

CBM

EXPLORATION

AUSTRALIA:

Six-month freeze on NSW coal seam gas exploration licences

The state government has announced a six-month freeze on processing new applications for coal seam gas exploration licences in NSW, while the cost of applying will soar from \$1000 to \$50,000 under new rules. The freeze will allow an audit of existing coal seam gas licences and pending applications to be carried out before a new assessment and allocation regime is put in place, Premier Barry O'Farrell told Parliament recently.

Mr O'Farrell said that, in 2002, the previous government set the cost of a coal seam gas application fee at \$1000, which was "simply and utterly incredible". He said the minister for resources and energy, Anthony Roberts, would raise the fee to \$50,000. The announcement followed a decision by Mr Roberts to refuse five coal seam gas exploration licence applications being sought by the company Grainger Energy, covering 43,000 square kilometres of the Riverina. (March 26, 2014)

03/26/2014

PRODUCTION

CHINA:

Green Dragon Gas signs agreement with CUCBM for five PSCs in China

Green Dragon Gas, one of the largest independent companies involved in the production and sale of CBM gas in China, has announced that it has entered into a binding agreement with China United Coalbed Methane Corporation (CUCBM), a subsidiary of CNOOC, regarding five of its Production Sharing Contracts (PSCs) in China. Highlights of the agreement are:

Interests of GDG and CUCBM now aligned with both companies to work together in order to maximise the value within the PSCs which continue in full force and effect; secures interest and revenue share of the approximately 1,600 wells drilled by CUCBM in line with PSCs; CUCBM committed to invest a further \$100 million into GSN in return for an additional 10% working interest (in addition to an estimated \$100 million invested to date); CUCBM committed to ongoing cooperation with GDG with full information sharing across wells drilled on PSCs and all local assistance; PSC exploration terms extended for a further 2 years.

“We now have a well-capitalised, supportive partner committed to developing our vast acreage and producing the substantial multi-TCF gas resource with us over the next 20 years. GDG can now look forward to the continued successful execution of our business plan as the pioneering CBM developer in China,” Randeep S. Grewal, Founder and Chairman of Green Dragon Gas, commented. (April 2, 2014)

04/03/2014

ENVIRONMENT

UNITED KINGDOM:

Dart Energy welcomes start of Public Inquiry into Airth coal bed methane development

Dart Energy welcomes the start on Tuesday 18th March of the Public Inquiry into its proposed CBM development at Airth near Falkirk in Scotland. The public inquiry, which is expected to last three weeks, was deemed necessary by the Reporter appointed by the Scottish Government after Dart Energy appealed to it on the grounds of non-decision, despite several extensions to the statutory deadlines, by Falkirk and Stirling District Councils over its Planning Application first lodged in Summer 2012.

If the development is approved the gas will be delivered into the national grid and the produced water treated to standards agreed with the Scottish Environmental Protection Agency (SEPA) and discharged to the Firth of Forth under licence.

The proposed development includes the drilling of 22 wells, development of Inter-Site Connection Services, site access tracks, a Gas Delivery and Water Treatment Facility, ancillary facilities, infrastructure and associated water outfall point. Over the 20-25 year life of the development, the expected gas recovered will amount to 0.02% of the annual UK gas consumption.

Douglas Bain, UK Country Manager said: "We are pleased to have the opportunity through the public inquiry of demonstrating the important strategic role gas will need to play in delivering safe, secure and economical energy to the UK in the coming decades as we transition to a low carbon economy.

We will seek through the Public Inquiry to address and allay with scientific rigour the concerns of the communities and at the same time correct the many myths surrounding the production of coal bed methane." (March 17, 2014)

03/17/2014

AUSTRALIA:

One in two Australians want tougher CSG regulation

The environmental movement and resources industries are again butting heads, after new research was released recently showing one in two Australians wanted more regulation of coal seam gas. A research paper by The Australia Institute cited a survey that found **some 71% of respondents thought the Federal Government should control CSG regulation, not states**. That research also argued against gas industry claims that increased export of LNG will lower gas prices. Report author Matt Grudnoff said industry claims on a range of issues did not "stand up to scrutiny", arguing claims of creating "a lot of jobs" were also false.

The release of the research came as the resources industry, through the Queensland Resources Council and Australian Petroleum Production and Exploration Association, hit back at its opponents. The gas lobby, APPEA, argued that Deloitte Access Economics estimated that during the CSG investment phase, national employment peaked at about 103,000 full time jobs in 2012. A statement from the gas industry said those jobs included work "within the oil and gas industry itself", but did not take into account that such figures also include other jobs created in the same period.

Recently, Queensland's peak mining lobby, QRC chief Michael Roche, also hit out a campaign against coal and CSG in Queensland, saying there was "no science" to back up the campaign. (March 18, 2014)

03/18/2014

SHALE GAS

EXPLORATION

ARGENTINA:

Chevron, YPF boost spending to develop Argentine shale

Chevron Corp and state-controlled YPF SA plan to spend an additional \$1.6 billion to develop Argentina's Vaca Muerta shale formation further, boosting plans for new wells this year and announcing fresh exploration projects. The project will help Chevron boost its oil and natural gas production, which has been stubbornly flat the past few years despite annual global capital spending of around \$40 billion.

It should also help ease concerns about foreign investment in Argentina, which was widely castigated after President Cristina Fernandez expropriated Repsol SA's majority stake in YPF two years ago, and should give the country fresh capital to develop one of the largest energy reserves in the Western Hemisphere. Since the start of the year, Argentina has made policy changes that have caught the eye of international investors while sparking a rally in local stocks and bonds. The shifts have included heating gas subsidy cuts of 20%, an 18% currency devaluation and a deal to pay Repsol \$5 billion for the YPF nationalization.

Chevron and YPF began drilling in the region last year, with Chevron agreeing to spend \$1.24 billion for YPF to drill 161 wells as the project's operator, a deal that was widely seen as a test phase by Wall Street. Chevron and YPF would jointly spend an additional \$1.6 billion to drill 170 wells this year, up from previous estimates for 140 wells this year.

Additionally, Chevron will spend \$140 million to explore the Nambueña region of the Vaca Muerta.

Chevron, which has called Vaca Muerta one of the world's most exciting shale plays, has previously forecast production there could jump from around 15,000 boe/d at present to 80,000 boe/d by 2017.

The company, which is 51% controlled by Buenos Aires, is seen as crucial in helping the South American nation achieve energy independence. (April 10, 2014)

04/11/2014

SHALE GAS

EXPLORATION

CHINA:

China's first large-scale shale gas field found in Chongqing

Sinopec, announced recently that it discovered a major shale gas field near Southwest China's Chongqing. The Fu-Ling field has **estimated reserves of 2.1 trillion cubic meters**. It's also the first large-scale discovery of its kind in China.

The discovery in Chongqing's Fuling district means that **China can enter into large-scale commercial development of shale gas much earlier than anticipated**. Sinopec's Chairman – Fu Chengyu -- says 10 years can now be cut off from China's planned development time for shale gas energy. "Our Fuling project, which will ultimately produce 10 billion cubic meters a year by 2017, will build shale gas capacity to 5 billion cubic meters a year by 2015." Fu Chenyu said.

The discovery of the Fuling field means China's **official target for annual shale gas production, 6.5 billion cubic meters a year, will be easily surpassed**. (March 25, 2014)

03/25/2014

CHINA:

CNPC JV starts drilling first shale gas well in Sichuan Province

Sichuan Changning Gas Development Company has commenced drilling of first shale gas well Changning H3-6 in China's Sichuan province, CNPC said recently. Founded in Decmebr 2013, Sichuan Changning Natural Gas Development Co is joint venture comprising CNPC, Sichuan Energy Investment Co, Yibin State Assets Operation Co and a Beijing National Union Energy Industry Investment Fund.

The shale gas block is located in Changning - Weiyuan national shale gas demonstration area, and is spread over 4,200 square kilometers. The block will see 50 wells being drilled with **target production of 1 billion cubic meters of natural gas** next year.

China is focusing on developing its huge shale gas resources and has set **shale gas production target for 2015 at 6.5 billion cubic meters**. In 2013, the country produced 200 million cubic meters of shale gas. (March 19, 2014)

03/20/2014

UNITED KINGDOM:

IGas finds shale formations on site near Manchester

Shale gas explorer IGas Energy said it had encountered parts of the promising Sabden and Bowland Shale formations in its drilling programme at Barton Moss, near Manchester in northern England.

Samples taken from the drilling programme will be **analysed over the coming six months** before the exploration firm will decide how to proceed, the company said. IGas also said it was in the process of acquiring around 100 square kilometres of 3D seismic data in the north west of the country to determine where else to drill for shale gas. "These early exploration results are key to our understanding of the potential resource in the area," said Chief Executive Andrew Austin.

Britain is counting on the development of potentially substantial shale gas resources to help it stem a rise in dependence on gas imports as production from the mature North Sea basin is declining. (March 31, 2014)

03/31/2014

CHINA:

Shell, CNPC to cooperate in deep-sea exploration, shale gas

Royal Dutch Shell and the CNPC have signed a deal to boost cooperation in sectors like deep sea exploration as well as **LNG and unconventional gas sources like shale**, CNPC said. The two companies had agreed to join forces in the development of both upstream and downstream energy businesses.

The Anglo-Dutch firm is already one of the biggest overseas investors in China's energy sector, and it could be well-placed to take advantage of Beijing's plans to grant foreign enterprises more market access. It is already partnering up with CNPC, the country's top energy group and parent of PetroChina, to **explore and develop shale gas in China's western regions**. Shell hopes to benefit from the operational and technological experience gained during the development of shale gas in North America, while CNPC holds the country's premium oil and gas acreage. It is also major supplier of LNG to China, securing gas from its global gas fields in Australia, Qatar and elsewhere. (April 10, 2014)

04/10/2014

SPAIN:

The Potential of Spanish Shale Gas

The invasion and annexation of Crimea has EU policymakers scrambling to improve energy security. The European Commission hopes to publish a roadmap by June 2014 that will spell out how exactly Europe can rid itself of Russian gas. Meanwhile, member states are not going to wait. That means not only trying to find other suppliers around the world (U.S. LNG), but also developing Europe's domestic energy resources.

Spain is hoping to get into the mix. Spain has been a nonfactor when it comes to energy production, largely dependent on imports. The Iberian nation is the fourth largest importer of LNG in the world, and relies upon imported oil and gas to meet 99% of demand.

But the success of the American shale gas revolution and the urgency with which Europe now wants to develop its own energy resources has the Spanish government pushing hard on shale gas. Deloitte suggests that **Spain does in fact have sizable shale gas resources and could turn itself into a net exporter of natural gas** if they chose to exploit them. Spain's oil and gas reserves have been tough to access using conventional drilling methods, but with the proven techniques used to tap shale in the U.S., Spain thinks it can do the same. (April 7, 2014)

04/08/2014

PRODUCTION

CHINA:

China eyes massive production from first shale project

China's Sinopec is planning to develop a production capacity of **10 bcm/y by 2017 at the Fuling shale gas field**, making it the country's first commercial shale gas project.

Sinopec has spent some \$322 million on the Fuling project in China's southwest, with the first breakthrough commercial discovery hit last year, and production capacity on track for significant yearly increases that could lead to fast-tracked large-scale development.

Capacity is currently at 0.6 bcm/year, but with 21 demonstration wells drilled, **Sinopec plans to reach 1.8 bcm/year by the end of 2014 and 5 bcm/year by 2015**. The average daily output from each well is at least 170,000 cu m, with one well, Jiaoye 1HF, averaging over 300,000 cu m/day of production over the past year and a half.

The Fuling field is said to have reserves of 2.1 trillion cubic meters of natural gas located at depths of less than 4,500 meters. But while the quality of the shale is said to be comparable to major US plays, **China has had difficulty developing its reserves due in part to a lack of technology and water scarcity for hydraulic fracking**.

According to the US EIA in just two basins alone—Sichuan and Tarim—there are some 1,275 trillion cubic feet (36 trillion cubic meters) of recoverable shale gas.

After state-run Sinopec, Royal Dutch Shell is the second major player on the Chinese shale scene, partnering with China National Petroleum Corp. in Changbei, Shaanxi province, to produce **tight gas**, and drilling in the Sichuan Basin.

In total, China has drilled fewer than 100 shale gas wells in the country—a far cry from the US shale portfolio of some 40,000 wells. By 2020, China hopes to be producing 60-100 billion cubic meters of natural gas per year, for which the drilling pace will have to be picked up exponentially. (March 26, 2014)

03/27/2014

SUPPLIES - IMPORTS - EXPORTS

UNITED STATES:

Louisiana shale gas sees a second life

The surge in Gulf Coast petrochemicals and natural gas-fired power generation, combined with exports of natural gas, could push up Louisiana's demand for the fuel and revive a voracious market for Haynesville and Marcellus shale gas, according to an ICF International report. The Haynesville Shale, which lies on the Louisiana-Texas-Arkansas border, was considered one of the hottest shale plays in 2008. But by 2012, the collapse of natural gas prices led to an exodus of operators to other plays, in search of more oil-rich sites. But **growing use of natural gas for electricity generation and newly approved gas exports could revive demand for natural gas** in Louisiana, according to consulting firm ICF International's recent report.

The chief driver for the anticipated increase will be natural gas exports, and **Louisiana has positioned itself well to capture new international customers**, ICF International noted. Louisiana's Sabine Pass export terminal is to date the only site to clear the needed permits to export natural gas, and its owner, Cheniere Energy, expects to start up the facility by 2015.

In turn, Louisiana's ample supplies in the gas-rich Haynesville and other shale plays have made it an attractive proposition for the several other proposed terminals along the Gulf Coast. Louisiana has also has a maze of pipeline capacity and shipping infrastructure, as well as several brownfield sites that could more easily be permitted than a new location, ICF said in its report.

Growing natural gas generation in the Southeast is also expected to increase the demand for Louisiana's natural gas production, with demand expected to grow by one trillion cubic feet a year throughout the next decade. (March 18, 2014)

03/20/2014

SOUTH KOREA:

South Korea must limit U.S. shale-gas imports to 20% of total

South Korea must limit the share of U.S. shale gas to one-fifth of its total gas **imports to avoid excessive dependence on a single supply source**, a senior executive at state-run Korea Gas Corp. said recently. "In my personal opinion, around 20% of shale gas [liquefied natural gas] is desirable. Too much exposure to shale gas LNG is not too desirable," said Kwon Young-Sik, chief operating officer at Kogas's resources division.

Asian importers of LNG such as South Korea are mulling a number of new supply sources as gas producers in Australia, the U.S., Canada, Russia and East Africa race to get new projects running.

South Korea, the world's second-largest importer of natural gas, imported around 37 million tons of LNG in 2012, according to the International Gas Union. It is positioned to be the **first Asian importer of U.S. natural gas, as it has contracted to purchase 3.5 million tons a year of LNG** from the Sabine Pass project. Kogas also has a stake in an LNG project in Kitimat, British Columbia, along with Shell Canada Ltd., Mitsubishi Corp. and PetroChina Co.

Mr. Kwon said Kogas, South Korea's monopoly gas importer, is waiting for new LNG demand forecasts from the government by the end of this year before making further decisions on its future fuel mix, which will also be determined by prevailing price levels. "We are always underestimating LNG demand. This time the plan will be more realistic," he said. (March 24, 2014)

03/24/2014