

COAL NEWS

NEW ZEALAND

Coal production exceeds 5M tonnes for the 3rd consecutive year

Statistics recently compiled by Crown Minerals have revealed that 2005 was a record year for New Zealand coal production. National coal production reached 5.3 Mt, over 87,000 tonnes more than during 2003, when the existing record was set. Large production increases were registered in several mines, most notably in Solid Energy's Stockton and Rotowaro opencast operations.

The value of coal mined in New Zealand during 2005 was a record \$508M, 23% higher than the figure for 2004. Crown Minerals said this illustrates the strong market value of New Zealand coals, both domestically and abroad. The record production of high value bituminous coal, coupled with strong increases in the value of bituminous coal exports, were the most significant factors contributing to the overall increase in value of coal production.

Coal imports also reached record levels with 1.08 Mt of foreign sub-bituminous coal being imported during 2005, primarily for feedstock at Huntly Power Station. This increase in coal imports occurred despite continued strong output from mines in the Waikato (2.1 Mt)

A total of 28 mines contributed to the record production tonnage, 5 underground and 23 opencast. The combined area of the 28 coal mining licences and permits that registered production during 2005 was approximately 122.1 sq km. Crown Minerals said this illustrates the comparatively small 'footprint' of working coal mines in the country (approximately 0.00045% of the country's land mass) and the exceptionally high dollar yield to land used ratio. It will soon release other mineral statistics to further illustrate the strong state of the extractive industries in general and their underlying contribution towards economic growth and regional development in New Zealand.

Feasibility study on West Coast coal fired station continuing

Solid Energy is working with potential partners to decide whether creating the coal fired station, which would generate about 150MW annually, is viable. The company said it was looking at sites at Birchfield, 10km north of Westport, and close to its Stockton opencast mine, 40km north of Westport.

Solid Energy said that the reality is that coal is going to need to contribute significantly to New Zealand's energy future over some years to come and the key is to increasingly find ways to burn it cleaner and more efficiently. The company's interest was not in operating a coal station but in supplying coal. A decision would be influenced by factors such as the price of electricity compared to coal production and whether Solid Energy could get better prices for the coal elsewhere.

Solid Energy looks to restart mine on large Mataura lignite field

Solid Energy has bought land in Eastern Southland surrounding its former lignite mine near Mataura and is looking for new markets. The Mataura lignite field is the largest in New Zealand with an estimated in ground resource of about 2,100 Mt, substantially larger than the other large lignite fields in Southland such as Ashers-Waituna and Morton Mains. The Mataura field contains some 10 seams each up to 16m thick.

Solid Energy said it was looking at reopening the Mataura mine. The company bought the mine in 1996 from Carter Holt Harvey which used the lignite in the local Mataura Paper Mill. Following the mill's closure in 2000, Solid Energy had shut down the opencast mine.

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To reopen the mine, the company needed access to more land and so had bought a number of farms and lifestyle blocks in the area. Solid Energy's short term aim was to re-establish the lignite mine as a commercial operation. Currently, a number of its customers are carrying out trials in burning the Mataura coal. Because of lignite's low calorific value there were issues about keeping the cost of transport low enough to make it viable as an energy option.

In making the land purchase, Solid Energy was also looking to the long term prospects for developing lignite prospects in Southland. The company has been investigating large scale lignite use in Southland including a plant to convert coal into diesel. Solid Energy also has a prospecting permit covering the western side the Mataura field.

Crown Minerals releases discussion document on reporting regulations

Crown Minerals recently invited stakeholders for review and amendments to the Crown Minerals Act 1991, Crown Minerals (Petroleum) Regulations 1999, and the Crown Minerals (Minerals and Coal) Regulations 1999 and its proposed enhanced on-line data and permitting services.

A number of changes to these current reporting regulations are being proposed and these changes and the reasons for the changes are outlined in the discussion paper available at http://www.crownminerals.govt.nz/news/download/Industry_consultation_document-changes_to_reporting_regulations.pdf. The closing date for comment is 20 July 2006.

Indian company buys into coal mine

Gujarat NRE Coke Ltd of India is to take a NZ\$20M (about US\$13M) stake in Pike River Coal Ltd. Pike River's parent company, New Zealand Oil & Gas Ltd (NZOG), said Gujarat NRE Coke had also contracted to buy 40% of Pike's coal production for the life of its mine, near Greymouth, at market prices.

The company is the second Indian investor in the mine, which is scheduled to start producing 1.3 Mt of coking coal a year in the second half of 2007. Last September, NZOG announced that it was joining forces with Saurashtra Fuels (SFL) of India to develop the mine. SFL will buy at least 0.15 Mt of coking coal a year from the Pike River mine, which will also export to Taiwan and South America.

Pike River's general manager Gordon Ward said the Indian company's investment was subject to regulatory approvals including the consent of the Overseas Investment Commission.

Eastern's Cascade coal mine lifts output substantially

The Cascade coal mine near Westport is expected to reach production of 65,000 tonnes for the year ending 30 June 2006.

Gordon Smith, chairman of Brisbane-based Eastern Corporation Ltd, said that this output was well above historical levels and the mine was now capable of meeting its production target going forward of 0.10 Mt/year. Cascade currently produces low ash, low sulphur, high vitrinite thermal coal for the domestic market.

Cascade continues to build a strong customer base and work is continuing on a number of options to resolve the freight issues necessary to establish an ongoing export market.

L&M exploring for coal seam gas

In a recent newspaper article on gas exploration, L&M Mining stated that over the past five years, it has drilled more than 30 coal seam gas exploration holes in 10 prospecting licence areas covering low-rank coal and lignite fields - two in the North Island and eight in the South Island. Coal seam gas is a significant commercial source of natural gas in the US and Australia, but a new field for New Zealand. L&M said methane from coal seams had the potential to supply up to 10% of New Zealand's gas needs after 2010, if prospects being explored fulfill their promise.

Some of the wells dug have proved unproductive while others are being developed. Among the most promising was the Hawkdun field, 60km from Alexandra (Central Otago) where flow testing of coal seam gas holes had just been completed. Results are currently being evaluated but initial indications are this field alone has 25-40 PJ of gas.

The Ohai coal field in Southland is considered the next priority for testing and then other possibilities are at Kaitangata (south of Dunedin), Ashers-Waituna (near Bluff) and Winton.

Solid Energy consent for pellet burners in Christchurch

Environment Canterbury (ECan) has granted a resource consent for 35 years to Nature's Flame authorising the installation of 405 pellet fires to be used in new homes, home extensions or homes without an existing solid fuel burner in Christchurch.

The proposed air plan requires the owners of new houses or houses without an existing solid fuel burner or open fire in Christchurch to get a resource consent to install a solid fuel burner. The company argued that the pellet fires would be distributed throughout the city and that the maximum emission rate of fine particles would have no measurable effect upon pollution levels in the city.

The ECan hearing committee said they were "satisfied that a robust product stewardship has been offered by the applicant" and that the emissions from pellet fires were very low and well within acceptable limits. One of the conditions of the consent is that the pellet fires are serviced at least once every two years.

Coal Association AGM

The Coal Association's Annual General Meeting is being held at 2.00pm at the Chateau on the Park, Christchurch on Wednesday, 23 August 2006. Associated activities include a seminar on issues facing the coal industry and the Association's Annual Dinner. For further information contact the Secretary, t.matheson@crl.co.nz.

INTERNATIONAL NEWS

Use of coal surges as firms seek alternative

According to the recently published BP Statistical Review of World Energy, coal is the world's fastest growing fuel, displacing natural gas as power generators and industrial consumers avoid major price increases and opt for a lower cost alternative.

Global coal consumption increased by 5% last year. The switch to coal boosted CO₂ emissions by almost 3%, despite an overall weakening in global energy consumption. In 2005, annual growth in the world's appetite for energy subsided from the previous 4.4% to 2.7%.

In China, which burns more than a third of the coal used in the world, consumption rose by 11%. BP said that coal was now cheap compared with other fuels, but the cost of carbon had yet to have a critical impact on fuel choice. It also said that it would take strong political leadership to ensure that the cost of carbon was adequately reflected in the price of fuel.

Zero-emission coal power on horizon (Australia)

The coal industry is confident that power stations producing no greenhouse gases will be operating in Australia within 10 years.

Queensland Resources Council spokesman Michael Roche says he doubts nuclear energy will be able to match the benefits of coal. Mr Roche says a trial programme of zero-emission coal power will start in the United States this year.

"They have a major project called FutureGen proving up technology that would result in zero emissions," he said.

"We're certainly hoping that the US project will be able to demonstrate commercially the viability of that particular technology, and that would quickly then flow through to use in countries like Australia."

In a further development, Germany has offered Australia an international partnership to develop zero-emission clean coal power plants. Germany has told a climate change conference in South Africa that its first clean coal plant will be ready by 2014. Australia said it could convert existing power plants to zero-emission facilities and that would reduce emissions by up to 60% over the next 50 years.

BHP Billiton to sell its Australian coal bed methane interests (Australia)

BHP Billiton announced that it has agreed to sell its Australian coal bed methane (CBM) interests to The Australian Gas Light Company (AGL). AGL has also agreed to pay BHP Billiton a further amount should AGL seek to acquire additional interests in the assets subject to the sale within a 12 month period.

BHP Billiton's principal CBM asset in Australia is a 50% interest in the Moranbah Gas Project (MGP), a Joint Venture between BHP Billiton and CH4 Gas Limited. The MGP is located in the Bowen Basin, approximately 400 km south of Townsville and 170 km west of Mackay. The MGP has gas sales contracts with Enertrade and Ergon Energy.

NRG sells coal plants for A\$385 million (Australia)

Australia's Babcock & Brown Ltd., paid A\$385 M to NRG Energy Inc. for two coal-fired power stations (total capacity 760 MW) at the Flinders complex, near Port Augusta, South Australia. NRG also said it was engaged in a 'review' of its Gladstone generation station, Queensland's largest coal-fired power station with a capacity of 1,680 MW.

Origin increases coal seam methane interests (Australia)

Origin Energy Ltd, Australia's second biggest power retailer (and Contact's majority shareholder) said it would invest an additional \$A114M in its Spring Gully coal seam gas project in Queensland. The investment would double the capacity of the project to 85TJ per day and allow Origin to supply natural gas to various Queensland businesses including fertiliser company Incitec Pivot and state-owned energy retailer Energex.

As natural gas resources decline, Australia's coal seam methane is seen as an alternative, alongside overseas sources such as the Papua New Guinean gas pipeline that could deliver gas into Queensland.

Australia was one of the first countries to begin commercialisation of coal seam methane and has large coal deposits along the length of its eastern seaboard, with projections suggesting the resource can sustain production for the next 200 years. Methane is held in coal seams and its extraction offers reduced greenhouse emissions, safer mining conditions and a valuable fuel source.

Bonanza drilling hits multiple coal bed methane zones (Canada)

Bonanza Resources Corporation announced that recent drilling at the Texanna coal bed methane project in East Oklahoma, USA has intersected multiple zone coal bed methane enrichment. The company's project operator Concorde Resources Corporation informed that the fifth well drilled has reached total depth and encountered a combined total 52m of coals and sandstones bearing natural gas.

Longford commences drilling operations of Barrhead Coal Bed Methane project (Canada)

Longford Corporation reported that it has commenced drilling operations of its Mannville CBM project in Barrhead, Alberta. During the next 3 months, Longford anticipates drilling 3 horizontal wells and a salt water disposal well in the Barrhead area.

Longford has accumulated the CBM rights on 8100 gross (2700 net) hectares of land with Mannville CBM potential in the Barrhead area. These properties are located in the vicinity of the Corbett Creek CBM project where horizontal well technology has been used to develop Mannville CBM production.

China's top coal transporter to raise capital (China)

Daqin Railway, operator of China's major coal transport line, plans to raise as much as 25 billion yuan (US\$3 billion) in the nation's largest domestic initial public offering. The proceeds of the IPO will be used to expand capacity in a country whose economy is growing at an average of 9.6% a year and relies on coal for two-thirds of its electricity needs. The stock is considered a worthwhile investment because the company has a monopoly on the country's major coal transport line.

Daqin transported more than 90% of coal produced in the country's major coal mine areas in northern Shanxi and western Inner Mongolia between 2003 and 2005. China is the world's biggest coal producer and freight traffic on China's railway network has increased by more than 60% since 1990, according to the World Bank. Daqin moved 240 Mt of coal last year out of its total cargo traffic of 290 Mt.

China licenses Foster Wheeler coal process (China)

Shanghai Boiler Works Ltd. is paying Foster Wheeler Ltd. an undisclosed amount to use the US company's arch-fired subcritical and supercritical steam generation process. The licensed technology is for firing difficult-to-burn low volatile coals, such as anthracite and semianthracite, in large scale utility steam generators, with high efficiency and reduced emissions.

China, South Africa in coal to liquids venture (China)

Sasol Ltd. of South Africa and its Chinese partner agreed to study the feasibility of an 80,000 barrels per day refinery that uses coal as the feedstock.

A group led by China's Shenhua Corp. and Sasol formally agreed to proceed with the second stage of feasibility studies on the refining project in Shaanxi Province, about 600km west of Beijing. The study will more closely analyse capital cost, feedstock cost, water supply and market conditions and will also gauge major commercial and funding issues.

Sasol signed a similar agreement recently with Shenhua Ningxia Coal Ltd. for another 80,000 barrels per day refining venture, this one in the Ningxia Hui Autonomous Region, about 1000km west of Beijing. Each plant is expected to cost about US\$5 billion and become productive as early as 2012, said Sasol, which has produced more than 1.5 billion barrels of oil equivalent fuel in South Africa.

DMT initiates cooperation with Chinese coal giant (China)

Deutsche Montan Technologie GmbH (DMT) of Germany will provide services support in the fields of safety and engineering on behalf of Huainan Group of Mining Industry, a major Chinese coal producer. The Huainan Group and RAG Aktiengesellschaft had previously signed a letter of intent covering partnership efforts centred on hard coal mining and utilisation.

Among the mining issues to be dealt with are preventing coal outbursts and gas eruptions, mining technologies, roof control, utilising the energy contained in mine gas, and training. The objective was to use an unequivocal evaluation scheme, to make both government and private sector mining operations aware of hazard potentials. The result will be a practice oriented checklist intended to improve safety standards at China's many mining sites.

Investments in coal exploration (China)

China plans to secure about 170 billion tonnes of coal reserves according to the energy bureau of the National Development and Reform Commission (NDRC). Industry insiders think that it would not be difficult to reach China's goal to secure more coal. It is believed that there is more coal in the western regions such as Xinjiang, Shaanxi, Gansu, Qinghai and even Tibet.

China currently has commercially recoverable coal reserves of 288 billion tonnes, with total estimated coal resources of 5.5 trillion tonnes. Coal exploration is considered as highly risky and fewer private companies are willing to invest in it. Consequently, the government is being asked to step up efforts to look for more resources and to establish an industry fund to help companies find more coal resources in the country.

Government allots 19 coal blocks (India)

The Indian coal ministry approved the allocation of 19 coal blocks with reserves of 7,436 Mt with a view to making coal available to central and state-owned companies to expand their production. The current allocation will empower the state governments to promote industrialisation by making coal available to prospective investors without having to approach the central government.

In all 28 blocks were offered to government companies, out of which only 19 blocks have been approved for allocation. The Mara-II-Mahan block in Madhya Pradesh with a capacity of 955Mt has been jointly given to the New Delhi government and Haryana Power Generation Corp Ltd.

Chhattisgarh Mineral Development Corp has obtained the state-based Gare Palma sector-1 with a capacity of 900 Mt for utilisation in sponge iron and steel industries. The 733 Mt Nuagaon Telisahi block in Orissa has been allotted to AP Mineral Development Corp and Orissa Mining Corp.

Third round of coalbed methane offering (India)

As many as 54 domestic and foreign oil companies submitted bids for the 10 blocks under the Indian petroleum ministry's third round of coalbed methane (CBM) offering. While most companies selectively bid for various blocks, Reliance Natural Resources Limited was the only entity to bid for all 10. Reliance Industries (RIL) submitted bids for five blocks.

The 10 blocks together have an estimated CBM resource base of 586 billion metres³ spread over Jharkhand, West Bengal (one block each), Chhattisgarh, Madhya Pradesh, Rajasthan and Andhra Pradesh (two blocks each). Officials said these were the highest ever bids received by the ministry for extraction of methane from below the coal seams. Global companies which bid include Arrow Energy, EIG and Molopo of Australia, CDX Gas, Omimex, Coal Gas and BP of the US and Geopetrol of France.

PLN sees rise in coal consumption (Indonesia)

Coal demand in the country's power sector is projected to jump to 72 Mt per year by 2010 from the current 29 Mt, according to state electricity firm, PLN.

PLN said the jump in the power consumption was in line with the government's policy to develop a total of 10,000MW in coal-fired power plants by 2009. PLN is currently in the process of selecting coal mining companies that could ensure supplies of the commodity for its coal-fired power plants. 15 coal mines had passed through the initial stage of tender processing, and the winning bidders would be announced in July.

Renaissance to sell bonds to buy coal mines (Indonesia)

PT Renaissance Capital, an Indonesian investment bank, plans to sell bonds to help finance the purchase of two coal mines after canceling a plan to find partners for the acquisition. The zero-coupon bonds, convertible into shares, will be sold this month and mature in 4 years. United Overseas Bank Ltd., Singapore's 2nd largest lender, is helping to sell the bonds.

Last March, Renaissance agreed to pay PT Bumi Resources for its coal mining units, PT Kaltim Prima Coal and PT Arutmin Indonesia, to benefit from surging prices for the fuel. Renaissance had talks with potential investors including Japan's Marubeni Corp. about investing in the mines.

Kaltim Prima and Arutmin have combined marketable coal reserves of 1190Mt, enough to maintain current use for another 22 years.

Japan government to provide China with coal liquefaction technologies (Japan)

The Ministry of Economy, Trade and Industry (METI) plans to provide coal liquefaction technologies to China as part of a broader effort to promote the energy resource in Asia in order to alleviate the global shortage of crude oil.

METI intends to tap proprietary technologies of the New Energy and Industrial Technology Development Organization (NEDO), an independent administrative agency under its control. As a first step, NEDO will join with Chinese energy companies Datang International Power Generation Co and Xinwen Mining Group to conduct feasibility tests to determine how efficiently they can liquefy coal. The two Chinese firms plan to start operating a liquefaction plant by around 2010.

Japanese engineering firms are expected to participate in this large project and NEDO is to receive fees for the use of its technologies in production. Japan has also entered talks with the Indonesian government over coal liquefaction projects. An experimental plant that uses NEDO's technologies is to be built as early as next fiscal year, with commercialisation as the goal. Japan is also considering cooperating with India, Mongolia and the Philippines in this field.

BHP, Enel, and others to bid on coal assets (Nigeria)

Nigeria had chosen 16 companies, including BHP Billiton and Enel SpA, to bid for state-owned coal fields it plans to sell soon. Nigeria is trying to diversify its economy, which relies on oil for 95% of its export income. It has offered companies ranging from chemical producers to the national fixed line telephone monopoly to private investors. The shortlisted companies will form the vanguard that will lead the revival of Nigeria's mining sector.

Other bidders include Johannesburg-based Mvelaphanda Group Ltd., Perth-based Aditya Birla Minerals Ltd., Russia's Kuzbassrazrezugol, Ivanhoe Mines Ltd., and Nigerian companies either offering to buy the assets by themselves or bidding in partnership with Indian or South African miners.

The 10 coal fields will be awarded to the winning bidder at an auction to be held from 24 to 26 July 2006.

A case for coal (Poland)

After the collapse of communism in 1989, Poland, with substantial help from the World Bank, embarked on a programme to cut the size of the mining coal sector, from about 80 working pits to 30.

The international boom in coal prices of the past two years, fuelled in part by demand from China, helped turn the balance sheets of the remaining Polish mines from red to black and halted talks of further cuts. Interest in Polish coal is increasing, especially in Europe. France and Germany have easy access to this large source of energy close to their borders.

The problem for Polish mines is that they are not just competing against Russian natural gas. There are also low cost coal producers such as South Africa, Australia and the US. The World Bank feels the most likely long term future for the Polish industry is as a supplier to local industry. However, Poland's coal mines probably still need production trimmed by 10-15 Mt, or about 20% of the total.

Coal-fired power plant achieves ZLD for FGD wastewater (USA)

Dallman Power Station (Springfield, Illinois) has 3 coal-fired units (and a 4th is soon to be installed) and they are equipped with flue gas desulfurisation (FGD) systems (scrubbers) to control SO₂ emissions.

A sharp increase in boron concentration in the FGD wastewater required that The City of Springfield Office of Public Utilities and the Illinois Environmental Protection Agency develop a boron mitigation strategy to remove the boron from the waste streams at the power generation facility. This meant including a new FGD wastewater treatment (Zero Liquid Discharge or ZLD) plant for the power plant. The elevated boron levels are caused from ammonia carryover due to the Dallman Selective Catalytic Reduction (SCR) systems' nitrogen removal process.

Seven states vie for FutureGen coal plant (USA)

Seven states are vying to host a US\$1 B private-public initiative to create a virtually pollution-free coal-burning power plant. FutureGen will use the integrated gasification combined cycle (IGCC) process to convert coal into synthetic gas without emitting greenhouse gases. The plant will remove mercury, CO₂ and other impurities from the combustion gases so that they can be disposed of or put to other uses without entering the atmosphere.

The FutureGen Industrial Alliance plant will begin generating 275 MW of electricity by 2012. The alliance is a consortium of some of the nation's largest coal and electrical utilities, including American Electric Power, Southern Co., Peabody Energy, Foundation Coal, Kennecott Energy and CONSOL Energy.

To win FutureGen, Ohio was reported to be offering incentives worth \$164 M and Illinois offering more than \$80 M. Wyoming would provide \$31.2 M, Texas is holding out at least \$20 M and Kentucky \$2.4 M. Also contending for the prize are North Dakota and West Virginia.

AES weighs expansion of US coal plants (USA)

Global power developer AES is considering expanding all of its coal fired power plants in the US to capitalise on an industry trend away from natural gas fired generation. The company is reviewing expansions of its power plants in Oklahoma and Texas and has added a lease on a nearby coal mine to supply the coal fired Shady Point plant in Oklahoma. Most of AES' 44,000 MW of generating capacity is in other countries, but in the US, "wherever we have a coal plant, we're considering expanding those facilities," the company said.

AES has begun to add coal mining operations to its list of global power assets, with leases in Hungary and Kazakhstan, as both a means of providing reliable fuel supplies and growing in "a lucrative part of the business." The company said he expected the industry in general to place more value on solid fuel generation.

BPI Energy provides operational update on CBM project (USA)

BPI Energy recently provided an update on its CBM operations in the Northern Illinois Basin Project.

By the end of April, BPI had drilled 107 wells in the Illinois Basin, consisting of 77 productive wells, 17 shut-in wells and 13 wells that have been drilled but are not in production. This compares with 30 wells drilled and 16 of those in production as of April 30, 2005. The company is currently subject to litigation with respect to the lease agreement covering the 17,400 hectares of CBM rights at its Southern Illinois Basin Project, where currently all of its productive wells are located. Due to the litigation, BPI could lose all of its acreage rights and productive wells at its Southern Illinois Basin Project.

Harare & Beijing unveil coal-fired generation venture (Zimbabwe)

Zimbabwe has reached agreement with a Chinese industrial partner to build three coal-fired power plants, two at Dande in the northern Zambezi Valley where new coal mines are to be dug to fuel them.

The Economic Development Ministry said the deal would provide coal China needs for mines in the Democratic Republic of Congo where it has large investments. The deal with the Chinese would help relieve the severe power shortages now hitting industry and farms where irrigation is disrupted.

TECHNOLOGY & OTHER NEWS

Sleipner 'could store all Europe's CO₂

The entire CO₂ emissions created in Europe could be stored underneath the North Sea if the infrastructure were put in place, according to Norwegian state gas and oil company Statoil. The Sleipner platform provides methane to countries throughout western mainland Europe but it is also the first of a handful of geological sites where CO₂ captured from the natural gas is stored. Statoil told the BBC there are calculations which say it could handle all of Europe's CO₂ emissions for several hundreds of years.

The aquifer reservoir was developed because the methane gas that passes through the platform is rich in CO₂, most of which has to be removed before the gas could be sold to customers. Rather than simply vent it to the atmosphere, the platform separates it and then injects it back beneath the sea bed into a natural sandstone aquifer - a honeycomb of rock - about 900m below sea level. In total, around 1 Mt CO₂ is stored every year.

Statoil said that if other countries wished to use the North Sea aquifer to store their CO₂, there would be major costs involved. Pipelines from the CO₂ emission points in Europe - with oil and gas plants producing the most volumes - and these pipelines being drilled to this plant and then pumping it in. The vast network of gas pipelines lying under the

North Sea after the UK's oil and natural gas boom closes could help the UK reduce CO₂ emissions and create a lucrative new business for the east of England.

Companies join forces on carbon capture and storage

Thirteen companies have come together to form an association to promote carbon capture and storage (CCS) technology with a call for a clearer steer from government. "We need a clear regulatory and fiscal framework going forward to justify CCS to shareholders," said Lord Ron Oxburgh, former chairman of Shell Transport and Trading and the president of the Carbon Capture & Storage Association (CCSA), at the organisation's launch in London.

The CCSA's members will work with the UK government to resolve regulatory issues that might delay the deployment of CCS technology and to help develop the fiscal and legislative conditions to allow for early demonstration projects. "Fossil fuels are going to continue to be the major source of power for the foreseeable future," said Gardiner Hill, CCSA chairman and BP's manager for environmental technology. "This technology has the additional advantage of providing a 'win-win' for the environment and energy security, when the circumstances are right for the CO₂ to be used for enhanced oil and gas recovery," he added.

The founding members of the association are: Air Products, Alstom, AMEC, BP, ConocoPhillips, E.ON UK, Mitsui Babcock, Progressive Energy, Schlumberger, Scottish & Southern Energy and Shell.

Clean coal technology to be tested at Loy Yang (Australia)

The potential of Mechanical Thermal Expression technology to cut greenhouse gases from brown coal generation will be put to the test at a new pilot plant to be built in Victoria's Latrobe Valley. Construction of the A\$6.3M plant at the Loy Yang power station is due to begin soon and will be funded by Federal and State governments and the Latrobe Valley generators.

Reports on the tests should be completed by June 2007, according to the Cooperative Research Centre for Clean Power from Lignite which has developed the MTE technology. MTE can reduce the high water content of brown coal before it is used in a power station. It involves heating brown coal to between 150-200°C and then squeezing the coal mechanically to extract moisture. The plant is expected to dry 15 tonnes of coal per hour by the middle of 2007.

The pilot plant will test the technology and assess whether it is viable to be used in existing or new power stations. CRCCPL said based on tests to date, the use of dried brown coal in existing power stations would reduce greenhouse gas emissions by about 5%. Using MTE technology in a new plant is expected to cut greenhouse gas emissions by 30%. The CRC wants to use MTE as a stepping stone to gasification of the brown coal. The next move is the so-called MTE-IGCC – integrated gasification combined cycle technology, which is expected to reduce greenhouse gases by 40%.

HRL and Harbin Power sign global clean coal power generation agreement (China)

HRL Limited, an Australian owned energy, technology and project development company and Harbin Power Engineering Company (HPE), a subsidiary of Harbin Power Equipment Group Corporation, China's largest manufacturer of power generation equipment and power station developer have joined forces in clean coal technology. They recently announced the signing of a Memorandum of Understanding, to develop a 400 MW demonstration power station in Victoria's Latrobe Valley using new clean coal technology developed by HRL and to explore future development of other power plants globally.

The project will use HRL's Integrated Drying and Gasification Combined Cycle (IDGCC) technology which is anticipated to deliver a 30% reduction in greenhouse gas emissions and 50% reductions in water usage compared with current best brown coal power generation technology in the Latrobe Valley.

Under the MOU, HRL and HPE will form a 50/50 alliance to develop a 400 MW demonstration plant in the Latrobe Valley using the IDGCC technology and explore opportunities to jointly develop further IDGCC power plants internationally, including China. HRL said HPE is an ideal project partner and is well placed to facilitate the application of large scale clean coal technology to coal reserves in China. HPE said that this project will be a solid platform from which to offer its power station manufacturing and development capabilities in the broader Australian market.

Advanced coal gasification research (USA)

The US Department of Energy recently announced the selection of four new projects under its Coal and Power R&D Program. Project teams will research advanced coal gasification technologies for the co-production of power and hydrogen or substitute natural gas (SNG). The objective of the co-production strategy is to pursue new technology developments leading to low cost, high efficiency, environmentally responsible coal gasification facilities.

The selected projects will be managed by the Office of Fossil Energy's National Energy Technology Laboratory (NETL) and will support NETL's Coal and Power R&D Program in three areas: novel hydrogen/electricity co-production, novel SNG/ electricity co-production, and improving the economics of central station hydrogen production plants. The projects total US\$22 M in government and participant cost shared funds.

Atlanta firm could clean up on dirty coal (USA)

Atlanta firm CoalTek has developed a patent-pending technology that can convert raw coal into so-called "designer coal." It uses "electromagnetic energy" (such as microwaves) to reduce moisture, ash, sulfur and mercury and make the coal burn more efficiently and cleanly. The company has raised nearly US\$13 M in private equity over the past nine months, including \$5 M in venture capital. CoalTek will use the money to finish designing a multimillion-dollar coal processing system being installed in a facility in Kentucky.

The facility sits strategically near the confluence of the Tennessee and Ohio rivers, a site that can ship hundreds of thousands of tonnes of processed "clean" coal to utilities and industrial users every year. Low-grade raw coal from the western US is delivered by rail car, mixed and processed, then sent out by barge and the processed coal will be cheaper than high-grade coal from Appalachia. CoalTek has the potential to process up to 30 tonnes of the low-grade coal per hour. Coal was the source of 75% of the electricity generated in the US last year.

US coal mining company to test ActiveMine™ (USA)

Active Control Technology Inc. announced that its proprietary wireless real-time personnel tracking and two-way communication solution "ActiveMine™", will be tested at a US underground coal mine. Upon a successful outcome, the ActiveMine™ solution will be submitted to the Mining Safety and Health Administration (MSHA) for commercialisation approvals.

In January 2006, West Virginia stipulated that all underground mines must promptly implement real-time tracking of miners, as well as two-way communications. In June, President Bush signed the MINER (Mine Improvement and New Emergency Response) Act directing the same tracking and communication technology requirements be implemented throughout the entire US mining industry.

Mountaineer Sizer selected by coal prep plants in Russia and China (USA)

Pennsylvania Crusher announced the sale of their Mountaineer® Sizer to Sha Ping Coal Preparation Plant in China. They also reported the sale of their Mountaineer Sizer to Russia. The Sizer has been purchased by Sedgman UGOL, LLC for the Suet-Tugnui Coal Preparation Plant in the Republic of Buryatia, south central Siberia, and will be shipped in June. Coal is one of the main sources of revenue for that region. It contains about thirty coal-bearing areas and produces about 6% of all energy produced in Russia. Coal reserves in the area include 1.7 B tonnes of brown coal and 2.2 B tonnes of bituminous coal.

The Mountaineer Sizer is designed for primary or secondary sizing of coals, industrial minerals and ores with minimum fines generation. This high capacity machine is extremely rugged, offers sizing rotors in a variety of tooth patterns to suit the application, and the crushing chamber is fully lined with wear plates resulting in simplified maintenance.

EVENTS

Call for papers – 24th Annual International Pittsburgh Coal Conference will be held in Johannesburg, South Africa 10-14 September 2007. For a paper to qualify for acceptance, please submit a one-page abstract before 1st March 2007 to pitt2007@sasol.com or Coal processing abstracts to www.sacoalprep.co.za

Power-Gen Asia 2006 Conference, Hong Kong, China, 5-7 Sep 2006, Vanesa Martinez, PennWell Publishing (UK), Warlies Park House, Horseshoe Hill, Upshire, Essex EN9 3SR, UK, Tel: +44 1992 656 614, Fax: +44 1992 656 700, Email: paperspga@pennwell.com, Internet: www.powergenasia.com

McCloskey's Australian coal markets and forecasting conference, Sydney, NSW, Australia, 7-8 Sep 2006, Georgina Lucey, The McCloskey Group, 2 Pages Court, St Peters Road, Petersfield GU32 3HX, UK, Tel: +44 1730 265095, Fax: +44 1730 260044, Email: georgina.lucey@mccloskeycoal.com, Internet: conf.mccloskeycoal.com

29th annual Platts coal marketing days conference, Pittsburgh, PA, USA, 14-15 Sep 2006, James Gillies, Platts, 24 Hartwell Avenue, Lexington, MA 02421, USA, Tel: +1 781 860 6110, Fax: +1 781 860 6101, Email: james_gillies@platts.com, Internet: www.platts.com/Events/PC626/

Conference on Clean Coal - Securing the Future, London, UK, 18-19 Sep 2006, Allison Lindsay, Coaltrans Conferences, Nestor House, Playhouse Yard, London EC4V 5EX, UK, Tel: +44 20 7779 8186, Fax: +44 20 7779 8946, Email: alindsay@euromoneyplc.com, Internet: www.coaltrans.com/

2nd Coaltrans Japan, Tokyo, Japan, 20-21 Sep 2006, Allison Lindsay, Coaltrans Conferences, Nestor House, Playhouse Yard, London EC4V 5EX, UK, Tel: +44 20 7779 8791, Fax: +44 20 7779 8946, Email: alindsay@euromoneyplc.com , Internet: www.coaltrans.com

23rd Annual International Pittsburgh Coal Conference, Pittsburgh, PA, USA, 25-28 Sep 2006, Crystal M. Jones, Conference Secretary, International Pittsburgh Coal Conference, University of Pittsburgh, 1249 Benedum Hall, Pittsburgh, PA 15261, USA, Tel: +1 412 624 7440, Fax: +1 412 624 1480, Email: pcc@engr.pitt.edu, Internet: www.engr.pitt.edu/pcc

Gasification technologies 2006 conference, Washington, DC, USA, 1-4 Oct 2006, rob Childress, Gasification Technologies Council, 1110 N. Glebe Road, Suite 610, Arlington, VA 22201, USA, Tel: +1 703 276 0110, Fax: +1 703 276 0141, Email: rchildress@gasification.org, Internet: www.gasification.org/Conference/annual.htm

COAL21 Conference 2006, Gold Coast, Qld., Australia, 10-11 Oct 2006, The Meetings Manager, Level 12, 179 Elizabeth Street, Sydney, NSW, Australia, Tel: +61 2 9264 1677, Fax: +61 2 9264 1666, Email: meetings@tmm.com.au , Internet: www.tmm.com.au

2nd IEA workshop on legal aspects of storing CO₂, Paris, France, 17 Oct 2006, Jacek Podkanski, International Energy Agency, 9 rue de la Federation, 75739 Paris, Cedex 15, France, Email: jacek.podkanski@iea.org

World Energy Congress Rome, Italy, 9-15 Nov 2007 Mike Treacher, PennWell UK Office, PennWell House, Horseshoe Hill, Upshire Essex EN9 3SR, UK Tel: +44 1992 656 636 Fax: +44 1992 656 700 Email: miket@pennwell.com Internet: www.rome2007.it

FEEDBACK

*This e-Newsletter is published for the Coal Association of New Zealand Inc. by CRL Energy Ltd.
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