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LNG

PRODUCTION

AUSTRALIA: Bonaparte FLNG project targeted to start up in 2018 – CNR/49/12/1

Paul Henderson, chief minister for the Northern Territory said recently that Australia's proposed Bonaparte floating liquefied natural gas project, led by France's GDF Suez, and is targeting first gas production in 2018. GDF Suez bought three gas fields from Australia's Santos in 2009 and plans to build a floating liquefaction plant off northern Australia to process the gas. The plant will have a capacity of 2 million tonnes per annum. GDF is the operator of the project and holds a 60% stake. Santos owns the rest. (Upstream Online, May 18, 2010)

PROCESSING

AUSTRALIA: Santos LNG plan receives conditional environmental approval – CNR/49/12/2

The government of Queensland recently granted conditional environmental approval for the Santos-led Gladstone LNG project. Premier Anna Bligh said Queensland's independent Coordinator-General Colin Jensen had completed a review of GLNG's environmental impact statement and approved it with strict conditions. The government said Santos would still have to obtain many other key environmental, production licenses and safety approvals required under various state laws and as conditioned by the Coordinator-General before any construction could start. This would involve

reporting back to the Coordinator-General to initially approve development plans, and progressive reports throughout the project life on its compliance with the conditions. "My conditions are clear and will not allow salt from coal seam gas water to leach into the environment. I have also set in place a condition that makes the proponent legally obligated to 'make good' any negative impacts on groundwater bores," Jensen said. The Coordinator-General added that all the LNG project proponents would have to work together to optimize the pipeline route from Gladstone to the LNG precinct site on Curtis Island to minimize environmental effects. (Platts, May 28, 2010)

AUSTRALIA: Eastern Star Gas teams up with Hitachi and Toyo LNG project – CNR/49/12/3

Eastern Star Gas recently signed a memorandum of understanding with the Japanese companies Hitachi and Toyo Engineering. The companies team up for exploring the opportunities of the export of liquefied natural gas from Newcastle in four years. Company reports say that it is hoping to link its coal seam gas explorations in Narrabri with an LNG plant in the Newcastle Port. Eastern Star Chairman John Anderson said that if the study outcomes were favourable, the design activities for the project could commence by the latter part of 2010. He further said that the first LNG export out of Newcastle could take place in 2014. (Topnews, May 26, 2010)

AUSTRALIA: First production of Ichthys LNG delayed to the fourth quarter of 2016 – CNR/49/12/4

Inpex Corp said recently it now sees production of liquefied natural gas from the Ichthys LNG project starting in the fourth quarter of 2016, later than earlier plans for a 2015 start date. Inpex plans to make a final investment decision on the Ichthys LNG project in northwest Australia in the fourth quarter of 2011. (Reuters, May 14, 2010)

RUSSIA: Completion of Yamal LNG plant planned in 2018 – CNR/49/12/5

Novatek plans to complete the construction of a LNG plant near the Yuzhno-Tambeyskoe field, in the Yamal Peninsula in year 2018. The capacity of the plant will be 15-16 million tons of LNG per year. The new plant will also open up for increased shipping along the Northern Sea Route.

As previously reported, the Sovcomflot Company has already signalled that it is ready to ship LNG along the route. The Yuzhno-Tambeyskoe field has an estimated 1.3 trillion cubic meters of gas and is located along the eastern shore of the peninsula, towards the Ob Bay. The license to the field is owned by Novatek. (Oil & Gas Eurasia, May 26, 2010)

RUSSIA: LNG plant planned in Nenets Autonomous Area – CNR/49/12/6

The newspaper Kommersant reported recently that a LNG plant is planned in Nenets Autonomous Area. Pechora LNG would be located in the South-East part of the Barents Sea in the settlement of Indiga. The project targets fields of Kumzhinskoye and Korovinskoye found in the Nenets autonomous Area and is to process 4,2-8,4 billion m³ annually. The plant will be launched in 2015; the final investment decision is to be taken in Autumn 2010. The tender for subcontractors will be opened in 2012. Pechora LNG was developed by Italian company Technip and is owned by CH-Oil&Gaz which is a part of Alltech Group. Alltech Group is an investment company dealing with oil-and-gas, real estate and coal projects. (Barentsnova, May 28, 2010)

WORLD: Hoegh and KBR agree for a long-term cooperation in LNG FPSO Segment – CNR/49/12/7

Höegh LNG and Kellogg Brown & Root executed recently an agreement for the long term cooperation within the LNG FPSO segment. Under the agreement KBR will be Höegh LNG's topside engineering partner for HLNG's LNG FPSO projects. The first phase of the cooperation will for KBR involve the performance of studies

and basic engineering or Front End Engineering and Design, as instructed by HLNG. The scope of the second phase to be undertaken by KBR will include execution of topsides detailed engineering and procurement services, project management services, construction management as well as integration and commissioning supervision as may be required for each specific project. (Downstream Today, May 18, 2010)

YEMEN: New LPG unit planned in Marib – CNR/49/12/8

General Manager of Yemen LNG, Francois Rafin, said the company plans to build a new liquefied petroleum gas extraction unit in Marib. The new unit will increase LPG supplies to the domestic market by 33 per cent. (Pipeline Magazine, May 10, 2010)

SUPPLIES - IMPORTS - EXPORTS

JAPAN: Okinawa Electric Power Co agree to buy LNG from Osaka Gas – CNR/49/12/9

Okinawa Electric Power Co said recently it has agreed to buy 400,000 tonnes per year of liquefied natural gas for its first LNG thermal power generation plant from Osaka Gas Co for 27 years starting in 2012. Osaka Gas will first supply the Okinawa utility with gas it buys under long-term contracts from eight countries, an Osaka Gas spokesman said. But beginning in 2014, when Osaka Gas starts buying the LNG from the Gorgon project in Australia, the gas distributor will

use mainly the Gorgon LNG to supply the Okinawa-based utility. The supplies, which will be delivered on an ex-ship basis, will be used at Okinawa Electric's first LNG-fired power plant, the Yoshinoura plant on Okinawa island, which is under construction and is due to start the operations in November 2012. The No.1 and No.2 units, each with a capacity of 251 megawatts, are scheduled to start commercial operations in November 2012 and May 2013 respectively. (Reuters, May 13, 2010)

QATAR: E.ON Ruhrgas in LNG supplies talks – CNR/49/12/10

E.ON Ruhrgas chairman Dr Bernhard Reutersberg said recently "We are in serious talks with Qatar on short, medium and long-term supplies and are obviously talking about volumes and prices. We are in touch with QP, Qatargas and RasGas". Reutersberg said he was quite optimistic about a "fruitful outcome" of talks with Qatar on LNG supply. "A few years ago, it was difficult to secure gas supplies from Qatar as the country was still developing its production facilities.

Now Qatar has a significant LNG production capacity. Global recession and demand destruction, particularly in the US due to the development of unconventional gas, have made it easier to obtain supplies from Qatar now". He also said "It really makes sense for Qatar to have diversity in markets as more supplies become available. Traditionally, Qatar has been focusing on Asia but Europe now presents significant opportunities for the country". (Gulf Times, May 27, 2010)

QATAR: LNG export to the US may be diverted – CNR/49/12/11

Deputy Prime Minister and Minister of Energy and Industry HE Abdullah bin Hamad al-Attiyah said recently that Qatar may end up exporting just 6 million metric tons of LNG a year to the United States after diverting as much as 20 million metric

tons a year to other countries. Al-Attiyah said that Qatar “may divert 12-20 million metric tons per year” away from the US market. “This means our gas exports to the US would remain in the range of 6 million metric tons per year,” he said. (Gulf Times, May 25, 2010)

SOUTH KOREA: Authorities agree Kogas LNG supply deal – CNR/49/12/12

South Korea's Commerce and Energy Ministry said recently that Korea Gas Corp. has agreed in principle with Qatar's Rasgas to buy LNG for two decades, with the first deliveries to begin in January 2011. KOGAS intends to sign a final contract with Rasgas in November 2010. According to a Commerce and Energy Ministry official, the new contract "will be in addition to a 25-year deal between KOGAS and Rasgas for 4.92 million tons of LNG per year". (UPI, May 25, 2010)

STORAGE

POLAND: Aarsleff wins harbour project of future Swinoujscie LNG terminal – CNR/49/12/13

Aarsleff recently entered into a contract with Maritime Office in Stettin for construction of a harbour in connection with a new LNG gas

terminal in Swinoujscie. The work consists of construction of a jetty and other port structures. The work will begin during the summer of 2010 and has an expected construction period of 30 months. (Downstream Today, May 24, 2010)

SPAIN: Osaka Gas to buy stake in Sagunto LNG terminal – CNR/49/12/14

Osaka Gas entered recently into an agreement with Endesa for its acquisition of the 20% interest in Sagunto LNG receiving terminal owned by Endesa Generacion, a wholly-owned subsidiary of Endesa. Sagunto terminal, located in Sagunto Port on the east of the Province of Valencia, has the total LNG regasification capacity of 6.4 million tons per annum. When the current expansion work is completed, its capacity will be increased to 7.6 million tons. (Osaka Gas press release, May 11, 2010)

UNITED STATES: EOG Resources acquires 49% of the Kitimat LNG project – CNR/49/12/15

EOG Resources Inc. recently bought 49 per cent of the Kitimat LNG Inc.'s proposed liquefied gas export terminal from the original proponent. Apache Canada Ltd.'s purchased 51 per cent of the project in January 2010. Apache will operate the project in co-operation with EOG. The Kitimat LNG terminal project will be located on Haisla

lands near Bish Cove. It is projected ship out 700-billion cubic feet of natural gas per day. The terminal will also link to the proposed Pacific Trail Pipeline network and EOG also acquired Galveston's 24.5 per cent interest in that system. The decision to build is expected to be made in 2011. The first LNG shipments are expected for 2014. (Terrace Standard, May 25, 2010)

GTL

NIGERIA: Sasol's GTL plant delayed till 2013 – CNR/49/12/16

Sasol said recently that first production from its gas-to liquids project in Nigeria may be delayed further until 2013 from the year before. "The construction is at an advanced stage and we still see completion of that construction by the end of 2012 or early 2013 ... it will be operational during the course of 2013," Chief Executive Pat Davies said. Sasol has a 10 percent economic stake in the Nigeria plant, while Chevron owns the majority 75 percent stake. (234Next, May 5, 2010)

NATURAL GAS

EXPLORATION – DISCOVERY

AUSTRALIA: Drillsearch Energy reports strong rates of production at Brownlow Wet Gas Discovery – CNR/49/12/17

Drillsearch Energy Limited announced recently that the extended production test for the Brownlow Wet Gas Discovery has continued at very strong rates with no evidence of significant pressure decline. As previously announced, the Brownlow

production test has achieved a peak test rate of 18.1 million cubic feet of gas per day through a 1-inch choke. The production test has been choked back to a flow rate of 12-13 million standard cubic feet per day through a 38/64" inch choke. Condensate production is approximately 10 bbls per million cubic feet of gas per day. (ABN Newswire, May 14, 2010)

NORWAY: Statoil finds gas in the north of the Mikkil field – CNR/49/12/18

Statoil recently made a small but commercial gas find north of the Mikkil field in the Norwegian Sea that it could develop as an Asgard satellite. The well in production licence 473 confirmed gas, with the discovery estimated at 1.9bcm-3.8bcm. The licence holders: Statoil (40.85%), Eni (29.4%), Petoro (19.95%) and ExxonMobil (9.8%), will evaluate development options through the Asgard field. (Argus, May 14, 2010)

PAKISTAN: OMV reports drilling success in the Latif Block – CNR/49/12/19

OMV announced recently additional gas reserves in the Latif Exploration License located in the Sindh Province/Pakistan. OMV is the operator and holds a 33.4% working interest in the Block. The Latif North-1 well was drilled 3 km north of the 2007 discovered Latif gas field and successfully tested 44.7 mn scf/d. Latif North-1 is OMV's 3rd drilling success in the Latif area after the Latif-1 discovery in 2007 and Latif-2 in 2008. Both wells together are currently producing 29 mn scf/d of gas which is processed at the OMV operated Kadanwari processing plant and is provided to the local Pakistani market. (Oilvoice, May 4, 2010)

ROMANIA: Europa Oil & Gas announces new test on Voitinel gas well – CNR/49/12/20

Europa Oil & Gas (Holdings) provided recently an update of well testing operations on the Voitinel gas discovery, situated in northern Romania, specifically on the analysis of the results of the fracture stimulation ('frac') of the '1650' gas sand. The frac was performed and the well flow tested at a stabilised rate of 2.5 million scf/d after three days, a 67% improvement on the October 2009 stabilised rate. The frac has significantly increased the effective drainage area of the well and it is now believed that each development well

on the Voitinel structure will have the potential to produce up to 6 bcf of gas at an average first year production rate of 2.5 million scf/d. These initial appraisal results further increase the confidence that a combination of fracking and high angle wells can be used to implement a successful commercial development of the Voitinel/Solca Trend which could have up to 400bcf of gas-in-place. Interests in Voitinel are Aurelian Oil & Gas (Romania) SRL 33.75%, S.N.G.N. Romgaz S.A. 37.50% and Europa Oil & Gas SRL 28.75%. (Oilvoice, May 24, 2010)

UKRAINE: Cadogan Petroleum test gas at the Zagoryanske 3 Well – CNR/49/12/21

Cadogan Petroleum plc reported recently the successful test of the Zagoryanske 3 well and its plans for production from the Upper Visean, V-18 zone. Cadogan has conducted a thorough commercial evaluation of this V-18 discovery and will tie-in the well to the nearby gas treatment facility and construct a pipeline to the CGTP Novotroisk main export line.

First commercial production is planned to commence in August 2010 with initial rates, based on the Poltava Office of the Ukrainian State Geological Exploration Institute ("USGEI") report, expected to average around 35 mcm/day gas and 15 t/day condensate. (Oilvoice, May 24, 2010)

PRODUCTION

PAKISTAN: All Pakistan CNG Association asks authorization to reactivate abandoned gas fields – CNR/49/12/22

The All Pakistan CNG Association recently asked the government to allow its members to buy gas fields abandoned by big exploration and production companies. The CNG association suggested that its members could retrieve tight gas from many fields that have been abandoned

by the large oil and gas exploration and production companies. It pointed out that the large E&P firms do not maintain fields for small amount of gas but the CNG association can manage such fields and utilise gas for sale at the CNG stations. The association will only establish a CNG plant and transport gas in cylinders from such fields to various sale points (CNG stations). (Dawn, May 18, 2010)

PROCESSING

NIGERIA: Gas project inaugurated in Bayelsa – CNR/49/12/23

Shell Petroleum Development Company (SPDC) recently inaugurated Nigeria's biggest integrated oil and gas project in Gbaran-Ubie, Bayelsa State. The facility has the capacity to produce one billion standard cubic feet of gas and more than 70,000 barrels of oil per day. Shell said it would commence the supply of gas to the Federal Government-owned Integrated Power Project (IPP) and the Nigeria Liquefied Natural Gas (NLNG) in Bonny, Rivers State in June 2010. The plan testing would run for nine to 12 months, the Project Manager of the plant, Okechukwu Elechi explained.

He added that over five wells had been tested at Koroama, Zarama, Kolo Creek and Gbarain in addition to six other wells drilled at Zarama to service the plant. Shell had disclosed that the gas being flared from the Etelebou and Kolo Creek Fields would be gathered by the project's processing facilities to eliminate flaring in the area and secure current oil production. According to the company, oil production in the area would be increased through the drilling of 17 new wells in phase one, as well as the elimination of flaring from additional three fields.

The gas project will also supply 80 million standard cubic feet of fuel gas per day to a nearby 225 megawatts power plant being constructed by the Federal Government at Gbaran Ubie, and also feed the Bayelsa State Power Plant at Imiringi. (This Day, May 17, 2010)

TRANSPORTATION-DISTRIBUTION

ABU DHABI: Dolphin Energy ready to increase delivery capacity to Fujairah – CNR/49/12/24

Dolphin Energy said recently it is ready to transport 350 million standard cubic feet per day to Fujairah, slated for completion third quarter of 2010. This additional transportation capacity is made possible due to the completion of a 128-

kilometre, 48" pipeline from Dolphin's Taweelah Receiving Facilities to a hot tap connection on the existing Al Ain Fujairah 24" pipeline. TFP, which imports from Qatar's North Field, will supply the Abu Dhabi Water and Electricity Company's (ADWEA) F1 and F2 power stations in Fujairah. (Pipeline Magazine, May 6, 2010)

ARGENTINA: No duty on gas supplied to Uruguay by Bolivia – CNR/49/12/25

A Uruguayan media reported recently that Argentina will allow Uruguay to transport Bolivian gas through its pipeline network without taxing the supply of duty. Decision was taken after negotiations in Montevideo between Argentinean planning Minister Julio De Vito and Minister of Industry of Uruguay Roberto Kleymerman. "Our only condition is earlier deliveries of gas to Argentina guaranteed to be agreed", the Argentinean minister commented. (Focus News Agency, May 16, 2010)

BULGARIA: Citygas receives loan to develop gas distribution network – CNR/49/12/26

European Bank for Reconstruction and Development (EBRD) recently approved a EUR30m loan to Citygas Bulgaria for the development of a gas distribution network in the south of the Bulgaria. Citygas Bulgaria is the holder of a 35-year renewable concession to develop and operate the gas distribution network in Trakia region and the municipality of Kargiali, with a population of approximately 900,000. The EBRD loan will finance the construction of 833km of the gas distribution network and associated infrastructure in 27 municipalities in the Trakia region and in the municipality of Kargiali by 2012. The project aims to provide gas connection to 1,000 industrial, 1,500 commercial and 96,000 domestic users by 2017. (Energy Business Review, May 6, 2010)

EUROPE: E.ON Ruhrgas becomes shareholder in Trans Adriatic Pipeline – CNR/49/12/27

Statoil and EGL announced recently the divestment of a combined stake of 15% in the Trans Adriatic Pipeline project (TAP) to E.ON Ruhrgas. The new shareholder structure of the Trans Adriatic Pipeline project now comprises of EGL holding a 42.5% share, Statoil holding a 42.5% share and E.ON Ruhrgas holding 15%. Due to regulatory requirements, the deal is expected to be concluded by the end of June 2010. The 520km long pipeline will transport gas via Greece and Albania and across the Adriatic

Sea to Italy's southern Puglia region and further to Western Europe. The project is designed to expand transportation capacity from 10 to 20 bcm per year depending on throughput. The TAP project also envisages the development of natural gas storage facilities in Albania. The Trans Adriatic Pipeline is supported by the EU as a TEN-E project (Trans European Networks - Energy), in conformance with its energy policy and has been categorized by the EU Commission as an EU Interconnector. (Downstream Today, May 20, 2010)

PERU: Petrobras and Odebrecht may build a pipeline between Camisea field and the southern regions – CNR/49/12/28

It has been reported that Petrobras and Odebrecht will decide by July 2010 whether to partner with Conduit Capital to build a natural gas pipeline in Peru. Kuntur Transportadora de Gas, the local subsidiary of Conduit, won a bid to build the 1,085 km pipeline that would carry natural gas from the Camisea fields in central Peru to southern regions.

Odebrecht would need to carry out an environmental impact study that would allow the companies to start construction in January 2011, and that the group would need roughly 18 months to build the pipeline. Mines and Energy Minister Pedro Sanchez told leaders from regions in southern Peru that the three companies would form venture to build the pipeline. (Reuters, May 14, 2010)

UNITED STATES: Williston Basin starts open season for new Bakken gas pipeline capacity – CNR/49/12/29

Williston Basin Interstate Pipeline Co. announced recently that it plans to expand its existing natural gas pipeline capacity by approximately 33 percent in the Bakken production area in northwestern North Dakota. The proposed expansion would add up to 30 million cubic feet per day to existing volumes from the Bakken production area for

delivery to Northern Border Pipeline. The expansion project will be accomplished by adding facilities to an existing compressor station in northwestern North Dakota. The targeted in-service date of this expansion project is November 2011. Williston Basin's existing natural gas pipeline system runs throughout the Bakken production area in western North Dakota and eastern Montana. (Downstream Today, May 19, 2010)

UNITED STATES: Williams Partners announces expansion of Transco pipeline – CNR/49/12/30

Williams Partners L.P. announced recently the execution of precedent agreements for a proposed expansion of its Transco pipeline to provide 225,000 dekatherms of incremental firm natural gas transportation capacity to serve growing markets in the Southeast region in 2012 and 2013. The Mid-South Expansion project is designed to provide service on the Transco natural gas pipeline to the city of LaGrange, Ga., Progress Energy Carolinas, Inc., and Southern Company Services, Inc.

The company anticipates filing an application with the Federal Energy Regulatory Commission in fall 2010, seeking approval to construct the Mid-South Expansion project. Subject to approval by the FERC and other agencies, the proposed expansion would consist of approximately 23 miles of new pipeline, a new compressor facility in Dallas County, Ala., and upgrades to existing compressor facilities in Alabama, Georgia, South Carolina and North Carolina.

The project is currently being developed to be constructed in two phases, 95,000 dekatherms would be placed into service in the fall of 2012 and 130,000 dekatherms would be placed into service in the summer of 2013. The Transco pipeline is a 10,000-mile pipeline system which transports natural gas to markets throughout the Northeastern and southeastern United States. The current system capacity is approximately 8.6 billion cubic feet per day. (Downstream Today, May 26, 2010)

UNITED STATES: Kinder Morgan and Copano Energy form joint venture to provide services to Eagle Ford Shale producers – CNR/49/12/31

Kinder Morgan Energy Partners LP and Copano Energy LLC recently formed a joint venture to provide gathering, transportation and processing services to natural gas producers in the Eagle Ford Shale resource play in South Texas. Kinder Morgan and Copano have each upped their

committed capacity from 150,000 to 375,000 MMBtu per day to Eagle Ford Gathering for transportation on Kinder Morgan's Laredo-to-Katy pipeline and processing at Copano's Houston Central processing plant. They said they have also extended their existing straddle processing agreement and transportation agreement through the end of 2024. (The Street, May 16, 2010)

SUPPLIES - IMPORTS - EXPORTS

AUSTRALIA: ERM Power station to be supplied by Eastern Star Gas – CNR/49/12/32

Eastern Star Gas recently entered into a Memorandum of Understanding with ERM Power for the supply of gas to a 600 MW power station approved for development in Wellington, New South Wales. Eastern Star Gas Managing Director David Casey said that the gas sale to ERM would be the first commercialisation step for the Narrabri Coal Seam Gas Project.

The MoU provides for supply of 20 PJ/a of gas over a 20-year contract period. Eastern Star Gas said that it expects to finalise a full gas supply agreement by the end of 2010 so that final project commitments can be made in mid-2011. The company will expand its Wilga Park Power Station before commencing gas deliveries to Wellington Power Station in mid-2013, and supply of gas to the New South Wales market will be made through a proposed link to the Central Ranges Gas Pipeline. (Gas Today, May 18, 2010)

EUROPE: Share of gas in primary energy demand could rise by 2030 to 26.7% – CNR/49/12/33

European Union of the Natural Gas Industry (Eurogas) indicated recently that current expectations of long-term development of gas demand are 15-20% lower than 3 years ago. Nevertheless, indications are natural gas consumption in EU member states will raise to 500-535 million tons of oil equivalent in 2030 from 437 million toe in 2007. The share of gas in Europe's primary energy demand could rise by 2030 to 26.7% in the base case and 28.7% in the environmental scenario from a 24% share in

2007. Demand primarily will be stimulated by electric power generation that should account for 36-38% of total gas demand by 2030, up from 30% in 2007, due to its "considerable potential" for reducing carbon dioxide emissions at low cost. The problem will be to secure gas supplies to meet future demand, as indigenous production in Europe (including Norway) will decrease from 250 million toe in 2007 to 200 million toe in 2020 and 145 million toe in 2030 when the EU gas market will need to import 70% of its supply from outside its borders. Even intra-EU unconventional gas production would not exceed 20-25 million toe/year. (Oil and Gas Journal, May 17, 2010)

PERU: Gas exports may cause local shortages – CNR/49/12/34

The Peruvian government refused recently to change the contract it signed with Consorcio Camisea to export natural gas to Mexico, as demanded by the governors of the southern provinces of Arequipa, Cuzco, Moquegua, Puno and Tacna, who are worried about shortages of local supplies. The contract signed in 2006 was to export four trillion cubic feet of gas.

The President García said enough gas is available in blocks 56, 57, 58 and 88, in the Amazon jungle area where Camisea operates in the Cuzco region, for both domestic supplies and exports. Consorcio Camisea is already committed to selling 8.7 trillion cubic feet of gas, of which four trillion are to be exported by Peru LNG, a consortium of the U.S. Hunt Oil Company, SK Energy, Repsol YPF and Japan's Marubeni. But southern Peru needs five trillion cubic feet of gas, an amount that is not guaranteed, said Tacna governor Hugo Ordóñez, who is the head of the National Association of Regional Governments.

"The four trillion cubic feet that Peru LNG is planning to export to Mexico should remain in the country to supply the internal market, because the law establishes that as the priority" Ordóñez said. (IPS, May 14, 2010)

STORAGE

CHINA: National Energy Administration plans large UGS facilities – CNR/49/12/35

Liu Heming, vice director of Department of City Construction of Ministry of Housing and Urban-Rural Development, said recently that China would build a group of large gas reserves projects soon following the guideline of National Energy Administration. In Beijing, daily gas consumption during the peak season exceeds 50 billion cubic meters, 10 times more than the slack season consumption of four billion cubic meters, but the peak-shaving capacity of Beijing only stands at 1.4 billion cubic meters, just accounting for 2.2 percent of Beijing's yearly consumption. "China should have 80 billion cubic meters of peak-

shaving capacity at least by 2010, which only account for 8-12 percent of national consumption," said Yan Jianhong, vice director of China Petroleum Planning and Engineering Institute, a research institute of CNPC, parent of PetroChina. In order to meet the requirement, PetroChina, China's largest natural gas supplier, plans to build 10 storage tanks between 2011 and 2015 period to boost its storage capacity to 22.4 billion cubic meters, about 8-10 percent of annual national gas sales. Included is Changqing reserve tank with a capacity of 12 billion cubic meters, which is expected to enter into construction in 2010. (Asia Pulse, May 19, 2010)

FRANCE: Seismic survey completed over Chemery UGS facility – CNR/49/12/36

Spectraseis announced recently the completion of its most comprehensive LF seismic survey to date over France's largest underground gas storage facility near Chemery. The field is operated by Storengy, a fully owned subsidiary of GDF Suez. Among many research objectives, the data will provide an examination into how reservoir characterization can be improved by relating LF seismic attributes to reservoir parameters. In addition to reservoir characterization, the survey was designed to test expanded methods in LF seismic data acquisition and processing, such as interferometry.

A second data acquisition phase is planned for later in 2010 to acquire 4D data under different gas-filled conditions in the reservoir where Spectraseis' soon to be launched new borehole multi-level receiver array for LF measurements may also be utilized. Located 200 kilometers southwest of Paris, the Chemery gas storage facility is the largest such underground facility in France with capacity of 7 Bcm. The site serves Paris, Nantes, Lyon and the South of France. The reservoir, with a depth of 1100 meters, is in the Trias formation and has 93 existing wells. (Downstream Today, May 19, 2010)

GERMANY: Capacity to store 37 bcm to be reached soon – CNR/49/12/37

Lower Saxony state's mines and energy agency LBEG said recently Germany is to almost double its underground storage capacity for natural gas. The storage will soon be able to hold 37 billion cubic meters of gas. Current capacity in Germany

is 21 billion cubic meters. LBEG chief Lothar Lohff said gas companies needed the extra new storage sites, despite the high cost of compressing gas and forcing it underground, so that they could react to market fluctuations. (Deutsche Presse Agentur, April 27, 2010)

IRAN: Gas storage facility planned near Qom – CNR/49/12/38

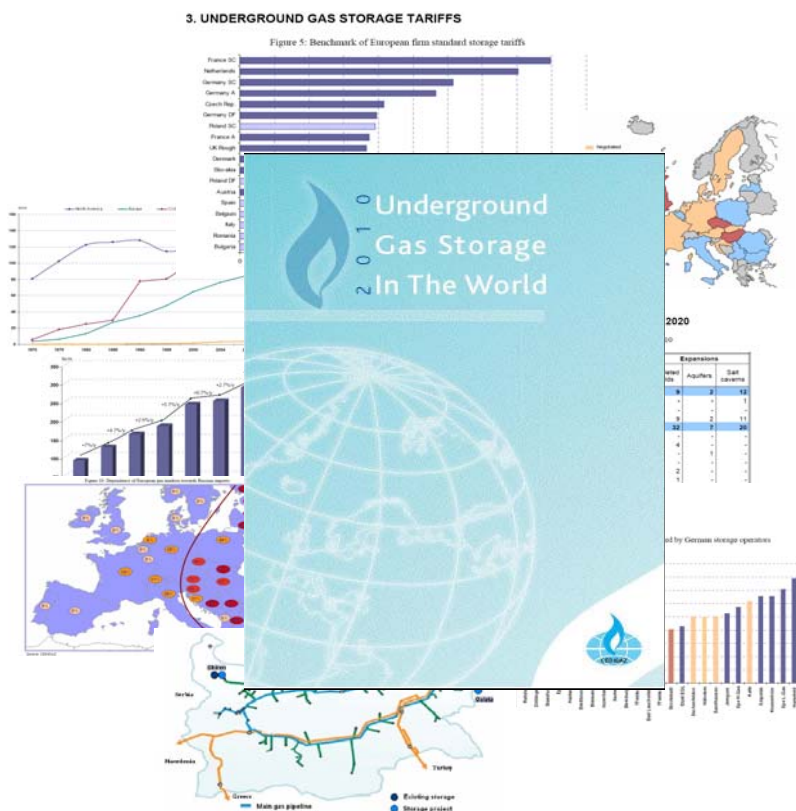
The National Iranian Gas Company (NIGC) said recently that it plans construction of a UGS facility. The facility would be located at the Sarajeh reservoir at Qom, south of Tehran. "The injection of gas ... at a rate of 4.5 million cubic meters per day will begin in the second half of the (2010-2011) year and the injection will gradually go up to 9.5 MMcmd," Reuters said NIGC managing director Javad Oji.

"One of the characteristics of the Sarajeh repository is that the gas injected into it for the first time would come along with a degree of condensates (impurity) when extracted and will thus need processing," Oji said. (Upstream Online, April 20, 2010)

NEW ZEALAND: Contact Energy targets Ahuroa gas storage facility to be operational in December 2010 – CNR/49/12/39

Contact Energy's Ahuroa gas storage facility near Stratford is on track to be operational by the end of 2010 with drilling of the three final wells completed recently and flow lines for gas injection and extraction now installed. Contact has temporarily stopped injecting gas into the facility while the gas compressor is reconfigured to a higher pressure. (to be continued p. 10)

Underground Gas Storage in the World 2010 Edition by Romain Benquey *with the contribution of Armelle Lecarpentier*



The survey provides an analysis of the recent evolutions in the technico-economic aspects of the underground gas storage business, as well as an overview of the UGS markets and their developments in the world, country by country. A specific focus is made on the legal framework and storage tariffs in European countries, as well as on their future storage needs by 2020.

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Reconfiguration is due for completion by September 2010 at which time injection will recommence. "The Ahuroa gas storage facility will help us manage the costs of inflexible 'take or pay' gas supply contracts, and limit the use of gas at times when it is cheaper to use other generation options," Contact's Managing Director David Baldwin said. (Contact Energy press release, April 30, 2010)

UNITED STATES: ENGlobal wins FEED contract for East Cheyenne gas storage project – CNR/49/12/40

ENGlobal announced recently that it has been selected by Merchant Energy Partners, LLC, a private natural gas storage developer based in Denver, Colo., to provide front-end engineering and design services for Phase One of the East Cheyenne Gas Storage Project located in Logan County, Colo. ENGlobal has been engaged to design facilities associated with approximately 9.7 Bcf of storage capacity, including engineering and procurement services. The contract scope includes a compressor station, a gas processing facility, gathering lines, pipeline interconnects, and

a metering station. Construction of the East Cheyenne Project is expected to begin in June 2010 and to be completed by September 2011. William Harnisch, Senior Vice President - Engineering and Project Development and Partner of MEP, said, "The East Cheyenne Project, with total project acreage of approximately 6,000 acres, is needed to provide natural gas storage to meet anticipated market demand throughout the Midwest and Western United States. Once complete, the storage areas would have a total working gas inventory of approximately 18.9 billion cubic feet". (Downstream Today, May 19, 2010)

UNITED STATES: Bobcat Gas Storage announces open season for firm service – CNR/49/12/41

Bobcat Gas Storage announced recently the start of an open season for firm storage service from its natural gas storage facility in St. Landry Parish, Louisiana. The Bobcat Project offers customers premier interconnections with five interstate pipelines including Texas Eastern Transmission, L.P., Transcontinental Gas Pipeline Company, Florida Gas Transmission, Gulf South Pipeline and ANR Pipeline. Bobcat is conducting an open season for 2.4 Bcf of firm storage capacity, offering 2 to 4 turn service. Bobcat will offer customers service under its FERC-approved tariff and market-based rates. (PRNewswire, May 14, 2010)

UNITED STATES: Peregrine plans Open Season for Ryckman Creek gas storage project – CNR/49/12/42

Ryckman Creek Resources, LLC, a wholly-owned subsidiary of Peregrine Midstream Partners LLC, received recently approval to use the Federal Energy Regulatory Commission's pre-filing review process for its Ryckman Creek Gas Storage Project, a new interstate natural gas storage development in Uinta County, Wyoming, near the highly liquid Opal Hub. The project involves converting an existing partially depleted oil and gas field, known as the Ryckman Creek Nugget Unit, into a gas storage field. First-phase working gas capacity is being designed for 25 Bcf of high-deliverability, multi-cycle (HDMC) gas storage. Phase I will include maximum injections

exceeding 200,000 Mcfd and maximum withdrawals of approximately 360,000 Mcfd. The project will be subject to regulation as an interstate natural gas storage facility under the Natural Gas Act. Ryckman Creek Resources intends to file an application for certificates of public convenience and necessity in fall 2010 to construct, own and operate the project, as well as to charge market-based rates for the services it will offer. Ryckman Creek plans to conduct a non-binding Open Season to gauge prospective customer interest during fall 2010. Construction on the project will start upon receipt of the certificate, anticipated in spring 2011, with an in-service date by April 2012. (Downstream Today, May 11, 2010)

UNITED STATES: Alaska governor signs bill providing incentives for gas storage facilities developers – CNR/49/12/43

Alaska Gov. Sean Parnell recently signed into law a bill that the state hopes will encourage the development of large-scale natural gas storage facilities to help deal with peak demand days during the winter. H.B. 280, the Cook Inlet Recovery Act, provides incentives for the development of storage facilities across the state, and adjusts tax credits meant to encourage exploration and production of gas in the Cook Inlet. Additionally, it requires the Regulatory Commission of Alaska to consider the negative impacts the denial of gas supply contracts would have on consumers.

The gas storage income tax credit is \$1.50/Mcf of capacity, with a maximum of \$15 million, or 25% of the cost to build the facility. Under the new law, the state production tax credit is increased to 40% from 20% for drilling related costs outside of the North Slope. The new tax credits take effect July 1, 2010 and will be fully available for all non-North Slope costs. (SNL, May 13, 2010)

USE FOR POWER GENERATION

NIGERIA: Government approves new gas-to-power domestic price – CNR/49/12/44

President Goodluck Jonathan recently approved the implementation of a new gas-to-power price in the domestic market as part of efforts to encourage more production for electricity generation. According to the Minister of Petroleum Resources, under the approved price regime, the price of gas will increase progressively from its current 20 cents per million British thermal unit to \$1/mmbtu by the end of 2010 and \$2/mmbtu by the end of 2013. Mrs. Deziani Alison-Madueke said the old price regime of 20 cents per mmbtu could not support the needed investment required by gas suppliers to meet domestic demand. The minister said a new price regime initially proposed in 2009, which sought a steady migration of gas-to-power price to \$1/mmbtu by the end of 2012, was not implemented in any of the Gas Sales Purchase Agreements. The power sector currently consumes about 700 million standard cubic feet per day of gas and this is set to grow to about 2,500mmcf/d by 2014. Mrs Alison-Madueke added “In essence, each price change will be triggered only when the gas sector has demonstrated that it has developed sufficient gas to attain a particular threshold of electricity generation. The prescribed thresholds are 4,700 megawatts by end of 2010; 6,200 megawatts by end of 2011; 8,200 mw by 2012. With this linkage to performance, Nigerians are assured that they are paying for growth in supply”. (This Day, May 28, 2010)



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