LNG Unlimited

LNG JOURNAL PUBLICATION 20 March 2018

McDermott and CB&I reveal full merged executive team and plans

CEO Dickson plans to better serve clients, to be competitive and move ahead on growth

LNG Journal editor

McDermott-CB&I CEO David Dickson sees better future

Energy and LNG engineering companies McDermott International and Chicago Bridge and Iron (CB&I) have revealed their executive leadership team and integrated organizational structure for the new combined company under their agreed merger.

"The plans are important steps to position the combined company to build a common culture, better serve our customers, become more competitive and drive long-term growth," said McDermott President and Chief Executive David Dickson, who will lead the combined company.

Transaction

McDermott and CB&I agreed to merge in December 2017 in an all-stock transaction valued at $6 billion to create a larger onshore-offshore operation to target engineering, procurement and construction contracts.

CB&I has built LNG facilities around the world, including the Peru LNG production plant at Pampa Melchorita, the only export facility in South America, and currently has two contracts on the US Gulf Coast, Cameron LNG in Hackberry, Louisiana, and the Freeport facility in Texas.

McDermott has worked on offshore portions of LNG production projects, most recently in countries such as Australia and Trinidad in the Caribbean.

The merger is now moving towards its finalization in the second quarter.

Several closing conditions remain, though the final competition laws clearance was received from Russia.

"I'm looking forward to being joined by an experienced leadership team comprised of extraordinary talent from both organizations and the wider energy industry," said Dickson.

"Together we will be well positioned to maximize our proven ability to control risk in bidding and deliver excellence in project execution in a cost-efficient delivery structure.

"We will partner with our customers to provide integrated, end-to-end solutions - from the wellhead to the storage tank - that deliver the quality, efficiency and dependability needed to keep their businesses growing," stated the new CEO.

Upon the close of the transaction, the combined company's operations will be organized by four Areas - North, Central & South America (NCSA), Europe, Africa, Russia & Caspian (EARC), Middle East & North Africa (MENA) and Asia Pacific (APAC).

"CB&I's industry-leading technology business will remain a tier-one market facing offering," said the statement.

"The centralization of Project Delivery, including Project Management & Controls, Engineering, Supply Chain, Marine, Fabrication, Construction, and Quality, Health, Safety, Environment & Security, will also significantly enhance project delivery performance," it added.

Under this new structure, the global executive leadership team in addition to CEO Dickson will include:

Stuart Spence, currently serving as Executive Vice President and Chief Financial Officer for McDermott, will continue in that role for the combined company.

Richard Heo will become head of North, Central and South America (NCSA) for the combined company. He is currently Executive Vice President, Fabrication Services for CB&I.

Tareq Kawash from CB&I will become head of Europe, Africa, Russia and the Caspian (EARC) for the combined company.

Ian Prescott, currently Vice President, Asia for McDermott, will continue as the head of Asia Pacific (APAC) for the combined company. ■

UNLIMITED AGENDA

TransCanada places in service feed-gas pipeline for Sempra's Cameron LNG plant in Louisiana

LNG Journal editor

TransCanada Corp., the North American pipeline company, said its Cameron Access project has been placed into service in southwest Louisiana, securing deliveries of natural gas to the Cameron LNG export plant being developed by Sempra Energy of the US and partners.

The Cameron Access project involved improvements to an existing pipeline, construction of a new compressor station and the addition of 27 miles of 36-inch diameter pipeline on a greenfield route.

Investment

"Representing an investment of approximately US$300 million, the pipeline is capable of transporting 800,000 dekatherms a day to the Cameron LNG export facility," said TransCanada.

Cameron plant is under construction in Hackberry

The Cameron LNG export facility is currently under construction in Hackberry and scheduled to go into service at the end of 2019.

Engineering companies CB&I of the US and Japan's Chiyoda Corp. are transforming the existing Louisiana import terminal into an export plant for California-based Sempra and its Japanese and European project shareholders.

The Cameron liquefaction facility will export more than 12 million tonnes per annum of LNG, or 1.7 billion cubic feet per day of natural gas.

The project is a joint venture backed by affiliates of Sempra, France's Total, which purchased its stake from French utility Engie, as well as three Japanese companies.

They are the trading houses Mitsui & Co. and Mitsubishi Corp. and the shipping company, Nippon Yusen Kabushiki Kaisha (NYK Line).

"The completion of Cameron Access creates significant value for our customers by providing additional connectivity for their domestically produced natural gas to the high-value US Gulf Coast LNG export market," said Stanley Chapman III, TransCanada's Executive Vice President and President of its US Natural Gas Pipelines affiliate.

"Additionally, LNG export projects such as Cameron Access will help reduce global carbon emissions by allowing emerging markets to displace coal-fired power generation with clean-burning natural gas," explained Chapman. ■

Former Canadian energy CEO joins Steelhead LNG and its Vancouver Island floating project

Steelhead LNG, the developer of an export project offshore Vancouver Island in the Canadian Pacific province of British Columbia, has named an experienced energy executive to head its pipeline division and to join its board of directors.

The company said that R.L "Randy" Jespersen, a former Chief Executive of Canadian energy company Terasen Gas., would bring 35 years of experienced to ongoing discussions on securing feed-gas supply for the venture now named Kwispaa LNG to reflect native North American First Nation participation.

Jespersen's career began with Dome Petroleum followed by Amoco in Calgary and Houston, Texas.

In 1996, he joined Terasen Inc. (now FortisBC), where he held various senior roles including Vice President of Gas Supply.

"During this period, the British Columbia-based gas distribution company achieved an unprecedented level of growth through corporate acquisitions and major project developments, including construction of the Southern Crossing pipeline, Whistler natural gas extension and the Mt. Hayes liquefied natural gas storage project on Vancouver Island," said Steelhead.

Jespersen assumed the role of President and CEO of Terasen Gas in 2002 until his retirement in 2010.

"I am very impressed by the calibre of the Steelhead LNG team and by the company's low-cost pathway to developing the Kwispaa LNG project and pipeline that is competitive in the current market," said Jespersen.

"It creates an attractive pricing opportunity for British Columbia and Alberta producers, and benefits for all British Columbians, including our First Nations partners," he added.

In addition to his executive appointments, Jespersen also previously served as Chair of both the Canadian Gas Association and the Western Energy Institute. He was also on the Executive Committee of the Business Council of British Columbia.

"As a respected leader in the North American energy sector, who has contributed greatly to the economic and environmental framework of Western Canada, Randy Jespersen will play a significant role in the company as we continue our quest to connect clean, low-cost Canadian natural gas with energy hungry global markets," said Steelhead LNG Chief Executive Nigel Kuzemko.

Steelhead aims to source Canadian natural gas feedstock for the Kwispaa LNG facility from various producers in northeast British Columbia and northwest Alberta.

The company is currently assessing a proposed pipeline corridor that would extend from the Chetwynd area to Williams Lake area, southwest to Powell River, across the Strait of Georgia, terminating at the Kwispaa LNG site.

Steelhead said it anticipated making a route decision in mid-2018, following early discussions with potentially affected Indigenous communities to integrate feedback into the design.

Steelhead has additionally retained four groups of the world's largest project contractors, including KBR and CB&I of the US and TechnipFMC as it narrowed its field of bidders to complete front-end engineering and design work for initial production of 12 MTPA of LNG.

The company also said in January 2018 it was considering ordering two floating liquefaction and storage hulls at a cost of US$500-million from South Korean shipbuilder Hyundai Heavy Industries.

Steelhead is hoping to advance with its project down the regulatory path backed by First Nations relationships. ■

Harvey Gulf Chapter 11 filing won't affect LNG

Harvey Gulf International Marine, the US small-scale fleet owner and liquefied natural gas bunkering specialist, has filed for Chapter 11 bankruptcy protection, though the move would not affect LNG operations.

Harvey Gulf said the filing in Houston, Texas, would not have an adverse impact on the region's emerging LNG bunkering market.

The Chapter 11 route is often followed by US companies with financial over-reach to give themselves time to restructure their businesses and control debts.

Harvey Gulf has a fleet of 60 small ships serving as platform and offshore supply and support vessels and in other roles for the energy industry in the Gulf of Mexico waters of Texas and Louisiana.

Among the fleet are five vessels powered by LNG with a sixth LNG-fueled ship on order.

In addition, Harvey Gulf has a facility with more than 600,000 cubic metres of LNG storage at Port Fourchon, the southernmost port in Louisiana.

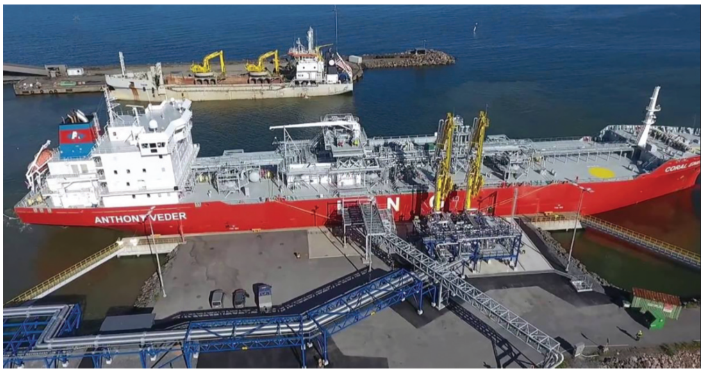
Harvey Gulf in November 2017 signed a long-term LNG transport contract as part of a joint venture to deliver LNG as a maritime fuel source to various ports in Florida and the Caribbean for Shell Trading Co.

The Chief Executive of Harvey Gulf, Shane Guidry, owns 70 percent of the joint venture and Harvey Gulf holds 30 percent.

The venture called Quality Liquefied Natural Gas Transport owns and operates the assets providing marine transportation of LNG in the region. ■

Gasum posts decline in profits even as LNG revenues rise

LNG Journal editor



Finland's terminal in Pori receives small shipments

Gasum, the Finnish natural gas company and owner of Nordic LNG player Skangas, posted an 8.6 percent fall in annual operating profit to 114.2 million euros ($141.6M) from 124.8M euros in the previous year even as revenues rose.

Gasum's group revenue rose 10 percent to 925.0M euros from 843.4M euros in 2016.

Activities

Among its activities, Gasum imports LNG to Finland and promotes the processing of waste to produce biogas in Finland and Sweden.

The Gasum subsidiary Skangas is a leading company in Nordic LNG and continues to strengthen its position and infrastructure in supplying to the maritime, vehicle and industrial sectors in Finland, Sweden and Norway.

"Our LNG and Biogas businesses achieved positive development and accounted for 26 percent of Gasum's total revenue," said Chief Executive Johanna Lamminen.

"This supports our strategy - step by step towards a cleaner tomorrow," added the CEO.

"In line with our strategy, we also invested in the development of the Nordic LNG infrastructure and market with our subsidiary Skangas in 2017.

"LNG offers a competitive and clean alternative for industry outside the gas pipeline network, maritime transport and heavy-duty road transport.

"During the year, we continued to improve access to LNG by, for example, investing in the development of the LNG filling station network in Finland, Sweden and Norway," added Lamminen.

Gasum said its natural gas business accounted for 678.7M euros of the total of the group's revenue, up 3 percent versus 2016 on price increases.

The revenue of the LNG business rose 20 percent to 195.2M euros from 162.4M in the previous year due to an increase in volumes sold.

"Now that the most significant investments of the LNG business have been completed, growth is anticipated to continue in the coming years," said Gasum. ■

Clean Energy Fuels of US posts rise in supplies to natural gas vehicles

Clean Energy Fuels Corp., the California-based leader in natural gas-fuel supply including liquefied natural gas, reported a 6.8 percent surge in its sales to 351.4 million gallons, though the absence of a federal alternative fuels tax credit (AFTC) in 2017 led to a drop in revenue.

Clean Energy, based in Newport Beach and listed on the Nasdaq stock exchange, is the leading provider of natural gas fuel for transportation in North America and has a network of filling stations completed from southern California to the Canadian border.

The US company now has around 550 fuel stations across the country and in Canada as it continues with its LNG, compressed natural gas fuel and biogas fuel distribution growth.

Clean Energy said revenues for 2017 amounted to $341.6 million, a 15.2 percent decrease from the $402.7M posted for 2016.

"This decrease was primarily due to the absence of the AFTC in 2017 and lower construction and compressor revenue, partially offset by increased revenue from higher volume sales in 2017," the company said.

For the fourth quarter, Clean Energy delivered 86.4M gallons of natural gas fuel, a 2.7 percent increase from 84.1M gallons in the same three months of 2016.

Revenue for the fourth quarter of 2017 was $89.3M, a fall of 12.3 percent from $101.8M logged for the fourth quarter of 2016.

The lower effective price per gallon was largely attributable to the effects of the company's sale of certain assets related to the upstream production portion of its biogas business known as Redeem to BP Products North America Inc.

"This resulted in decreased revenue from the sale of certain tradable credits the company generates by selling CNG, LNG and its Redeem vehicle fuel," explained the company.

"These decreases were partially offset by an increase in revenue as a result of the increased gallons delivered in the fourth quarter of 2017 compared to the same period in 2016, as well as increased station construction and compressor revenue," it added. ■

NEWS NUDGES

Statoil changes to Equinor

Statoil, the Norwegian energy company and operator of Europe's only baseload LNG production plant at Hammerfest, is planning to change the name of the company to Equinor. "The name change supports the company's strategy and development as a broad energy company," said Statoil. "The name Equinor is formed by combining 'equi', the starting point for words like equal, equality and equilibrium, and 'nor', signalling a company proud of its Norwegian origin," explained the company. Statoil Board Chairman Jon Erik Reinhardsen said the world is changing and so is Statoil.

Japan LNG conference

The Japanese Ministry of Economy, Trade and Industry (METI) said its seventh LNG Producer-Consumer Conference would be held on Monday, October 22, 2018 in Nagoya, jointly hosted with the Asia Pacific Energy Research Centre (APERC). The Japanese conference has become the most important non-commercial event on the LNG calendar and in recent years has attracted government ministers and senior energy industry executives to discuss market developments.

Petronas deal with Togas

Petronas, the Malaysian energy company and LNG producer, has signed an accord with Japanese utility Tokyo Gas to supply cargoes for a period of up to 13 years. The deliveries from Petronas subsidiary Malaysia LNG will start in April 2018 and will amount to around 500,000 tonnes per annum for the first six years, with the possibility of a volume increase to 900,000 tonnes per annum for the remaining seven years. ■

Papua New Guinea LNG outlines post-quake issues and strategy

LNG Journal editor

Australia-listed Oil Search, a Papua New Guinea LNG stakeholder and field operator, said the liquefaction and export plant near Port Moresby would be reopened for production in early May after it conducted a field trip to assess damage and also to under-score the continued progress of expansion plans.

Oil Search said in its report that the Hides Gas Conditioning Plant and major processing facilities were not significantly impacted by the February 26 earthquake, though some damage to foundation supports and various pieces of equipment were visible.

ExxonMobil-operated liquefaction plant near Port Moresby

Pipeline

The company added that the pipeline to Port Morseby was undamaged and that all oil and natural gas wells had been shut-in.

The Komo airfield serving the Highlands provinces has sustained damage and remained closed.

"Rehabilitation work is underway on Ridge and Moro camps and associated facilities to provide habitable accommodation for the production workforce," said Oil Search.

The Central Processing Facility has suffered limited damage and was expected to be operational in late March, with production from the Kutubu fields progressively restored.

The ExxonMobil-operated PNG LNG production facility recently logged an annualized output rate of 8.6 million tonnes per annum and mainly supplies Japan, China and Taiwan.

The plant has two storage tanks each with 160,000 cubic metres of capacity and was built with nameplate production of 6.9MT, benefiting from various upgrades and de-bottlenecking since the start-up in 2014. The shareholders in the PNG LNG plant apart from ExxonMobil and oil search also include Australia's Santos, French energy company Total, Japan's JX Nippon Oil & Gas Exploration and the PNG government.

Oil Search also discussed the LNG expansion plans in PNG and stated that there was "broad alignment between key parties on the preferred downstream development concept" for the additional output.

"There will likely be three new Trains, two supported by Papua LNG (the Elk-Antelope field), one by PNG LNG and the P'nyang Juha fields," the company said. ■

Woodside agrees on Scarborough gas development with BHP Billiton

Woodside Petroleum, the operator of two LNG export plants in Western Australia, and Australian commodities group BHP Billiton have entered into an agreement in relation to the proposed development of the Scarborough gas field, part of which Woodside is in the process of acquiring from ExxonMobil Corp. for LNG expansion.

Under the agreement, BHP will waive its right of pre-emption and provide its consent to the sale by ExxonMobil to Woodside of the US major's 50 percent, resulting in Woodside holding a 75 percent stake in the gas field and becoming the operator.

Woodside grants BHP an option to purchase an additional 10 percent interest in Scarborough on equivalent consideration and terms to the transaction with ExxonMobil.

The option may be exercised by BHP at any time prior to 31 December 2019 or the approval to commence the front-end engineering and design phase of the Scarborough development.

Woodside Chief Executive Peter Coleman said the deal with BHP strengthened alignment and certainty of the Scarborough development.

"I am pleased BHP has agreed that Woodside will become operator of the Scarborough development," said Coleman.

"The Scarborough joint venture will now be focused on finalising the development concept prior to entering FEED and positioning for the final investment decision in 2020," added the CEO.

Woodside said it was aiming to complete the transaction with ExxonMobil on the gas field acquisition before the end of March.

The Australian company also announced the completion of the retail component on March 12 of its share offering for the A$2.5 billion (US$1.96Bln) funding for its acquisition of the Scarborough field stake.

The offer of shares to institutions had been completed on February 19 and the retail offer was the second stage. ■

Shell plans LNG truck-loading at Indian Hazira terminal to widen distribution of cleaner fuel

LNG Journal editor

Royal Dutch Shell through its subsidiary Shell India plans to start liquefied natural gas truck-loading at its Hazira LNG import terminal located north of Mumbai to widen clean fuel distribution in the domestic market.

The terminal will start up the truck-loading by 2019 from Hazira in which Shell has a 74 percent stake and France's Total owns 26 percent.

Hazira import terminal in Gujarat, north of Mumbai

Customers

The trucks will deliver their LNG to be used as fuel for transportation or to be regasified for use by customers not connected to the national gas pipeline network.

Shell said LNG has a lot of potential in India because energy supply reliability is a big issue and a lot of the current off-grid demand is met by diesel fuel.

"There has not been much supply infrastructure in place, but terminals are now putting truck-loading facilities in place," said Steve Hill, an Executive Vice-President at Shell.

The Indian government is committed to promoting natural gas in the country and to increase the fuel's share to 15 percent in the energy mix from around 6.5 percent at present.

"The LNG truck fuelling option is a part of our gas reach-out business in India," said Hill.

Another Indian LNG import terminal owner, Petronet LNG with facilities at Dahej, also near Mumbai, and at Kochi in the southwest state of Kerala is planning to bring LNG use to the country's mass transportation system.

Petronet is one of the companies backing the use of LNG as fuel for buses under an investment programme. The companies behind the project also include Indian Oil Corp. and auto and truck maker Tata Motors. The LNG fuel technology has been provided by Chart Industries of the US.

A pilot project using an LNG-powered bus was launched just over a year ago and it will run on a trial basis in Kerala.

The bus project is part of a plan by the Ministry of Petroleum and Natural Gas to use LNG directly for transportation to reduce carbon emissions.

The LNG-powered bus is fitted with a Chart cryogenic tank with capacity of 400 litres, giving the bus mileage of around 600 kilometres.

The transport project is backed by the Kerala government and involves the introduction over time of 3,000 new buses using natural gas as fuel. ■

DNV GL opens Dutch LNG test centre in Groningen

European classification society DNV GL has opened a liquefied natural gas test centre in Groningen in the Netherlands to enable safer and more efficient use of the fuel as demand grows from the shipping and transport sectors.

DNV GL, formed from the merger five years ago of Norway's Det Norske Veritas and Hamburg-based Germanischer Lloyd, said the centre would be supported by stakeholders across the value chain.

The facility is at DNV GL's existing renewable energy technology and gas laboratory site and has a capacity compatible for the downstream sector.

"Its capacity is up to 250kg of liquefied gas and boasts a heat exchanger that allows the temperature of the LNG, and therefore its boil-off, to be precisely regulated," said the society.

Johan Holstein, head of gas testing and analysis at DNV GL Oil & Gas, said the testing of new sensor technology to rapidly identify the composition of LNG would be a priority.

"The current accredited technology, gas chromatography, can take 3-5 minutes to show the composition of LNG," Holstein explained.

"Sensors can give an answer in a second," he added.

DNV GL said that a stable and known composition of LNG is important for accurately assessing energy content and engine performance control.

Japan's spot LNG costs on rise versus 2017 to $10.90 per MMBtu

LNG Journal editor

Japanese LNG cargo costs have been steadily rising

Japanese spot LNG cargoes that arrived in Japan in February cost an average of $10.90 per MMBtu compared with $8.80 per MMBtu a year before, a rise of around 24 percent and along with long-term contract deliveries will be adding to Japan's energy import costs as oil and gas prices recover.

The government said the price of spot LNG cargoes that were contracted in February was $10.60 to arrive at a later date compared with $8.50 per MMBtu in February 2017, a rise of 24.7 percent.

Average

Japan had paid an average $10.10 per MMBtu for shipments that arrived in January 2018 versus $7.30 per MMBtu in the same month of 2017, an increase of $2.80 per MMBtu, or 38 percent.

The price of LNG contracted in January 2018 had surged 31 percent to an average $11.00 per MMBtu, an increase of $2.60 MMBtu for each shipment compared with the $8.40 per MMBtu paid in the same month of 2017.

The spot cargo numbers come from the commerce division of the Japanese Ministry of Economy, Trade and Industry and are only issued if a minimum number of two trades are recorded.

The Ministry emphasizes that "spot LNG" refers to fuel traded on a cargo-to-cargo basis and does not mean shipments under contracts on a short-term, medium-term or long-term basis. The statistical accounting of the spot prices started in March 2014.

Overall Japanese LNG gas imports edged lower in January to 8.26 million tonnes while the cost of the shipments was 11.5 percent higher than in the first month of 2017. Lower import volumes from Asia in January were offset by higher volumes of shipments from the Middle East and Australia.

The cargo deliveries in January were 0.5 percent lower than the 8.30MT of LNG imported in January 2017, according to the trade figures from the Japanese Finance Ministry.

The cost of the shipments rose in January to 416.2 billion yen ($3.81Bln) in January 2018 compared with 373.2Bln yen in January 2017.

Imports of thermal coal, a main competitor of LNG, fell even more by 6.5 percent to 9.98MT versus 10.67MT in January 2017.

Argentine state firms overhauled as latest LNG tender is completed

Argentine state-run energy company Integracion Energetica Argentina (IEASA), formerly known as Enarsa, has revealed the main winners of its latest LNG cargo tender with four companies chosen as the main suppliers.

Overall Argentina is importing 68 cargoes during the next 12 months and has found suppliers for 22 cargoes in its latest tender, according to IEASA officials.

The tender for deliveries from May through August saw three international commodities market players chosen among the suppliers. They are Trafigura, Gunvor and Vitol.

A fourth supplier will be UK energy major BP of the UK with shipments from Trinidad. The other winners of the tender have not yet been named after submitting their bids in late February.

Of the 22 LNG cargoes heading for Argentina in the May-August delivery window, nine of them will be unloaded at the floating storage and regasification unit (FSRU) in Bahia Blanca, a port in the south of Buenos Aires province.

The balance of 13 cargoes will be shipped to the GNL Escobar facility, another FSRU docked on the Parana River, located about 30 miles north of Buenos Aires.

Argentina plans to discontinue LNG imports from around 2022 as domestic gas production increases over the next few years from its vast shale reserves now under development.

The country's President Mauricio Macri is currently leading an overhaul of the energy industry as part of his reforms to help meet the nation's oil and gas needs.

Since taking power in December 2015, Macri has backed faster development of the Vaca Muerta shale reserves and other unconventional plays in the southwestern Neuquen Basin.

While shale gas production, which began in 2013, has been growing at more than 20 percent per annum, it has not been enough to replace falling output of conventional gas.

THE EXCLUSIVE MEETING PLACE FOR LNG & GAS BUYERS & SELLERS IN CHINA

PRODUCED BY

CWC C&C

FROM THE PRODUCERS OF

CWC WORLD LNG & GAS SERIES

27th WORLD GAS CONFERENCE WASHINGTON DC | JUNE 25-29 2018 IGU

LNG2019 SHANGHAI 1-5 APRIL

PRESENTED BY IGU gti

CWC 4TH CHINA LNG & GAS INTERNATIONAL SUMMIT & EXHIBITION

25 - 26 APRIL 2018 | BEIJING, CHINA

Zhang Yuqing
Former Deputy Director General
National Energy Administration

Zhang Rongwang
President, Trading & Marketing Branch
CNOOC Gas and Power Group

Li Yalan
Chairperson of the Board of Directors
Beijing Gas Group Co., Ltd

Wang Zhehong
Deputy General Manager
Shenergy (Group) Co., Ltd
& Chairman
Shanghai Gas (Group) Co., Ltd

Liu Jingbo
Deputy General Manager
Guangzhou Gas Group

Zhu Xingshan
Senior Director, Planning Department
CNPC

Jun Nishizawa
Senior Vice President, Division COO
Energy Resources Division B
Mitsubishi Corporation

Andrew Walker
VP Strategy
Cheniere Marketing Ltd

Tom Earl
Chief Commercial Officer
Venture Global LNG

Mabel Leung
President
China Natural Gas Marketing
ExxonMobil (China) Investment Co., Ltd.

OFFICIAL SUPPORTERS

中国石化 SINOPEC

CNOOC

PLATINUM SPONSOR

NEXTDECADE
A Portfolio LNG Company

GOLD SPONSOR

VENTURE GLOBAL LNG

SILVER SPONSORS

ExxonMobil

TELLURIAN

BRONZE SPONSORS

LNG The Energy Link

CHENIERE

中国寰球工程有限公司
CHINA HUANQIU CONTRACTING & ENGINEERING CO., LTD.

三菱商事

GTT China 中国

S&P Global Platts

HÖEGH LNG

COMET
Custom Transactions on Demand

陕西燃气 SHAANXI GAS
陕西液化天然气投资发展有限公司
SHAANXI LIQUEFIED NATURAL GAS INVEST.& DEV CO., LTD.

wison

GLX

For more information please contact **Elliott McGinn** or **Tyler Forbes** on **+44 20 7978 0000** or email **ChinaLNG@thecwcgroup.com**

CHINALNGSUMMIT.COM

LNG Hub #ChinaLNG

Golar LNG says production started on FLNG hull deployed offshore Cameroon

LNG Journal editor

Golar LNG, the fleet owner and project developer said first production of LNG has successfully commenced from the production vessel "FLNG Hilli Episeyo" offshore the West African state of Cameroon.

The company had earlier said the "FLNG Hilli Episeyo" had been hooked up to a mooring and had commenced commissioning.

'Hilli Episeyo' FLNG hull is onstream offshore Cameroon

Location

The Golar FLNG vessel is now in operation off the port of Kribi in Cameroon in a venture also involving the state energy company, Societe Nationale des Hydrocarbures (SNH) and European oil and gas company Perenco.

The Cameroon venture is based on the initial allocation of feedgas supplied by Perenco and SNH from the Sanaga Sud and Ebome gas fields.

The "Hilli Episeyo" is the world's first FLNG hull conversion to be deployed for a project.

It was converted from a 1975-built, Moss-type LNG carrier, the "Hilli", with a storage capacity of 125,000 cubic metres.

The "FLNG Hilli Episeyo" had arrived in Cameroon waters on November 20 from the Keppel Shipyard.

Golar added that another of its conventional LNG carriers, the "Golar Gandria", had been removed from lay-up and was now at the Keppel Shipyard in Singapore for conversion into a production hull.

Topside equipment on the "FLNG Hilli Episeyo" includes a pre-treatment system, four single mixed-refrigerant liquefaction Trains using PRICO technology from US company Black & Veatch and boil-off gas compression and offloading equipment.

The "Hilli Episeyo" is designed for a liquefaction capacity of about 2.4 million tonnes of LNG per annum.

The decision to proceed with the "Hilli Episeyo" came in 2015 when Russia's Gazprom, through its Singapore-based Marketing & Trading unit, won the tender to be the sole off-taker from the Cameroon FLNG venture, clearing the way for the project financing to go ahead.

Gazprom signed up for 1.2 million tonnes per annum of LNG for an initial eight years on a free-on-board basis, whereby the Russians supply their own ships.

Golar is also involved in the FLNG production project in the West African waters of Equatorial Guinea.

Perenco is an independent oil and gas operator in 13 countries worldwide and completed the acquisition of more upstream interests in Cameroon in 2011 from French energy company Total.

Perenco, whose headquarters are in London, has operated in Cameroon since 1993, working as a close partner to state-owned SNH.

It operates and produces from the Rio Del Rey, Moudi and Ebome Marine concessions and has three production sharing Contracts, two in production with oil from Dissoni North and gas from Sanaga South.

In addition to the FLNG project with Golar, Perenco is also involved in supplying gas from the Sanaga field by pipeline to an onshore 216-megwatt power plant at the port of Kribi. ■

Eni sells UAE stake for almost $1Bln in gas field that enabled Egypt to halt LNG

Italian energy company Eni has agreed to sell a stake for $934 million to the United Arab Emirates-based Mubadala Petroleum in the prolific Shorouk concession offshore Egypt containing the huge Zohr natural gas field that will enable the Egyptians to halt LNG imports as most of their domestic gas requirements will be met.

Eni currently holds a 60 percent stake in the Shorouk licence while Russian oil company Rosneft holds a 30 percent stake and BP of the UK owns 10 percent.

"The completion of the transaction is subject to the fulfilment of certain standard conditions, including all necessary authorizations from Egypt's authorities," said Eni.

Egyptian Minister of Petroleum Tarek El Molla has said that the increasing production from the Zhor field meant Egypt would have no need of LNG imports by the start of 2019.

El Molla said that because of its own growing gas resources the Arab country would save $250M per month by no longer having to import LNG to its two floating terminals at Ain Sokhna port on the Gulf of Suez.

The Egyptian Zohr field has estimated resources of at least 30 trillion cubic feet (Tcf) and has helped end the nation's natural gas shortages and may soon turn it back into an LNG exporter, as other discoveries have been made and are also being developed.

These include the Atoll Phase One project in the East Nile Delta offshore Egypt that has been brought on stream in a separate project by BP and is now producing 350 million cubic feet of gas a day and 10,000 barrels a day of condensate.

What Eni described as its "super-giant" Zohr gas field was successfully started up in December 2017, only 28 months after its discovery, and is currently producing 400 million cubic feet per day.

The Zohr production will gradually ramp up to reach the plateau by the end of 2019.

"We are pleased to be working with Mubadala and welcome them into the partnership for the Shorouk concession," said Claudio Descalzi, Chief Executive of Eni.

"This represents a further signal about the strength and quality of this world-class asset developed by Eni," added Descalzi.

Mubadala was established in 2012 and is owned by the Government of Abu Dhabi in the UAE.

Musabbeh Al Kaabi, the CEO of Petroleum at Mubadala Investment Co. said it was an attractive long-term opportunity for his company.

"We are joining a strong partnership with Eni as operator, who have delivered the project in record time and with the full support of the Egyptian authorities," said Al Kaabi.

At the same time as it signed the agreement for the sale of the Egyptian Zohr stake to Mubadala, Eni also signed two concession agreements in Abu Dhabi. ■

Building the Energy Future through LNG

Chart LNG solutions are facilitating the use of natural gas as a safe, economical, clean-burning fuel alternative to diesel and other distillates for energy, transportation and industry.

www.ChartLNG.com
LNG@ChartIndustries.com

CHART®

Innovation. Experience. Performance.®