

## Oil & Gas – Upstream & Downstream

### **China's crude run fell by 0.7% in May**

China's crude run in May fell by 0.7% year-on-year to 38.3 million tons due to maintenance at some major refineries and weak demand. Ethylene output reached 1.27 million tons in May, down 7.1% year-on-year. From January to May, China's natural gas output totaled 45bcm, up 7.2% year on year.

### **"Stimulus 2.0"?**

According to China Daily Newspaper, from April to May, the National Development and Reform Commission (NDRC) has approved four new airports or airport relocations, about 100 clean-energy projects and the construction of three major steel mills worth more than 130 billion yuan (USD 20.57 billion) in total. Moving at what the Chinese-language business press called a "markedly faster" speed the country's economy, the government has green-lighted more investment in fixed assets - new factories and infrastructure.

### **Overall Development Plan for CNOOC's Lishui 36-1 gas field submitted to NDRC**

China National Offshore Oil Corp.'s (CNOOC) has moved a step closer to tapping the estimated 4.9 billion cubic meter of recoverable gas reserves at the Lishui offshore gas project. CNOOC's partner in the project, Primeline Energy Holdings Inc., announced in early June that the overall development plan (ODP) for the Lishui (LS) 36-1 field has been filed with China's National Development and Reform Commission (NDRC). "Major construction contracts have been signed and fabrication of the platform and work on the pipeline are proceeding smoothly," said Primeline Chief Executive Ming Wang. The LS 36-1 field is scheduled to become operational in the third quarter of 2013, according to Primeline. CNOOC holds a 51% stake in Lishui 36-1, which lies roughly 150 kilometers north-east of Zhejiang Province's Wenzhou City in offshore Block 25/34, while TSX Venture Exchange-listed Primeline holds 36.75% outright and another 12.25% through its subsidiary Primeline Petroleum Corp. Gas from LS 36-1 will be piped to a planned onshore processing terminal at Wenzhou, which is expected to be able to produce 1.2 million cubic meters of gas per day. According to U.K.-based Primeline, the company will now shift its attentions to the nearby LS 35-3-1 discovery, for which reserves estimates have yet to be released. If commercial, LS 35-3-1 is expected to be linked to the production facilities at LS 36-1. But following a negotiation of terms with CNOOC last year, the discovery will soon be part of a newly designated offshore exploration area, Block 33/07. Primeline has indicated that following the submission of the ODP for LS 36-1, all of its rights to Block 25/34 except the development area for LS36-1 will be relinquished to CNOOC, and a new contract between the pair will be finalized that will commit Primeline to drilling four exploration wells in Block 33/07 over a seven-year period.

### **A new oil discovery in Bohai Bay**

CNOOC Ltd. has made a new oil discovery in the Bohai Sea, it said on May 24. The discovery at LD 21-2-1D in south Liaodong Bay, tested oil production at 608 barrels per day, the company said on May 25. The new find holds high quality hydrocarbons and represents the thickest layers found in the exploration of Bohai clastic rocks in recent years, CNOOC

said. The well has unearthed oil pay zones with total thickness of 170 metres. The well was drilled to 2,831 metres in water depths of around 20 metres next to the producing LD 27-2 oilfield.

### **CNOOC, Husky to speed up Liwan development**

CNOOC Ltd and its partner Husky Energy have said they will speed up development of the Liwan offshore gas project near Hong Kong to begin production in the second half of 2013. The decision to accelerate development of the Liwan 3-1 field was announced after CNOOC Chairman Wang Yilin met billionaire Li Ka-Shing on the fringes of CNOOC's annual meeting in Hong Kong on May 25 (Li is the majority owner of Canada-based Husky Energy, with a stake of almost 70%). CNOOC Ltd., the listed arm of CNOOC, holds a 51% share in Liwan 3-1 and Husky owns the rest. The Liwan 3-1 project alone could produce 4.2 mcm per day according to energy sources.

### **Floater tender due for launch**

CNOOC is working towards the launch of a tender for construction of a new floating, production, storage and offloading vessel to develop its Enping 24-2 oilfield in the South China Sea. Sources said that because the National Development and Reform Commission is yet to endorse the field's overall development plan, CNOOC is likely to start the process with a tender for the floater's mooring system. Non-Chinese companies showing initial interest in the mooring system contract include Monaco-headquartered SBM, Norway's APL and Bluewater of the Netherlands, sources added. Even though the bid is yet to be issued, there is talk in the market that CNOOC's offshore arm, Offshore Oil Engineering Corporation, is interested in a dominant role as the lead contractor of the floater. In so doing, it will seek a yard to build the hull, while it will be responsible for topsides. The 150,000-DWT dual hull FPSO will include a power generation plant, oil and gas treatment facilities and utility systems plus living quarters able to accommodate 100 people. The FPSO will supply electricity through a 2.2 kilometre, 35KV, dynamic submarine power/communication cable. Basic design work is being handled by CNOOC's in-house engineering unit, CNOOC Research Centre, and is due for completion in August. The new floater will be managed by CNOOC's FPSO specialist, CNOOC Energy Technology & Services (CETS). Located 200 kilometres south of Hong Kong and in water depths of 86 to 96 metres, the Enping 24-2 field hosts 19 million cubic metres of hydrocarbon reserves (or about 120 million barrels) with peak production seen at 7,900 cubic metres per day (50,000 barrels per day). First production is targeted for 2014. The development is also expected to include an eight-leg jacket fixed platform including a modular rig, living quarters, separate sewage treatment facilities, utility systems and crude oil processing system. The crude oil will be exported from the platform to the FPSO through a 2.2 kilometre subsea pipeline.

### **CNOOC to breathe new life into retired floater**

CHINA National Offshore Oil Corporation (CNOOC) has decided to use the Nanhai Kaitou, a floater that was retired in 2010 as a temporary replacement for the floating, production, storage and offloading vessel Nanhai Shengkai, at the Lufeng 13-1 and 13-2 fields in the South China Sea. The 250,000-tonne Nanhai Shengkai, which was producing from the two Lufeng fields in the eastern part of the South China Sea, went off station in late May. It will

soon head for a four-month maintenance period at the Dalian Shipyard in north eastern China. The company has spent \$15 million to revamp the floater. Over the long term, CNOOC plans to use Nanhai Kaitou as a swing floater to maintain production from fields in the South China Sea when its own floaters are slated for maintenance or are being repaired after damage caused by typhoons. The 1970-built Nanhai Kaitou has been anchored at Longxue Shipyard, in Guangzhou city, since 2010 after it was decommissioned from the Xijiang 24-3 field in the South China Sea.

### **Construction starts on CNPC jack-up drilling rig**

Construction has begun in Shanghai Waigaoqiao Shipbuilding Co. Ltd., a subsidiary of China State Shipbuilding Corp. on a jack-up drilling rig for China National Petroleum Corp. (CNPC) that is capable of operating at depths of 400 feet (121.92 meters: m), CNPC announced recently. CNPC won rights to explore the offshore Yanchengdong Block in the South Yellow Sea Basin in February, and intends to deploy RMB 718 million (\$114 million) over the next three years for related projects. The construction of the 'No. 16' jack-up drilling rig also deepens CNPC's relationship with Waigaoqiao, which has built eight tugs and pipe-laying ships for CNPC. With a deck covering an area equivalent to 13 basketball courts, the rig can drill to depths of 9,144 m and is scheduled to be delivered in February 2014, Waigaoqiao said in a separate announcement later. Last September, CNPC formed a joint venture (JV) named China Petroleum Petrofac Engineering Services with oil and gas facilities service provider Petrofac Ltd. The JV is based in Sharjah in the United Arab Emirates, and will mainly provide project management and engineering services to Chinese oil and gas companies. The No. 16 platform will be able to operate in waters in the Middle East, Waigaoqiao said.

### **PetroChina begins drilling Hu59-6 well in Xinjiang**

PetroChina, China's largest oil and gas producer, has smoothly commenced drilling of its first risk operation well Hu59-6 in the Santanghu basin in northwest China's Xinjiang Autonomous Region. PetroChina Tuha Oilfield Company, CNPC Western Drilling Company and CNPC Greatwall drilling Company have jointly won the cooperative petroleum resources exploitation contracts of the Santanghu basin through open bidding. The three companies will employ the '2+1' risk operation strategy and work closely with each other in order to overcome any potential technical difficulties. The target has been set at 300,000 metric tons (tonnes) of annual crude oil output for the next 10 consecutive years. Western Drilling Company and Greatwall Drilling Company have planned to drill 84 more wells after the success at well Hu59-6. Tuha oilfield is one of the three largest oilfields owned by PetroChina in the Xinjiang Autonomous Region. Its total crude oil output in 2011 reached 1.55 million tonnes. **XINHUA, May 28, 2012**

### **Sinopec completes gas gathering station at Hangjinqi Block**

China Petrochemical Corp. (Sinopec Group) has reached a milestone in the development of the Hangjinqi Block, completing construction of the project's first gas gathering station, the company's in-house newspaper China Petrochemical News reported recently. The state-owned major regards Hangjinqi as a potential successor to the Daniudi gas field, which lies to the south and is under full-scale development. Hangjinqi is four times the size of Daniudi and the largest gas block held by Sinopec Group's regional subsidiary, North China Petroleum

Bureau (NCPB). Sinopec Group has also broken ground on a 60-kilometer (km) pipeline that will transmit output from the Hangjinqi Block, according to the report. Hangjinqi's gas output is likely to reach 1.5 billion cubic meters per year (bcm/y) by 2015. The block borders the Sulige gas field, which is operated by CNPC. Both structures are tight gas-bearing.

### **CNPC targets clean energy**

The largest Chinese oil and gas producer and supplier intends to increase sales of LNG during the next three years to help promote the use of LNG-powered vehicles as part of its government's drive for cleaner energy. The company has also begun several small-scale LNG plants, to chill and truck to users the "stranded gas" in some Chinese fields that are considered too small for large-scale pipeline transport. The country's five-year plan to 2015 has set ambitious clean-energy targets. Under the plan, China will need to find US\$80-150 billion a year to fund its renewable energy, emissions and energy efficiency targets. Last year it invested around US\$54.4 billion. □

### **CNOOC unit to build medium-sized LNG vessel**

CNOOC Energy Technology & Services Ltd, a wholly owned subsidiary of China National Offshore Oil Corp. (CNOOC), is to build a 30,000-cubic-metre liquefied natural gas (LNG) vessel, the first small land medium-sized LNG vessel in China. The Shanghai Design and Research Institute of the China State Shipbuilding Corp. will be the designer of the vessel. The 185.2-metre-long vessel will be able to transport 900,000 metric tons (tonnes) of LNG per year. This is the latest of CNOOC's efforts to expand its LNG transport capacity. The company and BG Group Plc. jointly built a large LNG vessel last year. *XINHUA, May 28, 12*

### **Sinopec, Mitsui to build synthetic rubber plant in Shanghai**

Sinopec and Japan's Mitsui Chemicals Inc. will build a 2 billion yuan (US\$315 million) synthetic rubber project in Shanghai. The plant, in Shanghai Chemical Industry Park, will be capable of producing 75,000 tons of ethylene-propylene-diene terpolymer (EPT), when commercial production starts in the first quarter of 2014. Sinopec and Mitsui will start a 50-50 new joint venture to build the facility, Sinopec said in a statement in June. The venture is focusing on the production and sales of ethylene propylene diene monomer rubber, which is the copolymer of EPT. The synthetic rubber is widely used in automotive parts, electric wires and cables, and other industrial products.

### **China hunts for gas hydrate in South China Sea**

China has sent a research vessel to the northern area of the South China Sea to explore for methane gas hydrate, the official Xinhua news agency reported recently. The ship, named Haiyang 6, will also attempt to drill for samples of gas hydrate if conditions are favourable, the report said. Gas hydrate, or 'combustible ice', is a form of natural gas formed under high pressure and low temperatures, conditions similar to those found in permafrost or on the ocean floor. In addition to the South China Sea, China's gas hydrate resources are believed to lie onshore on the Tibetan plateau, in the Qilian Mountain permafrost in Qinghai Province. China acquired its first gas hydrate sample in 2007 after research on the unconventional resource began in 1999, the report said. In 2011, the country commenced a three-year research project on how gas hydrates are formed.



### **PetroChina hikes CBM production target by 50%**

PetroChina has hiked its coal-bed methane (CBM) production target by 50% and now aims to be producing 6 billion cubic metres per year by the end of 2015 as shale gas ambitions are scaled back in the shorter term. This year, the company will probably produce 3 bcm of CBM. According to the National Development and Reform Commission's (NDRC) five-year plan, China should be producing 30 bcm per year of CBM by the end of 2015.

### **Sinopec Corp to expand shale oil and gas capacity at Peiling block**

Sinopec Corp., China's second largest oil and gas producer, has launched a shale gas and oil capacity building project at the Peiling block, said the parent company Sinopec Group on its website. The project is Sinopec's first shale gas and oil capacity building project and also the first in China, said Sinopec. The project will be carried out by Jiangnan Oilfield Co. and Sinopec Exploration Southern Co. The former will take charge of the capacity building, and the latter will be responsible for exploration and assessment. The first well is scheduled to be drilled in early June. *XINHUA, May 28, 2012*

### **Dow and Davy License New LP OxoSM Technology to Yanchang Petroleum in China**

**June 12, 2012** – Davy Process Technology Limited (DPT), a Johnson Matthey company, and The Dow Chemical Company's (Dow) Oxygenated Solvents business announced that Shaanxi Yanchang Petroleum Yan'an Energy and Chemical Co., Ltd. (Yan'an Energy), a project entity invested in by Shaanxi Yanchang Petroleum (Group) Co., Ltd., the fourth largest oil company in China, has selected LP OxoSM Technology using Dow's proprietary NORMAX™ Catalyst to co-produce 2- propylheptanol, normal butanol and iso butanol in a single integrated plant in Fu County, Shaanxi Province, China. With this license, Yan'an Energy will build a LP OxoSM plant, as part of Yanchang Petroleum Yan'an Coal-Gas-Oil Resources Integration Complex, with a capacity of 80 kta 2-propylheptanol, 206 kta normal butanol and 7 kta iso butanol.

### **Shell set for FEED tender for the shale gas in Sichuan**

Shell is preparing to launch a front-end engineering and design tender for the pilot development of China's first shale gas field, in the south western province of Sichuan China. The pilot project is intended to pave the way for the Fushun-Yongchuan field's full commercial development to start in two years. However, it is required by Chinese regulation, that foreign FEED contractors wanting to participate in the tender should partner with a Chinese engineering house. Sources said the tender is expected to draw interest from WorleyParsons of Australia, Fluor from the US and Amec from the UK, as well as from a number of smaller players such as Profundo Technologies. A source added that WorleyParsons is likely to form a consortium with China Petroleum Engineering Southwest Company (CPE Southwest), which is CNPC's in-house gas FEED contractor, in order to participate in the race. The field's engineering, procurement and construction tender for the pilot scheme will be launched next year.

## Power, New Energy (renewables)

### **CNOOC signs power equipment deal with Dongfang Electric**

CNOOC, China's largest offshore oil and gas producer and the parent of CNOOC Ltd., has signed a contract worth 3.87 billion yuan with Dongfang Electric Corp. (DEC) to purchase equipment for its two natural gas-fired power plants in South China's Guangdong province. The equipment, including gas turbines, steam turbines, electricity generators and heat-recovery boilers, will be used in the third phase of the Jiaming Power Plant in Zhongshan and the first phase of the Zhuhai Power Plant. *XINHUA, June 1, 2012*

### **Approval for 5-year nuke safety plan**

China has approved a five-year nuclear safety plan after last year's Fukushima disaster in Japan spurred the government to halt new power plants. The quality of the country's nuclear plants is "under control" and they meet national and International Atomic Energy Agency standards, a statement posted on the central government website said recently.

### **China to resume nuclear power program**

Despite the dangers from nuclear reactors highlighted by the Fukushima disaster, China will push ahead with plans to build more nuclear power plants. It has indicated that it will lift its year-long moratorium on new nuclear power plants. China is targeting 60GW of nuclear capacity by 2020. China's cabinet said it had approved the 2020 nuclear strategy; finalised new safety standards and finished inspecting the country's existing nuclear plants. Beijing's latest announcement marks a major step towards the full resumption of its nuclear building programme that accounts for 40% of global reactors under construction today. Analysts said approvals for new nuclear reactors are around the corner and are expected to come very soon. China draws most of its energy from coal but Beijing is building wind, solar, hydropower and nuclear power to shift toward non-fossil fuel sources.

### **State Grid to buy power grid assets in Brazil**

The State Grid International Development Ltd. (SGID), a wholly owned subsidiary of State Grid Corp. of China (SGCC), plans to spend nearly \$1 billion purchasing power grid assets in Brazil from Spanish construction firm Actividades de Construcción y Servicios, S.A. (Grupo ACS), SGID said May 29. SGID will take over seven high-voltage electricity transmission assets spanning 2,792 kilometers across 10 Brazilian states for \$942 million, of which \$411 million is made up of assumed debt. The deal marks the continuation of State Grid's overseas expansion over the past few years. The company spent \$1 billion in December 2010 buying another seven power transmission assets in Brazil.

### **Shanghai targets 1,000 MW of wind power installed capacity by 2015**

Shanghai Municipality plans to reach 1,000 megawatts of offshore wind power installed capacity by 2015, the municipal government forecast on May 31. Shanghai is home to the 100 MW East Sea Bridge Offshore Wind Farm, China's first offshore wind power project. The wind farm went online in November 2010 and is capable of producing 260 gigawatt hours (GWh) of electricity per year. However, the vast majority of Shanghai's offshore wind power resources remain untouched.

### **Inner Mongolia to invest \$449 mln to lift wind power efficiency**

Inner Mongolia Autonomous Region plans to invest RMB 2.84 billion (\$449 million) updating its western power grid to minimize wind power waste, local grid operator Inner Mongolia Electric Power Corp. (IMEC) said on May 29. The funds will go towards connecting wind farms to the local grid as well as building power transmission lines connecting Inner Mongolia with eastern and southern China, said IMEC.

### **Huadian in offtake deal with CNPC for gas power project**

China Huadian Co., one of the country's largest power producers, has signed an agreement with China National Petroleum Corp. (CNPC) to offtake at least 360 million cubic meters (MMcm) per year of natural gas per for a Combined Heat and Power project in Hubei Province. The supply deal will feed an operational cogeneration project in Hubei's capital of Wuhan. The company has received approval for gas-fired cogeneration projects amounting to 752 MW of capacity since 2005, representing two-thirds of the national total.

### **Titan Wind Energy acquires tower factory from Vestas**

Titan Wind Energy Co. Ltd., China's largest manufacturer of wind turbine towers, has agreed to purchase a tower factory from Danish wind turbine maker Vestas Wind Systems for EUR 15.18 million (\$19.16 million), Titan announced on June 14. The factory, located in Varde Municipality, Denmark, will strengthen Titan's R&D capabilities, particularly for offshore wind turbine towers, said Titan, noting that it would also boost its annual production capacity from 1,600 to around 2,000 towers per year. Titan has supplied wind turbine towers to Vestas since 2006. Vestas, the world's largest wind turbine maker, has struggled as the slumping global economy has led to cuts in wind farm investment. The company reported net losses of EUR 166 million (\$208.62 million) last year and EUR 162 million (\$203.78 million) in the first quarter (Q1) of this year. To stem losses, Vestas announced plans to cut some 2,335 jobs this year, mostly from its plants in Denmark.

### **Air Products to supply gases for China LCD facility**

Air Products said Tuesday that it signed a long-term contract with Xiamen Tianma Microelectronics to supply bulk gases, including ultra-high-purity nitrogen and oxygen, hydrogen, argon, and helium, at a new facility in Xiang'an Industrial Park in Fujian Province.

### **Fluor finishes China polysilicon plant for LDK Solar**

Fluor Corp. has completed construction for LDK Solar's polysilicon plant in Xinyu City, China, one of the largest such production facility in the world. Fluor said it continues to provide debottlenecking services at the plant and is implementing new technologies to increase production. Fluor provided engineering, procurement and construction management services for the plant, which produces solar-grade silicon for the photovoltaic industry.

### **Alstom secures GT13E2 gas turbine generator and longterm service contract in China**

Alstom Thermal Power has been awarded a contract by Harbin Turbine Company Limited to supply a GT13E2 gas turbine and associated generator for a combined cycle plant owned by Shenzhen Nantian Electric Power Co., Ltd (formerly known as Meishi Power), located in Shenzhen, China. The plant is scheduled to enter commercial operation by 2013.

This new contract is in addition to an existing GT13E2 gas turbine generator, which has been operating successfully since 1995 at the same site. Alstom also signed an exclusive Long-Term Service Agreement (LTSA) with Shenzhen Nantian Electric Power Co., Ltd, which covers three maintenance cycles for each GT and includes the supply of six major inspection parts for both the new and existing gas turbines. Alstom will optimise the existing gas turbine with state-of-the-art technology of the GT13E2 which will help the customer reduce the cost of ownership and improve the product reliability and efficiency.