



Vol. 52, n° 19, December 17, 2013

Main news

LNG: Production

- Encana Corp would boost liquids production by 30% in 2014 as part of new plan to focus spending on regions rich in gas liquids and oil.

LNG: Supplies- Imports – Exports

- Santos Ltd could face more than \$1 billion in additional costs to drill enough wells to bring its \$18.5 billion Gladstone LNG export plant up to full capacity.
- France urgently needs to import liquefied natural gas to the southern port of Fos after prices in the region rose to a record.
- Despite the US shale gas revolution, Qatar is unlikely to lose its leading role in the global energy market for many more years due to strong Asian demand.
- Russia's three new LNG projects will find plenty of demand in a growing Asian market, without conflicting with Gazprom's monopoly on pipeline gas exports.
- Turkey is expected to increase its 20% stake in the Trans-Anatolian natural gas pipeline project (TANAP), designed to reduce Europe's reliance on Russian gas.

Natural Gas: Production

- BP and its partner in India, Reliance Industries (RIL) will invest \$5-10 billion to quadruple natural gas production by 2020.

Natural Gas: Reserves

- BG Group recently estimated there are 15 trillion cubic feet of natural gas in its reserve basins off the Tanzanian coast.

Natural Gas: Transport - Distribution

- The Trans-Adriatic pipeline (TAP) project plans to send invitations to tender for engineering and pipeline contract packages in the first six months of 2014.

Natural Gas: Supplies- Imports – Exports

- Moscow might be willing to give Ukraine relief on the price of natural gas it imports from Russia if Kiev granted better terms for the Russian naval fleet in Ukraine's Crimea.

Natural Gas: Storage

- Azerbaijan's state energy company SOCAR will soon complete the drilling of a second appraisal well as part of the creation of **underground gas storage** in the Nakhchivan Autonomous Republic.

Natural Gas: Companies

- Commission approves acquisition of German and Dutch gas supply and storage joint ventures by Gazprom.

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LNG

PRODUCTION

CANADA: Production forecast - CNR52/19/1

Encana to increase natural gas liquids production by 30 pct

Encana Corp said it would boost liquids production by 30% in 2014 as part of new Chief Executive Doug Suttles' plan to focus spending on regions rich in gas liquids and oil. The company will focus three-quarters of its planned 2014 capital spending of \$2.4 billion to \$2.5 billion on five shale regions in western Canada and the U.S. south and southwest.

These regions - Montney in British Columbia, Duvernay in Alberta, the DJ Basin in Colorado, the San Juan Basin in U.S. southwest and the Tuscaloosa Marine Shale in U.S. south - will account for about 25% of production in 2014. They will also generate about 45% of the company's total upstream operating cash flow, excluding the impact of hedging.

Encana has been hurt by low natural gas prices for much of last year, leading the company to write down the value of its gas assets by \$2.89 billion. The company said recently it had completed its restructuring program.

Encana said it expected total liquids production in 2014 to average between 70,000 and 75,000 barrels per day, and natural gas production to average between 2.6 billion and 2.8 billion cubic feet per day. (December 11, 2013)

PROCESSING

COLOMBIA: Domestic supply - CNR52/19/2

Colombia to build \$400 million LNG regasification plant

Concerned that declining natural gas reserves combined with the effects of climate change could make it a net importer in two years, Colombia in January will award a construction contract for a new LNG import terminal that will be able to **process up to 350,000 Mcf/d** beginning in December 2015.

Mining and Energy Vice Minister Orlando Cabrales said recently the \$400 million plant will provide enough gas to supply all of Colombia's thermal power plants and address what regulators warn may be a natural gas deficit by 2015. The plant likely will be located on the country's Caribbean coast near Cartagena. The terminal could be supplied with LNG from Trinidad-Tobago or by planned LNG export plants on the US Gulf Coast, sources said. "In the past, hydroelectric

has provided most of the power Colombia needed, but after severe droughts in recent years, the nation has had to switch to more thermal energy," Cabrales said.

Colombia produces nearly 1.2 Bcf/d of natural gas, enough to meet domestic demand and export about 250,000 Mcf/d to Venezuela. But reserves are falling fast in the absence of new discoveries and the nation's top electricity regulatory CREG has pushed for LNG import facilities to cover worst-case scenarios.

Colombia has offered incentives to wildcatters to promote offshore gas exploration, an effort that will bear some fruit next year. Anadarko, Petrobras and Ecopetrol and partners are planning then to drill three offshore wells that will target gas. The three groups planning drill next year will invest a minimum of \$300 million in the their projects in Colombia's Caribbean waters. (December 6, 2013)

SUPPLIES - IMPORTS - EXPORTS

AUSTRALIA: Production forecast - CNR52/19/3

Santos expects 2014 output to rise on Exxon's PNG LNG project

Santos Ltd., Australia's third-largest oil and gas producer, expects output to rise as much as 12% next year, driven by the start of a \$19 billion natural gas project in Papua New Guinea.

Santos will receive a boost from Exxon Mobil Corp. liquefied natural gas project in Papua New Guinea, which is scheduled to begin next year, and is looking to expand in the Pacific nation, Chief Executive Officer David Knox said recently. Santos also is building the \$18.5 billion Gladstone LNG project in Queensland, one of seven under construction in Australia to meet Asian demand. (December 4, 2013)

AUSTRALIA: Financing project - CNR52/19/4

Santos' Gladstone LNG faces additional well costs

Santos Ltd, Australia's No. 2 energy company, could face more than **\$1 billion in additional costs** to drill enough wells to bring its \$18.5 billion Gladstone LNG export plant up to full capacity. The project is part of a \$190 billion surge in new LNG capacity development under way in Australia, but **costs have already blown out by around 16% from an original estimate of \$16 billion.**

Santos told recently it would have to drill about 300 wells in two years to 2015, and another 200 to 300 wells a year thereafter to source enough coal seam gas to fuel the plant, which is due to come on stream in 2015. While well costs have fallen in the past three years, if drilling costs remain the same, the drilling programme would lead to additional capital expenditure for Gladstone of \$1.2 to \$1.6 billion through 2018, according to Reuters calculations.

This would be in sharp contrast with offshore projects such as the North West Shelf in Western Australia which had ongoing capital costs of about

\$10 to \$20 million a year, said Johan Hedstrom, an analyst with Canaccord Genuity Australia in Sydney.

Gladstone LNG is one of three coal seam gas to LNG export projects on Australia's eastern seaboard, with BG Group bringing its Queensland Curtis Island LNG plant online in 2014 and Origin and ConocoPhillips' Australia Pacific LNG bringing a plant online in 2015.

Unlike offshore LNG projects, which rely on a few large reservoirs, coal seam gas projects have to source gas from thousands of wells spread over a large area and the market has been closely watching the projects following a series of cost blowouts. Santos executives said the cost of getting the company's flagship project fully up and running would depend on the number and cost of wells, as well as the availability of gas from third parties.

Santos owns 30% of the project, while Malaysia's Petronas and Total own 27.5% each. GLNG has binding offtake agreements with both Petronas and South Korea's KOGAS for 3.5 mtpa over 20 years. (December 4, 2013)

CANADA: Gas supply - CNR52/19/5

CNOOC applies to Canada regulators for LNG export license

CNOOC Ltd applied to Canadian energy regulators recently for permission to export LNG from a proposed terminal along Canada's West Coast.

The application to the National Energy Board (NEB) comes just two weeks after the Chinese company reached a land deal with British Columbia for a property at Grassy Point, a nub of land just 10 miles south of the Alaska border. CNOOC and its Japanese partners, Inpex Corp and JGC Corp, plan to build a massive liquefaction and export facility there to ship gas from CNOOC's shale gas properties in Western Canada to energy markets in Asia. They have asked permission to **export up to 24 million tonnes of LNG over a 25-year period** from the proposed facility, known as the Aurora LNG project. (November 29, 2013)

FRANCE: gas supply - CNR52/19/6

France needs LNG imports 'quickly' to south as price gap widens

France urgently needs to import liquefied natural gas to the southern port of Fos after prices in the region rose to a record, the energy regulator and gas distributor said.

As heating demand climbs amid cold weather, the difference in gas prices between the southern and northern French markets has widened to a record. . .the gap is a result of **lower LNG supplies from Algeria and traders preferring to send shipments to Asia, where prices have risen**, the regulator Commission de Regulation de l'Énergie said in a statement.

France's energy regulator has warned of risks of tight supply in the south of the country, where prices were already pushed higher last year due to lower LNG imports and bottlenecks in getting piped gas from the north. GRTgaz SA, the French gas pipeline operator controlled by GDF Suez SA, was to raise capacity on its north-south link in a bid to prevent price surges and volatility under a plan announced earlier this year.

Supply shortages in the southern French market, known as Point d'Échange de Gaz Sud, or PEG Sud, pushed the difference in day-ahead gas prices with its northern counterpart PEG Nord to a record 12.29 euros (\$16.80) a megawatt-hour on Dec. 3, the regulator said in its latest statement. The month-ahead differential was 6.24 euros a megawatt-hour.

LNG prices have "risen significantly" in the past weeks in Asia to the detriment of imports coming to the European market, the regulator said in its latest statement. LNG for delivery to northeast Asia was unchanged at \$19 a million British thermal units this week after 12 weeks of gains, according to assessments by World Gas Intelligence of cargoes for delivery in four to eight weeks. That compares with \$13.80 in southwest Europe. Maintenance at the Algerian Port of Skikda has also lowered imports to Mediterranean ports in France and Spain, including Fos Cavaou and Fos Tonkin near Marseille, the CRE said. "It's unknown" when the infrastructure will function normally. (December 6, 2013)

INDIA/JAPAN: Agreement - CNR52/19/7

India, Japan eye joint tenders for cheaper LNG

India and Japan are stepping up the pressure for cheaper LNG with potential joint tenders as two of the world's biggest gas buyers try to ease the pain of high prices and rising demand. Asia is already the top destination for LNG supplies and economic expansion, nuclear plant shutdowns in Japan and South Korea and the shift toward cleaner-burning gas in smog-choked Chinese cities are boosting demand even higher.

But that demand has helped push LNG prices to near record levels and now buyers such as India and Japan are trying to find ways to cut their soaring gas import bills. **India and Japan signed an agreement in September to study joint procurement** of supplies and now the two countries will hold meetings to work out the details of joint purchases. "It is a very serious move, which means when you float a tender, maybe Japan and India could combine and can float a joint tender and see what price comes," said India's oil secretary Vivek Rae.

Asian buyers from countries that import 70% of the world's LNG, including not just India and Japan but also China, South Korea and Taiwan, are expected to meet here as they also try to get a better deal from suppliers. These meetings may herald the early stages of an Asian buyers' club for natural gas in super cooled form transported on ships. Such a group could counter the Gas Exporting Countries Forum, a loose group of 13 gas-producing nations, including Algeria, Iran, Nigeria, Oman, Qatar and Russia.

LNG buyers are trying to push suppliers to delink gas prices from oil and free up contracts that prevent customers from re-selling cargoes because of destination restrictions. But sellers so far are not budging, with oil majors such as Chevron Corp and Exxon Mobil Corp insisting that multi-year supply contracts in their current form are necessary to ensure they can take on the risk of developing projects that take years to build and cost billions of dollars. (December 4, 2013)

JAPAN: Talks - CNR52/19/8

Tepco said to be in talks with BP to buy 500,000 tons of LNG

Tokyo Electric Power Co. is in talks with BP Plc to buy 500,000 metric tons a year of LNG. Tepco, as the company is known, will pay for the fuel using a formula linked to both gas and oil prices. The company is negotiating with potential suppliers to buy as much as **1.2 million tons of LNG a year**,

said Yusuke Kunikage, a Tokyo-based spokesman for Tepco.

Tepco currently buys 20.56 million tons of LNG annually through term contracts, according to data compiled by Bloomberg. Prices in long-term LNG purchase contracts, which usually run for more than 10 years, are typically linked to Brent crude, or the so-called Japan Crude Cocktail. (December 5, 2013)

LEBANON: Tender - CNR52/19/9

Beirut seeks bids for LNG import facility

Lebanese Energy Minister Gebran Bassil said he was soliciting bids for a LNG plant to lower the nation's energy import bill. Bassil launched the solicitation to cut energy costs by \$2 billion per year, the Daily Star reported. Bassil said the savings would emerge because Lebanon would pay only for the natural gas from a new LNG facility and not the cost of building the facility itself. He said the deadline for bids for the LNG plant is Dec. 23. (December 9, 2013)

LITHUANIA: Gas supply - CNR52/19/10

Lithuania is negotiating with alternative gas suppliers from Asia

Lithuania's Prime Minister Algirdas Butkevicius rejects fears of businessmen that the Liquefied Natural Gas (LNG) terminal built in Klaipeda would become only an alternative channel to supply gas and it would not reduce gas price. The head of the Government also reveals that gas supply and its price is under negotiations not only with Russia-based Gazprom, but also with suppliers from Asia, informs LETA/ELTA.

The prime minister assures that the LNG terminal will not only provide a slightly cheaper gas but also become a **significant instrument in the negotiations with Russian supplier Gazprom**. "The LNG terminal is one of Lithuania's strategic projects, it is number one. As to how we will manage to find agreement with gas suppliers, it is another question. If we succeed to reduce gas price with Gazprom, then having the LNG terminal, the negotiations will be even smoother, since we will be able to receive gas from somewhere else,". (December 3, 2013)

QATAR: Market trends - CNR52/19/11

Asian demand will help Qatar keep LNG lead

Despite the US shale gas revolution, Qatar is unlikely to lose its leading role in the global energy market for many more years due to strong Asian demand, a new report has shown according to the Gulf Times.

US shale gas is now commercially viable and has virtually eliminated the need for the world's largest economy to import LNG, including from Qatar, QNB said in a report. The drop in US demand, however, has been replaced by strong demand from Asia, particularly from Japan after the Fukushima nuclear accident in March 2011.

While the US is becoming energy independent, Asia continues to have ever-growing energy needs. Asian LNG demand has grown rapidly in recent years from both traditional buyers and new ones. This trend is likely to continue in the future, QNB said. Reflecting these changes in the global energy market, **Qatar has redirected its LNG exports over the last three years from the US to Asia**. China started importing LNG from Qatar in August 2013 and is now finalizing its first floating LNG terminal to start receiving gas for Tianjin city this month. Japan has switched from nuclear to gas-fuelled power stations following the Fukushima disaster, which has more than made up for the loss of US LNG imports. In addition, other economies in Asia are increasing their

imports of LNG from Qatar, including India, Malaysia and Thailand. Demand from Asia is likely to continue to remain strong as its economies expand rapidly over the medium term.

The US shale gas revolution is also unlikely to spread to other parts of the world. While Asia has the largest proven reserve of shale gas in the world (19% of the world's total), technical issues such as the depth of gas deposits, proximity to urban areas and the shortfall of technological skills, make exploitation costly and will prevent a development of the industry similar to that of the US in the near term.

As a result, Asia will likely continue to remain Qatar's largest LNG importer over the medium term. In Australia, early attempts to develop the shale gas industry have turned out to be very costly and have not yet produced significant output. In Europe, shale gas is for the most part not commercially viable or allowed for ecological concerns. In particular, Hungary and Poland are finding it increasingly difficult to extract shale gas profitably. In addition, concerns about the polluting water discharge from fracking techniques have pushed Bulgaria and France to ban shale gas extraction outright.

Overall, the US shale gas revolution has resulted in a redirection of Qatar's LNG exports to Asia. (December 1, 2013)

RUSSIA: Market trends - CNR52/19/12

Russian LNG exports to find market niche

Russia's three new LNG projects will find plenty of demand in a growing Asian market, without conflicting with Gazprom's monopoly on pipeline gas exports, Energy Minister Alexander Novak told Reuters. Vladimir Putin recently **signed off on rule changes that enable No.2 gas producer Novatek and top oil firm Rosneft to launch LNG projects.**

Russia wants to double its share in the global LNG market by 2020 from its current 4.5% Gazprom and Royal Dutch Shell own Russia's only existing LNG plant on the Pacific island of Sakhalin, and Gazprom plans a second plant in Vladivostok.

Novak said the three new Russian LNG plants would start production before 2020, when the global market is still expected to face a supply

shortfall. "I often meet analysts and experts, and they all agree that today there is a niche to build plants and sell volumes by 2020. There is a deficit on the LNG market now," he said. The plants will quadruple Russian output to 35-40 million tons per year of the super cooled gas, which is more flexible than pipeline gas and can be shipped by tanker to any destination with a regasification terminal.

Russian companies are welcome to ship LNG anywhere if they do not compete with Gazprom, Novak said, adding there were no plans to break up its monopoly on gas exports delivered by pipeline. The law will protect Gazprom's exports to Europe, where it accounted for 26% of gas sales last year and targets 30% by 2020, despite recent declines in market share. Its LNG exports are a tiny fraction of pipeline flows. (December 3, 2013)

RUSSIA: Talks - CNR52/19/13

Gazprom considers Latin America for LNG exports

Gazprom is considering supplying LNG from its Baltic LNG project to Latin America via its expanding European network. The idea was discussed during a working meeting by Gazprom chairman Alexey Miller and Marcelino Oreja, CEO of Spanish gas company Engas at Gazprom's headquarters in Moscow. The meeting noted that Spain had a potential to become one of the major consumers of LNG from the project.

Enagas is the main gas transmission company in Spain. In addition to managing gas transmission systems, the company deals with LNG regasification. The company's assets include **four LNG regasification terminals as well as a 40% stake in three regasification terminals in Spain, Mexico and Chile.** Enagas also operates three underground gas storage facilities with an aggregate capacity of 5.8 billion cubic meters. In addition, the company owns a gas network connecting Spain with France, Portugal and North African countries. (December 16, 2013)

SOUTH KOREA: Industrial facilities' construction - CNR52/19/14

Shell floats giant FLNG, Prelude

Shell has floated the mammoth 488 meter-long-hull of its Prelude FLNG facility out of the dry dock at the Samsung Heavy Industries yard in Geoje, South Korea. Currently still under construction at the yard, once complete Prelude FLNG will be the largest floating facility ever built. Shell expects it to unlock new energy resources offshore and produce approximately **3.6 million tons of LNG per annum** to meet growing demand.

The 600,000-plus-tonne FLNG will allow Shell to produce natural gas at sea, turn it into LNG and then transfer it directly to the ships that will transport it to customers. It will enable the development of gas resources ranging from clusters of smaller more remote fields to

potentially larger fields via multiple facilities where, for a range of reasons, an onshore development is not viable. The facility would mean faster, cheaper, more flexible development and deployment strategies for resources that were previously uneconomic, or constrained by technical or other risks.

Prelude FLNG is the first deployment of Shell's FLNG technology and will operate in a remote basin around 475 Km north-east of Broome, Western Australia for around 25 years. Shell is the operator of Prelude FLNG in joint venture with INPEX (17.5%), KOGAS (10%) and OPIC (5%), working with long-term strategic partners Technip and Samsung Heavy Industries. (December 4, 2013)

TURKEY: Stake modification - CNR52/19/15

Turkey to increase its stake in TANAP gas pipeline project

Turkey is expected to increase its 20% stake in the Trans-Anatolian natural gas pipeline project (TANAP), designed to reduce Europe's reliance on Russian gas, Azeri state energy company SOCAR said.

Rovnag Abdullayev, head of SOCAR, said on recently that Turkey's stake would be increased **at the expense of stakes offered to Statoil and Total**. BP has agreed to join SOCAR and Turkey in TANAP by buying a 12% stake from Socar, industry sources and energy officials told Reuters. (December 3, 2013)

US: Agreement - CNR52/19/16

Cheniere Energy, Pertamina sign 20-year LNG agreement

for Exports from Corpus Christi Liquefaction Project Cheniere Energy, Inc. announced today that its subsidiary, Corpus Christi Liquefaction, LLC , has entered into a LNG sale and purchase agreement with the Indonesian state owned energy company PT Pertamina. Pertamina has agreed to purchase approximately 0.8 million tonnes per annum of LNG upon the start of operations from the LNG export facility being developed near Corpus Christi, Texas.

The Corpus Christi Liquefaction Project is being designed and permitted for up to **three LNG trains**, with aggregate **design production capacity of up to 13.5 mtpa of LNG**. The facility will **include three LNG storage tanks** with capacity of 10.1 Bcfe and **two LNG carrier docks**. The start of construction for the Corpus

Christi Liquefaction Project is subject to obtaining regulatory approvals. Cheniere expects LNG exports from the Corpus Christi Liquefaction Project could begin as early as 2018.

According to Cheniere under the SPA, Pertamina will purchase LNG on an FOB basis for a purchase price indexed to the monthly Henry Hub price plus a fixed component. LNG will be loaded onto Pertamina's vessels. The SPA has a term of twenty years commencing upon the date of first commercial delivery and an extension option of up to ten years. Deliveries are expected to occur as early as 2018.

The U.S. Department of Energy currently has three long-term applications to export LNG to Non-FTA

Countries ahead of the Corpus Christi Liquefaction project application. (December 4, 2013)

US: LNG exports - CNR52/19/17

Order of precedence for processing non-FTA LNG export applications before the U.S. Department of Energy

Listed below in order of precedence for processing as of December 10th, 2013. Non Free Trade Nations U.S. LNG Export Applications. (December 10, 2013)

Project	Export State Location	Quantity Bcf per day
Cameron LNG, LLC	Louisiana	1.7 Bcf/d
Jordan Cove Energy Project, L.P.	Oregon	1.2 Bcf/d FTA, .8 Bcf/d: non-FTA
LNG Development Company, LLC (d/b/a Oregon LNG)	Oregon	1.25 Bcf/d
Cheniere Marketing, LLC	Texas	2.1 Bcf/d
Excelerate Liquefaction Solutions I, LLC	Texas	1.38 Bcf/d
Carib Energy (USA) LLC	Various Gulf Coast States	.03 Bcf/d: FTA, .01 Bcf/d: non FTA
Gulf Coast LNG Export, LLC	Texas	2.8 Bcf/d
Southern LNG Company, L.L.C.	Georgia	.5 Bcf/d
Gulf LNG Liquefaction Company, LLC	Mississippi	1.5 Bcf/d
CE FLNG, LLC	Louisiana	1.07 Bcf/d
Golden Pass Products LLC	Texas	2.6 Bcf/d
Pangea LNG (North America) Holdings, LLC	Texas	1.09 Bcf/d
Trunkline LNG Export, LLC	Louisiana	2.0 Bcf/d
Freeport-McMoRan Energy LLC	Louisiana	3.22 Bcf/d
Sabine Pass Liquefaction, LLC	Texas	.28 Bcf/d
Sabine Pass Liquefaction, LLC	Texas	.24 Bcf/d
Venture Global LNG, LLC	Louisiana	.67 Bcf/d
Eos LNG LLC	Texas	1.6 Bcf/d
Barca LNG LLC	Texas	1.6 Bcf/d
Sabine Pass Liquefaction, LLC	Louisiana	0.86 Bcf/d
Magnolia LNG, LLC	Louisiana	0.54 Bcf/d: FTA, 1.08 Bcf/d: Non-FTA
Delfin LNG LLC	Louisiana	1.8 Bcf/d
Waller LNG Services, LLC	Louisiana	.16 Bcf/d, 0.19 Bcf/d: non-FTA

US: Export agreement - CNR52/19/18

Two Free Trade Agreement applications approved by U.S. Department of Energy

The U.S. Department of Energy Office of Fossil Energy announced recently two applications filed seeking a long-term multi-contract authorization to export domestically produced LNG to Free Trade Agreement (FTA) countries were approved.

Barca LNG LLC was approved to export up to the equivalent of **584 billion cubic feet of natural gas per year** to Free Trade Agreement (FTA) countries. Barca applied to export LNG from its proposed LNG terminal site in Brownsville, Texas. Eos LNG LLC was approved to export up to the equivalent of **584 billion cubic feet of natural gas per year** to Free Trade Agreement (FTA) countries. Eos also plans to export LNG from a LNG terminal site in Brownsville, Texas. Eos and Barca both stated in their applications that their sites will be floating LNG facilities and use existing LNG tankers for storage. Eos and Barca noted in their applications they would be able to tap directly into a natural gas source at the Port of Brownsville. (December 03, 2013)

GTL

SUPPLIES - IMPORTS - EXPORTS

US: Project cancellation - CNR52/19/19

Shell backs out of US Gulf coast GTL project

Shell has decided that it will not move forward with a proposed 140,000 bpd Gulf Coast gas-to-liquids (GTL) project in Louisiana and will **suspend any further work on the project**.

Considered to be one of the top industry leaders in GTL technology, and the company said that it has carefully evaluated a number of development options for GTL on the US Gulf Coast, using natural gas feedstocks. Despite the ample supplies of natural gas in the area, the company took the decision that **GTL is not a viable option for Shell in North America**, at this time, due to the likely development cost of such a project, uncertainties on long-term oil and gas prices and differentials, and Shell's strict capital discipline. "We are making tough choices here, focusing our efforts and capital on the most attractive opportunities in our world-wide portfolio, to add value for shareholders" said Shell's CEO Peter Voser. (December 8, 2013)

NATURAL GAS

PRODUCTION

INDIA: Investment opportunities - CNR52/19/20

BP-RIL plan to quadruple gas production in India by 2020

BP and its partner in India, Reliance Industries (RIL) will invest \$5-10 billion to quadruple natural gas production by 2020, reports Press Trust of India. "An opportunity awaits the BP/RIL joint venture to quadruple production by 2020 as we rework the fields and get into the next phase of development of already discovered resources," BP India head Sashi Mukundan said recently. The duo is currently producing about 11.8 million standard cubic meters per day of gas from the KG-D6 block. RIL-BP are focused on unlocking the next major hub for development in the east coast of India, reports Press Trust. (December 11, 2013)

RESERVES

CYPRUS: Reserves estimates - CNR52/19/21

Noble Energy eyes fresh appraisal for natgas off Cyprus

Noble Energy could launch a fresh appraisal of quantities in a subsea natural gas reservoir off Cyprus next year, and look for new hydrocarbon sources in the same area, officials said recently.

The company discovered quantities of natural gas in a deepwater offshore well south of Cyprus in late 2011. An appraisal drilling to verify the 2011 find has yielded on average 4.1 trillion cubic feet (tcf) of gas, Noble's Israel partners Delek Drilling and Avner Oil Exploration said recently. That was lower than the 5 tcf announced in October soon after the conclusion of the appraisal on the well. "We are in the process now of evaluating what type of prospects there are in the block. We look for oil and gas but primarily we are looking for gas," said J. Keith Elliot, senior vice president of Noble's east Mediterranean division. (December 9, 2013)

TANZANIA: Reserves estimates - CNR52/19/22

BG Group says Tanzania holds at least 15 trillion cubic feet of gas powerhouse

BG Group said recently it estimated there are 15 trillion cubic feet of natural gas in its reserve basins off the Tanzanian coast. The company said its latest discovery, dubbed Mzia, off the southern Tanzania coast holds an estimated 4.7 trillion cubic feet of total recoverable natural gas. The company said that brings its total estimate for reserves spread out over three areas to around 15 trillion cubic feet.

BG Group Chief Executive Officer Chris Finlayson said he expected the Tanzanian government to lay out eventual plans to **build an export terminal for the country's natural gas resources**. Export plans with its partners at British energy company Ophir Energy and Norway's Statoil call for deliveries of liquefied natural gas. Statoil last week announced it discovered more than 2 trillion cubic feet of natural gas at its Mronge-1 reserve area off the Tanzanian coast.

New Statoil gas find offshore Tanzania

Statoil has made another high-impact natural gas discovery in Block 2 offshore Tanzania, the fifth

discovery together with co-venturer ExxonMobil. The discovery of an additional 2-3 trillion cubic feet (Tcf)* of natural gas in place in the Mronge-1 well brings the total of in-place volumes up to 17-20 Tcf in Block 2. Mronge-1 is drilled by the drillship Discoverer Americas, and the site is located 20 kilometres north of the Zafarani discovery, and at 2,500-metre water depth.

The Mronge-1 well discovered gas at two separate levels. The main accumulation is at the same stratigraphic level as proven in the Zafarani-1 well in Block 2. The Zafarani-1 discovery was made in 2012 and was a play opener for the block. The Statoil-operated partnership started its new drilling campaign in Block 2 in September 2013. In addition to Mronge-1, the campaign includes drilling of several new prospects and appraisal of previous discoveries. Following Mronge-1, the partnership is scheduled to appraise the 2012 Zafarani discovery.

Statoil operates the licence on Block 2 on behalf of Tanzania Petroleum Development Corporation (TPDC) and has a 65% working interest, with ExxonMobil Exploration and Production Tanzania Limited holding the remaining 35%. (December 10, 2013)

TRANSPORT - DISTRIBUTION

EU: Tender - CNR52/19/23

TAP on time for 2019 deliveries

The Trans-Adriatic pipeline (TAP) project plans to send invitations to **tender for engineering and pipeline contract packages** in the first six months of 2014, said communications head Lisa Givert. "One big part of the project is also gaining access to land and rights of way to be able to meet the timetable for first gas to flow in 2019, but we're on track," Givert said as reported by Reuters.

On December 17 the Azeri Shah Deniz gas field consortium is due to **publish its final investment decision on the second phase of the development**, which will give further details on the production of 16 billion cubic meters of gas. The first phase of the development envisages a 9 billion cubic meters production. (December 11, 2013)

PAKISTAN: Pipeline project - CNR52/19/24

Pakistan vows to go ahead with Iran gas project

Pakistan will push forward with a controversial pipeline to import natural gas from neighboring Iran, Pakistan said recently, a project opposed by the United States. The pipeline will link Iran's gas fields with energy-starved Pakistan, but by going ahead with the project, Pakistan may incur US and international sanctions imposed on Iran - or anyone doing business with Iran - over that country's nuclear programme. The **US has**

opposed the project and instead supported an alternative proposal to build a pipeline from the gas fields of Turkmenistan to Afghanistan, Pakistan and India.

The two countries decided to fast track the pipeline and formulate a road map to work out challenges, the Pakistan's Ministry of Foreign Affairs said. He added experts from both sides would meet soon to accelerate work on the pipeline. Islamabad hopes the pipeline will help alleviate the country's energy crisis, especially electricity shortages. (December 11, 2013)

SUPPLIES - IMPORTS - EXPORTS

AUSTRALIA: Demand forecast - CNR52/19/25

US gas boom won't hurt Australia

BHP Billiton expects gas exports from **North America will supply 11% of Asian demand by 2030**, but will still be less than half the amount exported to the region by Australia.

With significant gas interests in both continents, BHP is well placed to comment on the running debate over whether the modern gas boom in North America will hurt Australia by crowding out its prime export markets in Japan, Korea and the rest of North Asia. BHP said the vast majority of the newly approved LNG export terminals in the US would send their gas to Asia, and by 2030 the nation should be exporting **11 billion cubic feet of gas per day**. When combined with a smaller volume from Canada, North America should be delivering about 11% of the 125 billion cubic feet per day of gas demand in Asia by 2030. **Australia's share of Asian demand was forecast to be 25% in 2030**, well behind the Middle East and Africa, which will jointly supply 40%.

BHP's prediction of future US gas exports appears to be less ambitious than some other predictions, with British bank Barclays predicting earlier this year that the US may rival Australia's gas export volumes by 2025.

BHP acquired \$US20 billion worth of shale acreage in the southern states of the US in 2011, and has previously indicated it is closely considering the potential for gas exports, which were largely banned until recent years. But the sudden boom in gas production in the US has prompted five new export projects to be approved by the US government, and that export capacity is tipped to continue rising over the next two decades. BHP said US gas exports to Mexico should also increase.

Overall, BHP said the developing economies like China, India and a group of six south east Asian nations were likely to drive energy demand in the world, with people in developed countries increasingly consuming less energy on a per capita basis, thanks to efficiency measures. (December 10, 2013)

AUSTRALIA: Final investment decision - CNR52/19/26

Woodside sees final decision on Israel's Leviathan in early 2014

Woodside Petroleum Ltd said it expects to make a **final decision on an investment in Israel's Leviathan field in the first half of 2014**, around the time that Israel is likely to finalize its tax policy for gas export projects. Woodside has made an in-principle agreement to buy a 30% stake in the newly discovered gas prospect for \$1.25 billion, part of a strategy to diversify outside of Australia that has seen it also eye projects in Myanmar and Ireland.

In October, Israel's top court upheld a government decision to allow about 40% of natural gas from the country's offshore reserves to be exported, dismissing arguments that more gas should be

earmarked for domestic use. Israel's finalization of its tax policy for gas exports, which the company expects within the next 60 days, will add additional regulatory certainty for the project, Woodside chief executive Peter Coleman said. But he said the company is still working to make sure the commercial case for Leviathan is solid.

Woodside cut its investment expenditure for 2013 to \$1.1 billion from \$2.3 billion, mostly due to the deferral of spending on Leviathan. It put investment expenditure in 2014 at \$2 billion to \$2.4 billion. With several of its long-term LNG contracts under price review, Woodside said it expects the prices it receives for LNG to move toward the Japanese average of around \$15 per million British thermal unit (mmBtu), up from under \$10 per mmBtu currently. (December 10, 2013)

CHINA: Delays - CNR52/19/27

Chevron's \$6.4 billion China gas project pushed back again

A \$6.4 billion gas project being built by Chevron CVN.X in China is facing further **delays due to disagreements with partner PetroChina over how to develop the technically tricky fields**, industry sources said.

The Chuandongbei project, the U.S. firm's largest investment in China, is now not expected to deliver first gas until the second half of 2014, nearly 7 years after the firms clinched a 30-year deal to **produce 7.6 billion cubic meters of gas a year**. The latest setback follows a series of delays for Chuandongbei, which Chevron has described as one of its larger capital projects for 2013. PetroChina initially expected first gas to be delivered in 2010, while its parent CNPC forecast just four months ago that production would start by end-2013. "There are some discrepancies over how to develop the fields between PetroChina and Chevron," said a Beijing-based industry official. Chevron is the operator of the project and holds a 49% stake. PetroChina holds the rest.

The Chinese government had now suspended its approval for the development plan for the second stage of the three-stage Chuandongbei project, to encourage the companies to focus on delivering the first phase, the sources said.

Chuandongbei is a sour gas development. The natural gas contains a high level of hydrogen sulphide. "The complexity of the project, being a high-pressure, high sulphur development that means higher operational risk and higher standards for technical processes, also contributed to the delays," said an industry official. As the only international oil firm developing high-sulphur gas in China, Chevron has imposed stringent safety standards, sources said, especially after a deadly disaster in 2003 in the same region that forced the then-head of CNPC to quit.

Chevron said the company has not yet announced a first-gas date. Chevron "continues to advance the construction of the first natural gas processing plant and development of the Luojiazhai and Gunziping natural gas fields for the Chuandongbei project," a spokesman said. The plant and the two fields make up the first stage of the project. Chevron expected the plant, which is designed for maximum production of about 2.7 bcm a year to be "mechanically complete" by end-2013.

The full development will include two sour gas processing plants and five natural gas fields with gathering systems and tie-ins to the plants. An exploration well is planned for the third quarter of 2013, Chevron said. The project, in the northeastern part of Sichuan province, has **proven reserves of 176 billion cubic meters**, the two companies have said. (December 6, 2013)

ITALY: Investment opportunities - CNR52/19/28

Italian minister wants to import Israeli gas

"Israeli natural gas exports to Italy are a common interest of both countries," Minister of National Infrastructures Silvan Shalom told Italian Minister of Economic Development Flavio Zanonato at the government-to-government meeting in Rome recently. Shalom and Zanonato discussed the Egyptian LNG option at the ENI SpA plant at Idku. Shalom outlined a proposal along these lines, and Zanonato said that he would promote it because it was the fastest and most economical way for all the parties, countries, and LNG companies. They also discussed the advantages and disadvantages of the Turkish, Greek, and Cypriot options.

By selling natural gas to LNG plants in Egypt, Israel could export gas to Europe, the buyer of Egyptian LNG. Egypt's two LNG plants are only partly operational because the development of the country's natural gas fields lags the rise in domestic consumption. As a result, the plants are losing billions of dollars. BG Group plc operates the Damietta plant, and ENI and its Spanish partner operate the Idku plant. (December 2, 2013)

KYRGYZSTAN: Gas company purchase - CNR52/19/29

Kyrgyzstan's Parliament approves sale of Kyrgyzgaz to Gazprom

Kyrgyzstan's Parliament gave the final green light to the acquisition of Kyrgyzgaz by Russia's Gazprom, despite the difficulties met in the last weeks. The decision, backed by 65% of the deputies, hands Moscow control of the infrastructures owned by the country's natural gas monopolist. **With the \$1 agreement, Gazprom will control pipelines, gas distribution stations and underground storage facilities.** The deal signed in July this year required the approval of the Kyrgyz Parliament.

The cash-strapped Kyrgyz government saw it fit to sell off the heavily indebted Kyrgyzgaz rather than continue to throw money at a company that was effectively bankrupt. Gazprom will pay off the company's \$40 million debt. It also committed to invest \$610 the infrastructures in the next five years. The Kyrgyz government has an option to buy back the Kyrgyzgaz assets in 25 years.

Kyrgyzstan is completely dependent on its neighbours - particularly Uzbekistan, Kazakhstan and Russia - for oil and natural gas supplies. It has had issues paying for its energy imports from these countries. (December 11, 2013)

RUSSIA/UKRAINE: Political pressure - CNR52/19/30

Russia ties Ukraine gas price relief to better terms for Black Sea fleet

Moscow might be willing to give Ukraine relief on the price of natural gas it imports from Russia if Kiev granted better terms for the Russian naval fleet in Ukraine's Crimea, a senior Russian official said. He added that it was **difficult to envision granting Kiev's wish for a lowering of gas prices without Ukraine joining a regional customs union led by Russia.** But he said it might be possible "if they provide something which is real, about the Crimea and our navy there".

Ukraine is teetering on the brink of bankruptcy and any easing of the price it pays for the Russian gas its export-dependent economy relies on could be a big help. The nation's reliance on gas from Russia gives Moscow great leverage as it vies for influence over the former Soviet Republic in competition with the European Union. Ukrainian President Viktor Yanukovich last month **walked away from a free trade deal with the EU in favor of maintaining close ties with Moscow**. The move sparked a political crisis in Ukraine, with protesters who want to see more integration with Europe pushing for Yanukovich's resignation. The official noted that Ukraine agreed in 2010 to extend the period of time in which Russia's Black Sea fleet could stay in Sevastopol on Ukraine's Crimean peninsula in return for a lowering of gas prices. (December 11, 2013)

STORAGE

AZERBAIJAN: Domestic supply - CNR52/19/31

SOCAR continues project on new storage facility in Nakhchivan

Azerbaijan's state energy company SOCAR will soon complete the drilling of a second appraisal well as part of the creation of **underground gas storage** in the Nakhchivan Autonomous Republic. A source in SOCAR told Trend news agency that the drilling is conducted on the basis of Nehram salt deposits at the Tumbul site. The source said currently the second appraisal well's depth is 657 meters. Its projected depth stands at 820 meters. "The second well is being drilled at the moment. In total it is planned to drill five such wells," the source said. Earlier SOCAR completed drilling of the first appraisal well. Its depth exceeded 1200 meters. Azerbaijan is currently carrying out swap deliveries of gas to Iran in order to provide the Nakhchivan Autonomous Republic with gas. The **underground gas storage facilities with a capacity of 200-300 million cubic meters** will be enough for meeting the needs of the Nakhchivan Autonomous Republic. (December 12, 2013)

COMPANIES

EU/AZERBAIJAN/GREECE: Agreement delay - CNR52/19/32

EU obstacles for SOCAR in its pursuit of DESFA

Azeri state-owned oil and natural gas company SOCAR was successful last summer in its €400 million bid to acquire management and 66% of Greek gas transmission company DESFA and was set to enter the Greek market by the end of 2013. A sudden obstacle however was put forward by the European Commission that may well delay the process for up to a year.

At a recent meeting in Brussels between SOCAR and Greek officials along with the Greek energy regulatory authority and heads of the Directorate-General for Energy (DG Energy), the following procedure was put forward by Brussels to the Greek-Azeri delegation: An EU-Azeri intergovernmental agreement needs to be signed that will need to be ratified by the European Parliament thereafter, as well as by the Parliament of Azerbaijan.

The agreement will specifically stipulate Baku's adherence to the EU's Third Energy Package that **separates in full the gas production corporate structure from transmission and trading**.

This is the first time such a request for a privatization is put forth by Brussels, which replied

to both interested parties that it is also the first time that a state producer and trading company - such as SOCAR - acquires a controlling stake in an EU gas transmission corporation, such as DESFA. Despite arguments put forward by Athens and Baku, Brussels is adamant that all legal procedures must be followed, which primarily means that the privatization is still ongoing and **SOCAR is not formally the owner of DESFA** and may well lose the case in the coming months. Government and media sources in Athens roughly estimate that it will take around a year to complete all steps and there is growing fear that SOCAR may feel disappointed and abandon its venture into the Greek market, thus derailing the privatization project of the government. Greek Premier Antonis Samaras will visit Baku mid-December to inaugurate the Southern Corridor and the Trans-Adriatic Pipeline (TAP) as Greece is a basic component of the pipeline. He will also discuss the issue of DESFA with local stakeholders so as to speed up the privatization process. It should be noted that SOCAR's main interest in the Greek market is due to the selection of TAP as the preferred Southern Gas Corridor route. (December 12, 2013)

EU: Regulation - CNR52/19/33

Mergers: Commission approves acquisition of German and Dutch gas supply and storage joint ventures by Gazprom

The European Commission has cleared under the EU Merger Regulation the proposed acquisition of (i) joint control over WINZ and Wintershall Services of the Netherlands and (ii) sole control over Wingas and WIEH of Germany by the Russian energy company Gazprom. The Commission concluded that the **proposed transaction would not raise any competition concerns**. WINZ and Wintershall Services are active in oil and gas exploration and production in the North Sea, while Wingas and WIEH supply gas, mainly in Germany.

The Commission assessed the potential impact of the transaction on competition in the markets for the sale of gas in Germany, Austria and the Czech Republic, where Gazprom sells gas to downstream wholesalers and retailers, including Wingas which is both wholesaler and retailer. The Commission found that the acquisition would not

allow Gazprom to restrict customers' access to gas supplies, given the presence of sufficient alternative upstream suppliers.

The Commission also assessed the potential effects of the acquisition on competition in the markets for the storage of gas in Germany and Austria. The Commission's investigation showed that most of the overlaps between the parties' activities were largely pre-existent to the transaction and/or involved only a very limited degree of integration. The Commission therefore concluded that the transaction would not raise competition concerns. This decision is without prejudice to the Commission's on-going antitrust investigation involving Gazprom (see IP/12/937); both are decided on their own merits.

EU Competition law, including EU merger control, applies to all companies doing business in the EU. The purpose of EU merger control is to address any competition concerns which would be specifically caused by a given merger or acquisition. (December 12, 2013)



CEDIGAZ NEWS REPORT is an internal publication of CEDIGAZ, edited by Constancio Silva with collaboration of Laïla Losson.

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