected to hit 8 million tons and coal methanol to reach 66 million tons.

[More...](#) | [Comments \(28\)](#) | [TrackBack \(0\)](#)

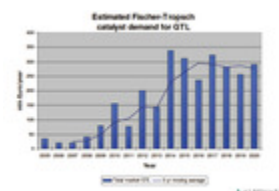
Rentech in New Coal-to-Liquids Fuels Project in West Virginia

December 09, 2006

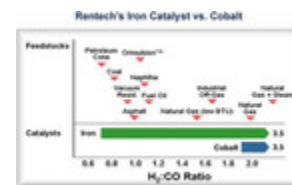
The Mingo County Redevelopment Authority (MCRA), Williamson, West Virginia and Rentech, Inc. have [entered](#) into a Joint Development Agreement (JDA) for the development of a Fischer-Tropsch (FT) Coal-to-Liquids (CTL) fuels plant to be located in Mingo County (the Mingo Project).

Located in the lower portion of southwestern West Virginia, the Mingo Project would utilize Rentech's Fischer-Tropsch technology to convert synthesis gas, a combination of hydrogen and carbon monoxide produced from the West Virginia coal, into transportation fuels to be used in the Mingo County region.

[More...](#) | [Comments \(9\)](#) | [TrackBack \(0\)](#)



Albemarle's estimate of the growth of the GTL catalyst market. Click to enlarge.



Rentech uses a proprietary iron catalyst well-suited to CTL projects. Click to enlarge.

Study: Oil Transition Carries Major Environmental Risks

December 08, 2006

The increasing use of substitute fossil-based liquid hydrocarbons—either unconventional crude oils or synthetic liquid fuels (synfuels)—will dramatically increase global greenhouse gas emissions unless mitigating steps are taken, according to a new study by researchers at UC Berkeley.

The authors argue that the global energy system is in the early stages of a transition from conventionally produced oil to a variety of substitutes, bringing economic, strategic, and environmental risks. They further argue that without appropriate policies, tradeoffs between these risks are likely to be made so as to allow increased environmental disruption in return for increased economic and energy security.

[More...](#) | [Comments \(30\)](#) | [TrackBack \(0\)](#)

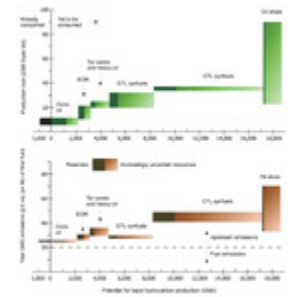
EIA Energy Outlook 2007 Sees Shift Towards Biofuels, Coal-to-Liquids, and Accelerated Efficiency Improvements

December 06, 2006

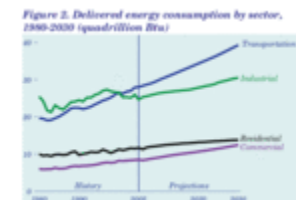
The reference case in the Energy Information Administration's (EIA) early release edition of *Annual Energy Outlook 2007* (AEO2007) [projects](#) more biofuels (both ethanol and biodiesel) consumption, growth in coal-to-liquids (CTL) capacity and production, growing demand for unconventional transportation technologies, growth in nuclear capacity and generation, an expansion in coal-fired power generation and accelerated improvements in energy efficiency throughout the economy.

AEO2007 projects ethanol use increasing from 4 billion gallons in 2005 to 14.6 billion gallons (about 8% of gasoline consumption by volume) by 2030. Only 300 million gallons of that are projected to come from cellulosic biomass sources; the rest will come from corn. Biodiesel use will also grow rapidly to 400 million gallons in 2030, up from 25 million gallons in 2005. The EIA expects 5.7 billion gallons of CTL fuels by 2030.

[More...](#) | [Comments \(23\)](#) | [TrackBack \(0\)](#)



*Global supply of liquid hydrocarbons from all fossil resources and associated costs in dollars (top) and GHG emissions (bottom).
Click to enlarge.*



*The transportation sector will continue to be the largest and most rapidly growing consumer of energy.
Click to enlarge.*

New Zealand Coal Producer Investigating CO2 Storage Potential for Coal-to-Liquids CCS

November 13, 2006

New Zealand's largest coal mining company, government-owned Solid Energy New Zealand Ltd., will [survey](#) potential land-based carbon dioxide storage sites in Otago and Southland as part of a project exploring carbon capture and storage (CCS) technologies.

Solid Energy is investigating a NZ\$1 billion (US\$685 million) Coal-to-Liquids project of which CCS would be a part. ([Earlier post.](#))

[More...](#) | [Comments \(1\)](#) | [TrackBack \(0\)](#)

Coal-to-Liquids Co-Generation Plant with Carbon Capture and Sequestration Slated for Montana

October 03, 2006

Montana Governor Brian Schweitzer and executives from Arch Minerals, BMC and DKRW Advanced Fuels [announced](#) an initial agreement to construct a coal-to-liquids plant in Montana. The facility will be located on the site of the Bull Mountain Coal (BMC) mine outside of Roundup, MT.

The plant will gasify coal, converting a portion of the resulting syngas to 22,000 barrels per day of Fischer Tropsch diesel, with the rest going to generate 300 MW of power using IGCC (Integrated Gas Combined Cycle) technology.

[More...](#) | [Comments \(13\)](#) | [TrackBack \(0\)](#)

Taiwan Oil Firm Funding Coal-to-Liquids Study in Alaska

September 29, 2006

The *Alaska Commerce Journal* [reports](#) that Chinese Petroleum Corp. (CPC) of Taiwan will kick in \$1.5 million to co-fund a preliminary feasibility study for an 80,000-barrel-per-day coal-to-liquids fuels plant near the Beluga coal fields on the west side of Cook Inlet, in Southcentral Alaska.

CPC is working with the Alaska Industrial Development and Export Authority (AIDEA) and Alaska Natural Resources-to-Liquids, LLC (ANRTL), an Alaska Fischer-Tropsch firm.

[More...](#) | [Comments \(8\)](#) | [TrackBack \(0\)](#)



The proposed Cook Inlet Coal-to-Liquids Project. Click to enlarge.

Shell and Anglo American Advance Monash Coal-to-Liquids Project

September 23, 2006

Energy Investments Australia Pty Ltd (Shell) and Anglo American plc have [signed](#) a joint development agreement (JDA) for the two companies to further advance the Monash Energy clean coal-to-liquids project—including carbon capture and sequestration—in the state of Victoria, Australia. ([Earlier post.](#))

This agreement is the first under a clean coal energy alliance formed by Shell and Anglo American in May 2006.

[More...](#) | [Comments \(4\)](#) | [TrackBack \(0\)](#)

Monash Energy Moving Forward on 60Kbpd Coal-to-Liquids with Carbon Capture and Sequestration Project

September 10, 2006

The Monash Energy Project in Australia—which initially envisages an integrated Coal-to-Liquids operation that includes a brown coal coalmine, drying and gasification plant, carbon dioxide capture and storage and a gas-to-liquids (GTL) plant with associated power generation ([earlier post](#))—is moving forward.

In August, [Monash Energy](#), a subsidiary of Anglo Coal, [secured](#) a site for its proposed demonstration plant. Monash Energy is seeking to demonstrate and gain experience in the performance of Latrobe Valley brown coal in drying and gasification, before finalizing the design of its major Coal-to-Liquids plant.

[More...](#) | [Comments \(4\)](#) | [TrackBack \(0\)](#)

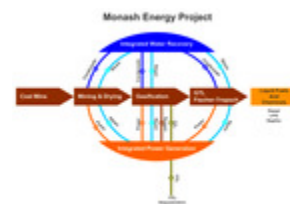
Syntroleum Shuttters Gas-To-Liquids Demonstration Plant

September 08, 2006

Syntroleum [announced](#) the completion of the production of 100,000 gallons of Fischer-Tropsch aviation fuel for the military at the company's 70-barrel-per-day Catoosa Demonstration Facility (CDF)—and with it, the cessation of operation of the facility.

In addition, Syntroleum has suspended catalyst activity testing at its 2-barrel-per-day pilot plant, saying that its work was complete.

[More...](#) | [Comments \(8\)](#) | [TrackBack \(0\)](#)



Overview of the Monash Energy Project. Click to enlarge.

Arch Coal Takes 25% Stake in DKRW Advanced Fuels; Shoots for "Significant" Role in Coal-to-Liquids

August 25, 2006

Arch Coal, the US's second-largest coal producer, has [acquired](#) a 25% equity interest in DKRW Advanced Fuels, LLC. In exchange, Arch has agreed to extend its existing option agreement with DKRW Advanced Fuels, to work with DKRW Advanced Fuels to secure coal reserves for two additional coal-to-liquids (CTL) projects outside of the Carbon Basin, and to invest \$25 million in the company.

DKRW Advanced Fuels is a subsidiary of Houston-based DKRW Energy LLC and the principal developer of the Medicine Bow Fuel and Power coal-to-liquids project in the Carbon Basin of southern Wyoming. The Medicine Bow CTL plant will initially produce about 11,000 bbl/day of transport diesel and other fuels.

[More...](#) | [Comments \(6\)](#) | [TrackBack \(2\)](#)

Coal Gasification Archive Goes Online

August 24, 2006

A Texas A&M University history professor and Syntroleum Corporation, owner of a compact Fischer-Tropsch fuels technology, are [posting](#) nearly a quarter of a million pages of coal gasification research conducted from the 1920s through 1980s on the Internet.

Professor Anthony Stranges, who holds degrees in chemistry and a doctorate in history, was part of a team of historians, chemists and engineers formed at the university in the 1970s to assemble and analyze hundreds of thousands of pages of German gasification documents captured after World War II.

[More...](#) | [Comments \(4\)](#) | [TrackBack \(1\)](#)

Report: Beard Energy Planning \$4B Coal-to-Liquids Plant in Ohio

August 21, 2006

The *Morning Journal* [reports](#) that [Beard Energy](#), a Vancouver, Washington-based energy company that is building ethanol plants in Ohio and Nebraska, may soon announce plans for a \$4-billion coal-to-liquids (CTL) plant in Wellsville, Ohio. Wellsville is south of Youngstown, Ohio and west of Pittsburgh, Pennsylvania.

Neither the company nor county officials would confirm the report, although Beard's president reportedly told the Ohio Coal Association that the company had selected the site.

[More...](#) | [Comments \(27\)](#) | [TrackBack \(0\)](#)

DKRW and SNC-Lavalin in Alliance for Coal-to-Liquids Projects

August 16, 2006

DKRW Advanced Fuels LLC (DKRW), headquartered in Houston, Texas and SNC-Lavalin GDS, Inc. of Houston and SNC-Lavalin Constructors Inc. of Bothell, Washington, wholly-owned subsidiaries of SNC-Lavalin (TSX: SNC), have [formed](#) an alliance to develop, design and construct a number of coal-to-liquid fuel projects each valued in excess of \$1 billion.

Medicine Bow Fuel & Power LLC (MBF&P), a wholly-owned subsidiary of DKRW Advanced Fuels LLC (DKRW), has awarded a contract to SNC-Lavalin GDS, Inc. and SNC-Lavalin Constructors Inc. to provide feasibility studies, front end engineering and design (FEED) services, and turnkey engineering procurement construction (EPC) contractor services for DKRW's future coal-to-liquid projects. The Medicine Bow, Wyoming coal-to-liquid project's FEED is expected to commence during the 4th Quarter 2006.

[More...](#) | [Comments \(4\)](#) | [TrackBack \(0\)](#)

Indiana Governor Introduces Energy Plan; Focus on Coal and Biomass

August 11, 2006

Indiana Governor Mitch Daniels [introduced](#) today the state's "Hoosier Homegrown" Energy Plan which focuses on the substitution of Indiana coal and biomass for current coal, natural gas and petroleum imports for use in power generation and transportation.

The governor also signed Executive Order 06-14 to create an Interagency Council on Energy to oversee the further development and implementation of the plan and to provide energy policy advice to the governor and General Assembly.

[More...](#) | [Comments \(5\)](#) | [TrackBack \(0\)](#)

Bill: ANWR Revenue to Support Development of Cellulosic Ethanol, Solar, Fuel-Cells and Coal-to-Liquids

July 28, 2006

US Representative Devin Nunes (R-CA) [introduced](#) the "American-Made Energy Trust Fund" bill (H.R. 5890). The bill's provisions would increase the tax credits for cellulosic biomass ethanol, extend tax incentives for solar and fuel cell property, promote coal-to-liquid fuel activities, and open up ANWR (Arctic National Wildlife Refuge) for oil and gas exploration and production.



*Indiana's growth in biofuel production.
Click to enlarge.*

The bill would take the lease and royalty revenues from ANWR and place them in a trust fund. All monies placed in the American-Made Energy Trust Fund could only be used for the development of new alternative energy technologies. ANWR's direct revenue to the US Treasury is estimated at \$40 billion during its lifetime of production at today's oil prices.

[More...](#) | [Comments \(54\)](#) | [TrackBack \(0\)](#)

China Issues Some Restrictions On Coal-to-Liquids Developments

July 20, 2006

The Chinese government has [issued](#) a circular on regulating the coal-chemical industry, urging local governments to tighten control of new projects.

The government will not approve coal liquefaction (Coal-to-Liquids) projects with an annual production capacity of less than three million tons; coal to methanol or dimethyl ether (DME) projects of less than one million tons; and coal-to-alkene projects of less than 600,000 tons, according to a circular released by the National Development and Reform Commission (NDRC).

[More...](#) | [Comments \(3\)](#) | [TrackBack \(0\)](#)

Peabody and Rentech Partner to Develop Major Coal-to-Liquids Projects in the US

July 18, 2006

Peabody Energy and Rentech, Inc. have [entered](#) into a joint development agreement to evaluate sites in the Midwest and Montana for coal-to-liquids projects that would transform coal into diesel and jet fuel. Projects would be sited where Peabody has large reserves and would be designed using Rentech's proprietary Fischer-Tropsch coal-to-liquids process.

The plants could range in size from producing 10,000 to 30,000 barrels of fuel per day (bpd). A 10,000 bpd plant would use 2 to 3 million tons of coal annually, and a 30,000 bpd plant would use 6 to 9 million tons of coal annually, based on the quality of coal.

[More...](#) | [Comments \(16\)](#) | [TrackBack \(0\)](#)

Report: Sasol Considering Coal-to-Liquids Plant in India

July 10, 2006

The Indian press [reports](#) that Sasol may build a major Coal-to-Liquids plant in India. India had to import 68% of the 2.485 million barrels of oil per day it consumed in 2005, according to the *BP Statistical Review of World Energy 2006*.

In June, Sasol signed two agreements with Chinese firms that move forward

the work on two major CTL projects with a combined output capacity of 160,000 barrels per day in China. ([Earlier post.](#))

[More...](#) | [Comments \(3\)](#) | [TrackBack \(0\)](#)

QGX Launches Mongolian Coal-to-Liquids Initiative

June 27, 2006

[QGX Ltd.](#), a Canadian company that has been exploring for mineral deposits in Mongolia since 1994, has [engaged](#) [Nexant](#), Inc., a global energy consulting company with core competencies in coal gasification, Integrated Gasification Combined Cycle (IGCC), coal-to-liquids (CTL) Fischer-Tropsch (FT) processing and gas-to-liquids (GTL) technologies, to assess the technological and economic potential for applying CTL technologies to the coal at Baruun Naran in Mongolia.

Nexant's initial review of the coal-quality data for Baruun Naran coal indicates that the coal appears amenable to coal-conversion applications.

[More...](#) | [Comments \(3\)](#) | [TrackBack \(0\)](#)

Syntroleum to Supply 100,000 Gallons of FT Fuel to DoD

Syntroleum has [signed](#) a contract to deliver 100,000 gallons of Fischer-Tropsch (FT) synthetic fuel to the US Department of Defense (DoD) for evaluation as part of a larger program aimed at long-term prospects for the domestic manufacture and supply of synthetic aviation fuels from FT plants.

The government is currently seeking up to 200 million gallons of alternative synthetic aviation fuel in 2008.

[More...](#) | [Comments \(4\)](#) | [TrackBack \(0\)](#)

Sasol and Chinese Sign Second-Stage Agreements for 160K BPD Coal-to-Liquids Projects

June 22, 2006

Sasol today [signed](#) a co-operation agreement with a consortium led by China's Shenhua Corporation for proceeding with the second stage of feasibility studies to determine the viability of an 80,000 barrels per day (bpd) potential coal-to-liquids (CTL) plant in the Shaanxi Province, about 650 kilometres west of Beijing.

Sasol yesterday signed a similar agreement for another 80,000 bpd CTL project in the Ningxia Hui Autonomous region with Shenhua Ningxia Coal Ltd. The combined capacity of the two



Baruun Naran is within trucking distance of major steel and power generation centers in northern China. Click to enlarge.



CTL development in China.

Chinese plants are roughly equivalent to that of Sasol's existing Secunda facility in South Africa.

[More...](#) | [Comments \(10\)](#) | [TrackBack \(0\)](#)

Montana Governor Testing GTL-Powered Pickup

June 20, 2006

Montana Governor Brian Schweitzer and staff will be [testing](#) a Dodge Ram 2500 pickup powered by a Cummins diesel engine fueled by neat synthetic diesel produced by Syntroleum's Gas-to-Liquids Fischer-Tropsch process.

The Dodge Ram pickup was donated by Dodge dealerships across Montana. Syntroleum is providing the Fischer-Tropsch synthetic diesel, which can be made from natural gas, coal or biomass. Governor Brian Schweitzer is outspoken about his belief in the need for the development of a coal-to-liquids industry—using Montana coal. ([Earlier post.](#))

[More...](#) | [Comments \(15\)](#) | [TrackBack \(0\)](#)

Shenhua Group Has 8 CTL Projects in Pipeline; Targeting 30M Tons per Year by 2020

June 16, 2006

[China Daily](#). Shenhua Group, China's biggest coal producer (and the third-largest in the world) is planning eight Coal-to-Liquids projects that will produce some 30 million tons per year (about 600,000 barrels per day) of synthetic oil and products by 2020.

The first three of the eight projects will have a total capacity of 4 million tons per year, and are due to be completed by 2010. The eight plants will be built in Shaanxi, and the autonomous regions of Inner Mongolia, Xinjiang Uygur and Ningxia Hui. Shenhua is building both direct and indirect liquefaction projects. ([Earlier post.](#))

[More...](#) | [Comments \(21\)](#) | [TrackBack \(0\)](#)

Japan's METI to Provide China with Coal Liquefaction Technologies

June 11, 2006

The *Nihon Keizai Shimbun* [reports](#) that Japan's The Ministry of Economy, Trade and Industry (METI) will provide coal liquefaction technologies to China as part of a broader Japanese effort to promote coal use in Asia outside Japan to alleviate the tightness in global oil supplies.



Shenhua's first direct coal liquefaction train is due to come online in 2007.



NEDO approach to liquefaction. Click to enlarge.

Earlier this year, the Chinese government announced plans to invest about US\$15 billion in coal-to-liquids (CTL) plants (both direct and indirect) over the next 5 to 10 years as part of an effort to reduce dependency on oil imports.

[More...](#) | [Comments \(10\)](#) | [TrackBack \(0\)](#)

Syntroleum and Sustec to Develop Coal-to-Liquids Plant In Germany

June 05, 2006

Syntroleum Corporation and Sustec Industries have entered into a joint project development agreement to [develop](#) a nominal 3,000 barrel per day (bpd) Syntroleum Fischer-Tropsch (FT) and Synfining unit as the first phase of a possible 20,000 bpd project at Sustec's Schwarze Pumpe industrial facility at Spreetal, Germany.

The 3,000 bpd Spreetal CTL plant is the first project under the Sustec-Syntroleum joint venture announced in January this year that provides for exclusive joint business development of projects integrating Sustec's gasification technology (from its Future Energy GmbH portfolio company) with Syntroleum's Fischer-Tropsch (FT) technology. ([Earlier post.](#))

[More...](#) | [Comments \(5\)](#) | [TrackBack \(1\)](#)

EU Energy Commissioner Calls for Development of Sustainable Coal Technologies

May 29, 2006

In a [speech](#) today in Gliwice, Poland to a conference on the future EU energy mix, EU Energy Commissioner Andris Piebalgs said that while the EU's newly abundant coal reserves could offer security of supply, coal use must be accompanied by a reduced environmental impact, which means lower emissions.

The condition of the EU25 is very different from the earlier EU15, Piebalgs noted. *"Declining coal production in the EU has been bolstered by that of Poland, the world's 7th largest coal producer. Not only has this raised the relative importance of coal in the EU, but it has also reinforced the need for Europe to value its indigenous resources."*

[More...](#) | [Comments \(5\)](#) | [TrackBack \(0\)](#)

Anglo American and Shell Form Coal-Conversion Alliance

May 26, 2006

Anglo American, one of the world's largest mining groups, and Shell Gas & Power International have [formed](#) an Alliance in the field of coal conversion.

The two companies will take selective equity positions in emerging coal-

conversion projects, combining Anglo American's coal reserves and mining capabilities with Shell's gasification and conversion technologies. The objective is the extraction and gasification of coal with the subsequent polygeneration of products including chemicals, hydrogen, power, synthetic liquid fuels and other uses.

[More...](#) | [Comments \(5\)](#) | [TrackBack \(0\)](#)

Pennsylvania Governor Pushes for Bio- and Synthetic Fuels Standard (corrected)

May 10, 2006

Pennsylvania Governor Edward Rendell used the opening of the first publicly-available E85 fueling station in Pennsylvania to [announce](#) a new initiative to produce 900 million gallons of bio- or synthetic fuels into the commonwealth's gasoline and diesel supplies over the next decade.

The PennSecurity Fuels Initiative targets the use of ethanol, biodiesel or coal-to-liquids fuels (the last equipped with carbon offsets). Nine-hundred million gallons is the forecast amount of fuel that would be imported from the Persian Gulf to Pennsylvania in 10 years, according to the Governor's office.

[More...](#) | [Comments \(4\)](#) | [TrackBack \(0\)](#)

Australian CTL Company Goes Public

May 08, 2006

Australia's [Linc Energy](#), which is partnering with Syntroleum Corporation on a coal-to-liquids (CTL) project in Australia that integrates Linc's underground coal gasification (UCG) technology with Syntroleum's air-based Fischer-Tropsch technology ([earlier post](#)), has [closed](#) its initial public offer (IPO) oversubscribed, raising \$A22 million (\$US16.97 million).

Part of the funds will be used to expand the existing UCG facility at Chinchilla, Queensland and to install a GTL demonstration plant with a 5 barrel-per-day production capacity.

[More...](#) | [Comments \(0\)](#) | [TrackBack \(0\)](#)

Senate Committee Convenes Coal Gasification Hearing

May 02, 2006

As a follow-on to last week's hearing on Coal Liquefaction ([earlier post](#)), the US Senate Committee on Energy and natural Resources convened a hearing Monday regarding the economic and environmental issues associated with coal gasification technology.

Testifying at the hearing were: David Garman, Under Secretary of Energy for Energy, Science and Environment, US Department of Energy; Brian Ferguson, CEO, Eastman Chemical Company; William Bruce, President, BRI Energy, LLC; Bill Douglas, Vice President, Econo-Power International Corp.; Bill Boycott, General Manager, Agrium USA, Inc.; and Antonia Herzog, Climate Center Staff Scientist, Natural Resources Defense Council.

[More...](#) | [Comments \(7\)](#) | [TrackBack \(0\)](#)

BRI Energy Seeking to Build Two Gasification-Fermentation Ethanol Plants

May 01, 2006

[BRI Energy](#), a company that ferments gasified waste, biomass or hydrocarbons such as coal into ethanol ([earlier post](#)) [announced](#) tentative plans to build one or two gasification-fermentation facilities in Oak Ridge, Tennessee.

BRI hopes for federal loan guarantees for part of the funding of both projects: one to convert western coal to ethanol, and the other to convert burnable municipal waste (paper, plastic, garbage, leather) to ethanol.

[More...](#) | [Comments \(27\)](#) | [TrackBack \(0\)](#)

Oxford Catalysts Group Goes Public in £15 Million IPO

April 27, 2006

Oxford Catalysts Group, which has [developed](#) new catalysts that, among other things, transform waste methane into hydrogen for use with fuel cells or into Fischer-Tropsch liquid fuels ([earlier post](#)), has gone public on the AIM market of the London Stock Exchange in an IPO that raised £15 million (US\$18.8 million)—£14 million net of expenses.

The over-subscribed placement of 8,620,690 shares valued the Company at £65 million (US\$81 million).

[More...](#) | [Comments \(0\)](#) | [TrackBack \(0\)](#)

National Coal Council Sets an Aggressive Transportation Fuel and Energy Agenda

April 26, 2006

In April 2005, Energy Secretary Samuel Bodman asked the National Coal Council (NCC) to conduct a study and prepare a report identifying the challenges and opportunities for more fully exploiting US domestic coal resources. The first volume of the report is now in, and proposes an eight-point aggressive expansion of the use of coal via "BTU conversion" for



BRI Process schematic. Click to enlarge.

transportation and energy needs.

The chair of the report Study Group is Gregory Boyce, CEO of Peabody Energy —the world's largest private-sector coal company, with 2005 sales of 240 million tons of coal and \$4.6 billion in revenues. Its coal products fuel approximately 10% of all US and 3% of worldwide electricity.

[More...](#) | [Comments \(12\)](#) | [TrackBack \(0\)](#)

US Senate Committee Convenes Hearing on Coal-to-Liquids

April 25, 2006

The US Senate Committee on Energy and Natural Resources held a full-committee [hearing](#) on the economic and environmental issues associated with coal-to-liquids processing, and on the implementation of the provisions of the Energy Policy Act of 2005 addressing CTL.

Testifying at the hearing were Dr. Clarence Miller, of the Department of Energy (DOE); Dr. Arie Geertsema, University of Kentucky; Dave Hawkins, NRDC; Hunt Ramsbottom, Rentech (the only Fischer-Tropsch vendor in this session); and James Roberts, Foundation Coal Corporation.

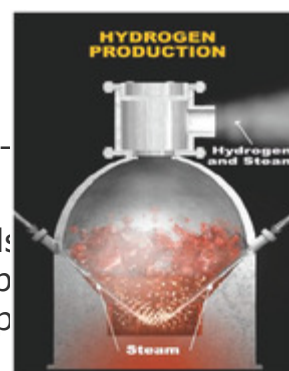
[More...](#) | [Comments \(29\)](#) | [TrackBack \(0\)](#)

Companies Partner to Advance Metal-Bath Gasification Technique for Coal-to-Liquids

April 22, 2006

[Diversified Energy](#) Corporation and [Alchemix](#) Corporation are [working](#) together to accelerate the development of Alchemix' HydroMax process, a distinct approach to gasification for hydrogen production or the production of a syngas for Fischer-conversion into liquid fuels.

Although HydroMax can process a variety of hydrocarbon feeds including biomass waste, sludge, and old tires, the partnership focuses on the development of coal-to-liquids processing, with Alchemix providing gasification front-end to the Fischer-Tropsch process.



[More...](#) | [Comments \(8\)](#) | [TrackBack \(2\)](#)

New Tandem Catalytic Process Enables More Efficient Fischer-Tropsch Production

April 14, 2006

Researchers at Rutgers and the University of North Carolina at Chapel Hill have [developed](#) a tandem catalytic system that creates a more efficient Fischer-Tropsch process for the conversion of coal and other carbon

feedstocks to synthetic fuels.

The two-step chemical process, developed by chemists at Rutgers University in New Jersey and the University of North Carolina at Chapel Hill, converts some of the “waste” byproducts from the traditional Fischer-Tropsch process into usable fuels.

[More...](#) | [Comments \(4\)](#) | [TrackBack \(3\)](#)

Rentech Prices Shares and Senior Notes Offerings; Expects \$100M in Proceeds

April 12, 2006

Rentech, Inc., the developer of a Fischer-Tropsch process for the production of synthetic fuels, has [priced](#) concurrent public offerings of 16 million shares of common stock and \$50-million (aggregate) in convertible senior notes due 2013.

The company expects net proceeds from the offerings to be approximately \$96.4 million—\$111.2 million if the underwriters exercise both of their over-allotment options in full. Rentech will use the net proceeds to finance the purchase price of its pending acquisition of the Royster-Clark Nitrogen natural gas-fed nitrogen fertilizer plant in East Dubuque, Illinois ([earlier post](#)), to fund working capital at RCN and for general corporate purposes, which may include some of the initial development costs for the conversion of the East Dubuque facility to use coal as feedstock.

[More...](#) | [Comments \(0\)](#) | [TrackBack \(0\)](#)

Senators Obama and Lugar Introduce Alternative Fuels Act

March 25, 2006

US Senators Barack Obama (D-IL) and Richard Lugar (R-IN) last week [introduced](#) legislation designed to further promote the use of biofuels and alternative fuel technologies to decrease US dependence on oil.

The American Fuels Act of 2006 (S. 2446) takes a multi-step approach that includes mandated levels of production and use of alternative fuels (synthetic as well as biofuels), consumer tax credits, manufacturer tax credits, public access to alternative fueling infrastructures, and the creation of a new office: the Director of Energy Security.

[More...](#) | [Comments \(17\)](#) | [TrackBack \(1\)](#)

A Proposal for Hydrogen, Synthetic Fuels and the Halving of US CO₂ Emissions

March 14, 2006

A team from General Atomics is proposing the use of hydrogen provided from non-fossil sources (solar, wind or nuclear) and CO₂ captured from coal-fired power plants or from the air to produce enough Fischer-Tropsch synthetics to meet the fuel needs of the transportation sector.

With such an approach, proposed in a poster session at the NHA hydrogen conference, the total net US release of CO₂ could be halved, even factoring in the release of CO₂ from the ongoing combustion of hydrocarbon—although not fossil—fuels, according to the researchers' analysis.

[More...](#) | [Comments \(16\)](#) | [TrackBack \(0\)](#)

Alliance for Synthetic Fuels Launches in Europe

March 07, 2006

DaimlerChrysler, Renault, Royal Dutch Shell, Sasol Chevron and the Volkswagen group are [launching](#) an association—The Alliance for Synthetic Fuels in Europe (ASFE)—to promote synthetic fuels in Europe and to support research, demonstration projects, and public-private cooperation in the area.

ASFE is focusing on synthetic fuels made with the Fischer-Tropsch (FT) process from natural gas (Gas-to-Liquids, GTL), coal (Coal-to-Liquids, CTL) or biomass (Biomass-to-Liquids, BTL). The Fischer-Tropsch process produces a range of near-zero sulfur and aromatics transport fuels and chemicals.

[More...](#) | [Comments \(9\)](#) | [TrackBack \(0\)](#)

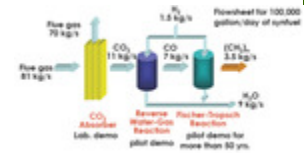
Canadian Coal Company Seeking Fischer-Tropsch Partner and Sites for CTL

March 05, 2006

Cash Minerals, an emerging energy company with a base of coal and uranium assets in the Yukon, is [evaluating](#) different coal sites in the Yukon and China for their suitability to support Coal-to-Liquids (CTL) projects using the Fischer-Tropsch (F-T) process.

This initiative follows high level meetings in South Africa and China between Cash Minerals and senior government officials and potential joint venture partners in technology and mining. Cash Minerals is also seeking F-T technology partners.

[More...](#) | [Comments \(4\)](#) | [TrackBack \(0\)](#)



A flow-sheet for 100,000 gallons per day of CO₂-free synfuel. Click to enlarge.

Ohio Governor Lays Out Energy Plan; Immediate Focus on Biofuels for Transportation

March 03, 2006

Ohio Governor Bob Taft has [announced](#) a number of initiatives to utilize state resources as energy sources. The most immediate are plans to expand the state's production and use of ethanol and biodiesel.

Taft made the announcement last week during a visit to Greater Ohio Ethanol in Lima, Ohio, during which he presented a check for \$5.9 million in state incentives. The \$80-million plant, when full operational, will convert 20 million bushels of corn per year into more than 56 million gallons of ethanol.

[More...](#) | [Comments \(4\)](#) | [TrackBack \(0\)](#)

DKRW Selects GE Gasification Technology for Medicine Bow Coal-to-Liquids Plant

March 01, 2006

DKRW will [use](#) GE's coal gasification technology in its proposed Medicine Bow, Wyoming coal-to-liquids (CTL) plant. The first phase of the Medicine Bow project is designed to produce approximately 11,000 bpd of Fischer-Tropsch diesel and other fuels from Carbon Basin coal.

In January, DKRW announced it would use Rentech's Fischer-Tropsch (FT) coal-to-liquids (CTL) technology in the plant. ([Earlier post.](#)) The GE gasifier will provide the syngas that feeds into Rentech's F-T process.

[More...](#) | [Comments \(5\)](#) | [TrackBack \(1\)](#)

Sasol Invests \$32M in GTL and CTL Research Reactor

February 27, 2006

Sasol, the South African energy company and leader in coal-to-liquids (CTL) and gas-to-liquids (GTL) production, is [investing](#) R200 million (US\$32 million) in the construction of an innovative Fischer-Tropsch design reactor at its research and development facilities in Sasolburg, South Africa.

The reactor will support the engineering design of the next generation of Fischer-Tropsch reactors for Sasol's gas-to-liquids (GTL) and coal-to-liquids (CTL) technologies. Both CTL and GTL are key drivers of Sasol's global growth strategy.

[More...](#) | [Comments \(0\)](#) | [TrackBack \(0\)](#)



Schematic of GE gasifier in an IGCC application.

EU and China to Sign Clean-Coal Technology Development MoU

February 20, 2006

Europe and China will [sign](#) a Memorandum of Understanding (MoU) this week on clean-coal technology during the 6th EU–China Energy Conference.

The MoU will encourage the development of technology allowing the capture and underground storage of carbon dioxide emitted from coal-fired power stations. China is also keen to exploit coal to produce liquid fuels and hydrogen.

[More...](#) | [Comments \(0\)](#) | [TrackBack \(0\)](#)

China to Invest US\$15 Billion in Coal-to-Liquids Plants

February 13, 2006

[China Oil News](#). The Chinese government plans to make a major investment of about US\$15 billion in coal-to-liquids (CTL) plants (both direct and indirect) over the next 5 to 10 years as part of an effort to reduce dependency on oil imports.

The National Development and Reform Commission (NDRC) said that the combined output of the CTL plants could reach 16 million tons annually—about 320,000 barrels per day. That represents about 5% of China’s current oil consumption, and 10% of imports.

[More...](#) | [Comments \(1\)](#) | [TrackBack \(0\)](#)

Syntroleum and Sustec in Coal-to-Liquids Gasification/Fischer-Tropsch Joint Venture

January 31, 2006

Syntroleum Corporation and Sustec AG, a private company based in Basel, Switzerland, have [entered](#) into a Memorandum of Understanding that provides for exclusive joint business development of projects that will integrate Sustec’s gasification technology (from its Future Energy GmbH portfolio company) with Syntroleum’s Fischer-Tropsch (FT) technology.

The joint venture is aimed at converting coal and other carbonaceous materials such as petroleum-coke, residual fuel oil and biomass into synthetic fuels and chemicals. Each company will own 50% of the joint venture.

[More...](#) | [Comments \(0\)](#) | [TrackBack \(1\)](#)

DKRW Selects Rentech for Medicine Bow Coal-to-Liquids Plant

January 17, 2006

Rentech has [signed](#) a Master License Agreement (MLA) with DKRW Advanced Fuels, a wholly-owned subsidiary of DKRW Energy, for the use of Rentech's Fischer-Tropsch (FT) coal-to-liquids (CTL) technology.

Concurrent with the signing of the MLA, DKRW-AF's wholly owned-subsubsidiary, Medicine Bow Fuel & Power LLC (MBF&P), signed an individual site license for its proposed integrated power and coal-to-liquids (CTL) project in Medicine Bow, Wyoming ([earlier post](#)).

[More...](#) | [Comments \(0\)](#) | [TrackBack \(0\)](#)

CTL/GTL Partners Dissolve Joint Venture

January 13, 2006

Rentech and Headwaters Technology Innovation Group, a wholly-owned subsidiary of Headwaters Incorporated, have [dissolved](#) their 50/50 joint venture named FT Solutions, LLC.

They formed the joint venture in June 2004 to combine each company's respective iron-based Fischer-Tropsch gas-to-liquids technologies for use in global Headwaters projects and for all Headwaters and Rentech projects in China.