Coal Association of New Zealand

Coal e-Newsletter

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COAL NEWS

NEW ZEALAND

L&M granted new Otago lignite permit as it looks at liquid fuels conversion

L&M Lignite Ltd has been awarded its second permit over the large Hawkdun lignite field in central Otago near St Bathans, as the company continues to investigate large-scale uses for lignite. The new 8700 hectare permit almost surrounds another of the company's blocks, the 1180 hectare one that was granted a 10-year permit in 1998.

The Hawkdun fields contain about a billion tonnes of lignite with a low stripping rate and have good potential for converting into liquid fuels. L&M Lignite Ltd has recently commenced a project to evaluate the potential of Southland and Otago's large lignite resources as a high-quality chemical feedstock.

The following options for lignite use are being considered: a source of hydrogen fuel; low sulphur diesel; fertiliser; methanol; and electricity generation. L&M has recently restructured and the group now comprises six operating companies; L&M Mining Ltd, L&M Lignite Ltd, L&M Coal Ltd, L&M Coal Seam Gas Ltd, L&M Petroleum Ltd, and Mintago Investments Ltd. All are owned by Auriferous Mining Ltd.

Greymouth to develop port for coal exports

Greymouth is determined to grab a slice of the coal traffic off the West Coast and has committed to a $25M plan to develop its port to achieve it.

The Grey District Council (GDC) has largely sorted out its road-vs-rail inward coal-transport options by initially letting truck traffic continue along Mawhere Quay to the wharf, which should allow the Greymouth trade to build up to 1.5Mt a year. A total of 3.5Mt is expected to depart the coast annually when local miners reach planned production for their operations.

Coal export bid may be good for Taranaki business

Port Taranaki is vying with Lyttelton to win the contract to export the coal from the proposed $100M Pike River coalfield development on the West Coast. Both ports are negotiating with the Pike River Coal Company (PRCC), which is expected to make its decision on the preferred export port by October. The reward is a highly lucrative long term trade of up to 1.3Mt of coal a year.

PRCC is applying to the Grey District Council seeking a change to its resource consent so it can double the coal it is allowed to extract to 1.3Mt annually. The company is also seeking to add the option of trucking coal from the mine in the Paparoa Range 42km to Greymouth's port. The original consent limits the transport route from the mine by road to Ikamatua, where it would be loaded on to rail bound for Lyttelton.

NZ Oil and Gas, owner of 72% of PRCC, said the Greymouth port would also need an upgrade to handle more than a million tonnes of coal a year, but not the $25M some local reports were citing. There would also need to be some upgrades at the Port of Taranaki if it is selected as the export port. The company would have time though, because it will take about a year to construct the mine access and then build up tonnage over 2 years before exceeding the 650,000 tonnes for the current consent.

Costs of developing the Pike River mine are rising due to heavy demand for products and services in the energy industry. However, NZOG said that development plans are still on track for this project. Higher steel prices and an extremely tight construction market placed upward pressure on capital costs, in common with with other Australasian new mine developments. This has led to an upward revision of funds for the mine development.

What's news?

New Zealand Oil & Gas (NZOG) joins forces with an Indian coking coal company

NZOG has announced that it is joining forces with Indian coking company Saurashtra Fuels Private Limited (SFL) to fund development of the Pike River coking coal mine. SFL and NZOG will contribute equity funding and the Board of Pike River Coal Company Limited (PRCC) has now made a formal decision to proceed with the mine development. Planning is in progress for for an Initial Public Offering (IPO) by March 2006, and possibly earlier.

SFL are India's largest privately owned coke manufacturer. They will appoint a Director to the Board of PRCC, and will assist in marketing Pike coal in India.

Taranaki sites for coal plants

Taranaki is being targeted as the prime target for a series of coal-fired power stations to be built to meet New Zealand's electricity needs by 2050. In a new report called 'Future Currents: Electricity Scenarios For NZ 2005 - 2050' the Parliamentary Commissioner for the Environment (www.pce.govt.nz) expresses concern at the lack of a clear strategy for New Zealand's energy future.Taranaki is favoured due to the presence of the Maui gas field, not as a source of gas, but somewhere to pump the unwanted CO_2 emissions from coal combustion once capture and storage technolgies become more affordable. Port Taranaki's proximity to West Coast coal fields also means there would be little trouble supplying the coal for use as feedstock for the power stations.

Eastern acquires Cascade coal mine near Westport

Queensland based energy company Eastern Corporation Ltd has completed its purchase of the Cascade opencast coal mine near Westport. The company said the acquisition of Cascade is the initial step toward Eastern's medium and long term plans to develop as an energy company, with Cascade providing Eastern with its first operating cash flow. The purchase price of $3.5M was comprised of $3.2M cash and $0.3M in shares. Eastern said that although Cascade is a small resource of approximately 1.5Mt of thermal and metallurgical coal, it is a profitable operation. Strip ratios at Cascade are as low as 1:1 and the mine produces a unique, high quality coal with low ash, low sulphur, and high vitrinite content.

Eastern has also begun an initial drilling programme at its recently acquired exploration permit, Whareatea West, about 5km from the Cascade mine. Early geological studies have identified the potential for a significant coking coal resource.

INTERNATIONAL

Green group wants clean coal method put to the test (Australia)

WWF Australia has called for clean coal technology trials to be fast tracked to resolve once and for all whether it can be relied upon in the battle to reduce GHG emissions. The country's first scientific trial of geosequestration technology - the capture and storage underground of CO_2 emissions from coal - is not due to begin until late next year.

Green groups usually argue that geosequestration is more costly and less safe than renewable energy sources such as wind and solar power. The Australian Conservation Foundation supports the use of clean coal technology on existing power stations but opposes the construction of new coal fired power stations or the allocation of new coal reserves.

Skills shortage may hamper coal terminal plans (Australia)

The operator of the Dalrymple Bay coal terminal in north Queensland admits that skills shortage could pose problems for a planned expansion of the facility. The Queensland Government has endorsed the port's master plan, which will see it increase annual capacity to 85Mt by September 2008. Federal Treasury welcomed the port expansion, but said the regulatory processes preceding its approval should have been expedited.

Longwall technology to debut down under (Australia)

A new technology in longwall mining will be introduced into Australia with the first application of a Chinese developed system of top coal caving in NSW. The Hunter Valley Southland mine, which is the last mining the sought after Greta seam coal, was purchased by Yanzhou Coal Mining Company of China, and renamed Austar Coal Mine. Yanzhou is one of the four largest Chinese coal miners in eastern China, with six underground mines in Shandong Province producing more than 40Mt per annum of coal, over 90% using the top coal caving method.

WB, USAID advice sought on method of coal extraction (Bangladesh)

The government has sought assistance from the World Bank and the US Agency for International Development for determining whether Bangladesh should follow 'open pit mining' or 'shaft mining' methods in coal extraction.

The energy ministry sought this help from the international organisations as an alternative to the local experts' opinion in this regard. The local experts have already given their opinion against open pit system considering the country's land limitation as well as environmental aspects. Around 90% of coal reserves can be extracted using open pit mining whereas around 15% of coal can be lifted in shaft mining.

Dillon Mine to increase production (Canada)

Western Canadian Coal Corp. announced that it has received approval from the British Columbia Ministry of Energy and Mines to increase its Dillon Mine production limit from 240,000 tonnes per year to a continuous rate of 80,000 tonnes per month. As a result, the company expects to produce and sell approximately 800,000 tonnes of ultra low-volatile coal for its first full operational year to March 31, 2006.

Over 5,000 coal mines to suspend production (China)
More than 5,000 small township- and individual-run coal mines in China have been ordered to suspend production to correct the lack of required safety production licences from concerned departments. The production suspension has no great impact on the country's coal supply as the combined output of these coal mines is around 40Mt in a six month period.

By the end of July 2005, 20,046 of the country's 25,927 coal mines have applied for safety production licences, accounting for 77% of the total. The Chinese government vowed to reform the coal industry by establishing large coal groups with better safety equipment, instead of scattered small shafts with poor safety standards.

China signs up for Aussie clean coal (China)
Beijing's"green" credentials for the 2008 Olympics could be boosted by revolutionary Australian technology to clean coal. Sydney company UCC Energy has signed an arrangement with Datang International Power to use its technology for a power station which is hoped to be operating before the Olympics.

UCC Energy said that ultra-clean coal, which was developed in a joint venture with CSIRO, could reduce GHG emissions from processing high value coals by 10% to 20%. UCC is working with the world's biggest producer of gas turbines, Mitsubishi Heavy Industries, to modify high temperature gas turbines to use UCC fuel. Mitsubishi has been involved in the development of the process since 1998.

Coal to surpass oil in exports (Colombia)
Cerrejon, the world's biggest open-pit export coal mine, accounts for up to 60% of all coal exports from Colombia. It is owned by BHP Billiton, Anglo American and Glencore International and hopes to extract a record 26Mt this year. Its locomotives, pulling up to 120 cars, make a half dozen trips each day from mine to port, transporting some 80,000 tonnes every 24 hours. Overall, coal is gaining on oil as Colombia's top export, as known oil reserves begin to drain. Colombia has estimated reserves of some 8 billion tonnes of coal that will last into the foreseeable future. Much of it is high grade and used to fire electricity generating plants around the world.

Making oil out of coal (India)
Four leading Indian industrial groups, Jindal, Essar, Tata and Bhushan Steel held exploratory talks with SASOL of South Africa for converting coal into oil, thereby creating a multi-billion dollar industry.

SASOL has operated its CTL (coal-to-liquids) plants since the 1950s and believes that its technology is competitive with oil at US$40/barrel. The SASOL conversion process also yields chemical by-products (such as olefins and alcohols), CO_2 and surplus electricity, and, if these are optimised, the technology might be able to compete with oil even at US$25/barrel, with US$40 as a safer benchmark.

Clean coal technology: gasification research (Japan)
Coal plays a vital role in Japan's energy mix - it is imported from a well supplied global market - and its contribution is set to continue. It is therefore imperative that technologies are utilised and continue to be developed to ensure coal is used as cleanly as possible. Improving the efficiency of coal fired power plants is one way to achieve this.

The Japanese Ministry of Economy, Trade & Industry (METI), the New Energy and Industrial Technology Development Organization (NEDO), and the Electric Power Development Co (EPDC), are undertaking a major project to develop coal gasification for use in fuel cells. The Coal Energy Application for Gas, Liquid and Electricity project – or EAGLE project - started in 1998 and is due to run until 2006.

The EAGLE project aims to demonstrate the technologies needed to transform coal into a synthetic gas for electricity generation and fuel cells. Construction of the 150 tonnes/day pilot scale gasifier began in August 1998 at EPDC's Wakamatsu site. Pilot testing has been operating since March 2002 and is planned to run through to 2006.

SNGPL plans coal gasification plant (Pakistan)
Sui Northern Gas Pipeline Ltd (SNGPL) is carrying out a pre-feasibility study for establishing a coal gasification plant at Bhakkar as a source of gas supply. Catalytic coal gasification was developed as a more efficient and less costly process to produce gas from coal. Methanol or synthetic gas can be produced from Thar coal at the coalfield and can easily be transported by pipeline throughout the demand centres. SNGPL has recently invited proposals from international consultancy firms to carry out the pre-feasibility study.

Russian coal acquisitions (Russia)
Russian steel company Mechel has acquired 3 coal fields in the coal-rich Kemerovo region in Siberia. Kemerovo, where coal was discovered 300 years ago, is one of the world's biggest coal fields. Mechel's newly acquired fields have cumulative reserves of more than 880Mt to Russian mining standards. Competition on the domestic steel market has fuelled Russian companies' hunt for coal assets as global steel prices continue to boom and producers seek to expand exports to China. Mechel's domestic rivals, Severstal and Evraz, have both expressed interest in coal acquisitions in Kemerovo.

Coal health compensation review (UK)

An independent review is to take place into the administration of coal health compensation schemes for former miners. The Energy Ministry announced the probe, saying it would not encroach on an ongoing police investigation into potential fraud under the schemes.

The schemes cover respiratory disease and vibration white finger claims. The Department of Trade and Industry ministers hope that the head of the review will be announced by the end of July and that conclusions should be available before the end of the year. The department said the review would consider the "integrity of the administration of the scheme for dealing with coal health claims."

Ukraine's coal mining industry to become self-sufficient (Ukraine)

The Ukrainian government demanded that in 1.5 or 2 years the country's coal mining industry should be prepared to be privatised. All mines are to be split into three groups: economically inexpedient, breakeven and profitable. Privatisation issues are to be settled for each group separately. The coal mining industry is also envisioned to be made financially self-sufficient. Ukraine possesses some 400 state owned coal mining enterprises and the industry will be allotted investments from the state budget.

US coal business looking very profitable (USA)

US coal producers say their business has taken a sharp turn for the better in the past months. A growing economy, hotter than normal summer weather and unusually high prices for competing fuels have boosted second quarter profits.

Quoted spot prices for Powder River Basin coal have risen nearly 70% since 2005 began, and the robust prices in both the Western Bituminous and Central Appalachia regions have once again begun to edge higher as well. Arch estimates that inventories of coal are 15% below their 5 year averages, another indicator of continued profits.

Syntroleum targets coal gasification (USA)

Tulsa-based Syntroleum Corp. said making transportation fuel from coal is an idea whose time has come. Record high prices for oil and gasoline and new incentives passed by Congress have created a market for coal gasification plants capable of turning the nation's abundant supply of coal into ultra-clean diesel fuel.

Montana and Wyoming, states with huge coal reserves, are turning to companies such as Syntroleum, experts in converting coal into clean burning liquid fuel, for help in developing their vast coal supplies. The conversion of coal into synthetic fuel has become practical and cost effective thanks to the new incentives, sky high oil prices and a need for alternative fuels. The use of coal as a transportation fuel could help reduce US dependence on foreign oil because coal is cheap and the United States has 270 billion tonnes of proven coal reserves, more than any other country.

Bush signs massive Energy Bill (USA)

President Bush signed the Energy Policy Act of 2005 which affects virtually every aspect of energy production in the United States. It specifically authorises the Secretary of Energy to "conduct a program of technology demonstration and commercial application for coal and power systems, including programs to facilitate production and generation of coal based power through liquid fuels derived from low rank coal."

Government approves establishment of Viet Nam Coal Group (Vietnam)

The Vietnamese government approved a pilot project to establish the Viet Nam National Coal Group (Vinacoal), which will operate as a holding company. Vinacoal will be formed by restructuring the Viet Nam Coal Corporation and its subsidiaries into a robust economic group, with advanced technology, modern management methods and diversified fields of business, including the coal industry, energy engineering, mining, shipbuilding, the automobile industry, and mineral exploitation and processing.

Vinacoal will consist of 11 businesses, including three coal companies, a financial company, a mining company, a rescue centre for the miners, a human resources development centre, two coal project management boards and a clinic. The mother company will hold 100% of statutory capital of the 18 affiliates, over 50% of statutory capital of the 24 subsidiary businesses and less than 50% of the four other enterprises.

TECHNOLOGY

EFNZ hosts an energy research investment strategy workshop (NZ)

The Energy Federation of NZ (EFNZ) hosted a two day workshop in September as an important step in developing a coordinated energy industry view on the priority areas of research through to 2050. More than 60 participants heard short presentations on possible future scenarios for NZ industry through to 2050, followed by presentations from technology experts on the likely current and future trends in relation to different technologies. The group then identified the priority areas of research that will ensure cost effective and timely research outcomes applicable to the likely future of New Zealand. In addition to a finalized strategy for release in March 2006, the workshop outcomes will help inform the Energy Research Roadmap being developed by the Ministry of Research Science and Technology and the Foundation for Research Science and Technology.

Government releases carbon abatement technology strategy (UK)

The UK government finally launched its long anticipated Carbon Abatement Technology (CAT) Strategy. The launch of the strategy followed last year's public consultation, in which the World Coal Institute submitted its recommendations and highlighted the potential offered by clean coal technologies.

Initial funding is to be provided by the Cleaner Fossil Fuels programme for the period 2005/06 to 2007/08. However, the CAT strategy is set to provide a new funding package starting in 2006/07 for demonstrations across carbon abatement technologies, hydrogen and fuel cells.

US announces "Clean Coal" R&D awards

The US Government has announced $62.4M for 32 clean coal research projects as part of the Bush administration's goal of developing coal fired zero emissions power. Among the objectives of the research are:

- improved and new methods of producing pure hydrogen in coal gasification;
- hydrogen handling - safe storage of hydrogen, and on-board storage which will aid the commercialisation of hydrogen fuel cell vehicles;
- improved and simplified removal of multiple pollutants in coal gasification;
- development of CO_2 capture technology that can be retrofitted on existing coal based power plants;
- expansion of carbon sequestration technology to identify and accurately assess the CO_2 storage capacity of geologic formations; and
- development of new alloys to advance ultrasupercritical generation with pulverised coal, an emerging newer technology that can deliver power with ultra-low emissions and ultra-high efficiency.

Draft Strategic Plan for reducing greenhouse gas emissions released by DOE (US)

The Department of Energy has released a plan for accelerating the development and reducing the cost of new and advanced technologies that avoid, reduce, or capture and store greenhouse gas emissions – the technology component of a comprehensive US approach to climate change. The Climate Change Technology Programme's (CCTP) draft plan provides strategic direction and organizes about US$3 billion in federal spending for climate change-related technology, research, development, demonstration and deployment. The Plan sets six goals: (1) reducing emissions from energy use and infrastructure; (2) reducing emissions from energy supply; (3) capturing and sequestering carbon dioxide; (4) reducing emissions of other greenhouse gases; (5) measuring and monitoring emissions; and (6) bolstering the contributions of basic science to climate change. The draft plan has been released for public comment until early November with the completed plan to be released in 2006.

New IGCC clean coal plant (US)

American Electric Power (AEP) has signed an agreement with GE Energy and Bechtel Corporation to begin the front-end engineering design process for a commercial scale, Integrated Gasification Combined Cycle (IGCC) clean-coal plant in the 600-megawatt range. AEP is moving forward with the front-end engineering design process in order to remain on schedule to complete an IGCC plant in 2010. The company intends to build at least another 600 megawatts of IGCC generation in its eastern operating area by 2013.

Victorian government calls for clean brown coal plant proposals

The Victorian government has called for proposals to build a new power demonstration plant trialling clean brown coal technology in the Latrobe Valley, part of the Energy Technology and Innovation Strategy announced in the Victorian Budget. The Latrobe Valley has the world's second largest brown coal deposits so the Government is calling for organisations to put together proposals for a new large scale demonstration plant that combines environmentally sustainable technology with efficient power generation. The new brown coal baseload power station using clean, energy efficient technology is expected to be constructed within the next 10 to 15 years and this large scale demonstration project is crucial to its success. It is expected projects will start in 2006, with successful applicants showing proven commercially viable technology by 2010-11.

"Lead role" for Queensland

The Federal Ministry for Resources said recently there is great potential for Queensland's mining sector to play a lead role in the development of carbon sequestration. While the renewable energy sectors are still searching for cost effective peak load power generation solutions, Australia would need to investigate technologies like carbon capture and storage. Geoscience Australia has identified 65 sites in 48 basins for CO_2 injection – 23 of these sites are in Queensland. They cited Queensland's potential to change the emissions profile of the mining and energy sectors, particularly on the south-east Queensland's large stationary sources, where mostly coal fired power stations represent 9% of Australia's total emissions. The international interest in Australia's progress in the area of low emission technology means local innovation will give the country a competitive advantage over other markets such as China.

OTHER NEWS

Coal & the G8 Summit

The summit held in Gleneagles, Scotland was attended not only by the G8, but also leaders of Brazil, China, India, Mexico and South Africa, heads of the International Energy Agency (IEA), International Monetary Fund, United Nations, and World Bank.

Among others, the G8 outlined its actions on powering a cleaner future, whereby fossil fuels will continue to be an important part of the global energy mix, and we will need to find ways to manage the associated air pollution and GHG emissions. The plan states that the G8 will support efforts to make electricity generation from coal and other fossil fuels cleaner and more efficient.

The G8 also voiced its support for the development and commercialisation of carbon capture and storage (CCS) technologies. It states that it will:

- Endorse the objectives and activities of the Carbon Sequestration Leadership Forum (CSLF) and encourage the Forum to work with broader civil society and address the barriers to the public acceptability of CCS technology.

- Invite the IEA to work with the CSLF to hold a workshop on short term opportunities for CCS in the fossil fuel sector, including from enhanced oil recovery and CO_2 removal from natural gas production.
- Invite the IEA to work with the CSLF to study definitions, costs and scope for 'capture ready' plant and consider economic incentives.
- Collaborate with key developing countries to research options for geological CO_2 storage.
- Work with industry and with national and international research programmes and partnerships to explore the potential of CCS technologies, including with developing countries.

News from the World Coal Institute

1) The WCI announced the launch of its new redesigned website – www.worldcoal.org. The website has been completely redesigned, content rewritten and new information added, and it has a new structure built around the core sections:
   - What is Coal?
   - Environment & Society
   - WCI Publications
   - About WCI

2) The World Coal Institute recently published a new report The Coal Resource – A Comprehensive Overview of Coal. The report provides an overview of all aspects of coal – from its origins through to its production and use and replaces the Coal – Power for Progress series of publications. The report is useful for anyone looking to gain an understanding of coal, its role in our societies today and challenges facing the industry.

   The Coal Resource reviews in detail the environmental challenges facing both the production and use of coal, something particularly pertinent given the global emphasis on tackling climate change. Information is provided on clean coal technologies which are available to tackle environmental impacts associated with the use of coal. Research and development is also ongoing, looking at the development of the next generation of technologies, which offer the prospect of near zero emissions from the utilisation of coal.

Putting energy in the spotlight

BP released the 54th edition of its Statistical Review of World Energy on 14 June 2005, which was once again dominated by the theme of growing energy demand and by developments in China. A copy of the BP Statistical Review of World Energy is available on the BP website: www.bp.com/statisticalreview

EVENTS

Cooperative Research Centre for Coal in Sustainable Development Annual Conference, Brisbane, Australia, 25 Oct. 2005, www.ccsd.biz

2005 New Zealand Minerals Conference, Auckland, NZ, 13-16 November 2005. www.nzmineralsconference.org.nz

Greenhouse 2005 -on Climate Change, Melbourne, Australia, 13–17 Nov 2005, www.greenhouse2005.com

ERRATUM - In last issue of Coal e-news (No. 10), under the article "Pike River Coal choice down to two ports", first paragraph third sentence , it should read as follows "Pike River Coal, ***72%*** *owned by New Zealand Oil and Gas, is expected to decide soon whether it will ship coal from Greymouth or sent it by rail to Lyttelton."*

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