

LNG Unlimited

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BP LNG agreement with Oman can relaunch Arabian Peninsula output

FOB cargoes deal between Sultanate and UK major will target shipments
LNG Journal editor

The Sultanate of Oman, whose LNG liquefaction plant exports cargoes from the port of Sur on the Arabian Peninsula, Oman and BP sign agreement for LNG cargoes from rejuvenated Arabian Peninsula plant

Oman LNG said the agreement is for free-on-board (FOB) cargoes over a period of seven years starting immediately.

The country's three liquefaction Trains at the facilities near Sur are expected to be at full capacity for the whole of 2018 after suffering several years of domestic gas shortages.

Khazzan

However, the turnaround in LNG output is now underpinned by the 1.5 billion cubic feet per day of output from BP's new Khazzan natural gas project that came on stream in September 2017.

Khazzan output alleviated domestic gas concerns that had previously led to insufficient feed-gas being available for LNG exports.

The three Trains are now almost at full capacity of 10.5 million tonnes a year. Under the deal, BP will lift 1.1 million tonnes per annum, equivalent to around 18 LNG cargoes a year, or about 126 over the period.

"The new agreement will not only unlock additional reserves but will also sustain our LNG business," said Mohammed bin Hamad Al Rumhy, the Minister of Oil and Gas and Chairman of Oman LNG.

"The revenues from this transaction will benefit Oman's na-



LNG sales agreement is signed in Omani capital Muscat

tional economy and boost our gross domestic product and will also boost efforts towards In-Country Value (ICV) and Corporate Social Responsibility (CSR), all of which are significant drivers to the socio-economic fabric of the Sultanate," stated Al Rumhy.

Concern over meeting rising domestic demand prompted Oman LNG to announce in 2015 that it would have to divert its exported volumes from foreign markets and toward domestic consumers unless more gas was brought on stream.

The three liquefaction Trains come from the amalgamation of Oman's two previously separate operating companies, Qalhat LNG and Oman LNG, now run under one banner.

The Omani government allocates Oman LNG supplies from various gas fields.

The Chief Executive of Oman LNG, Harib Al Kitani, explained the benefits of the new accord with BP.

"This agreement is a game changer for Oman and Oman LNG where it will provide benefits for the Sultanate through the export of new volumes of feed-gas to customers in need of reliable, safe, clean energy," said Al Kitani.

"Another win is that the agreement will enable the plant to operate at full capacity and thus create more value.

"From the returns generated, Oman LNG can further invest in social projects and ICV opportunities enhancing the society of Oman at large," added Al Kitani.

"Our aim is to serve the community and contribute to all segments of the society through the exports of LNG," stated the Oman LNG CEO.

Alan Haywood, Chief Executive of BP Integrated Supply and Trading, said the UK-based company was pleased to expand its long-standing relationship with Oman LNG through the conclusion of this LNG SPA.

"Following the commencement of production from the Khazzan gas field, this development deepens BP's commitment to Oman and strengthens our support for the Sultanate's gas sector," added Haywood.

Oman produced its first shipment of LNG in 2000 after the first of a two-Train plant began operations under Oman LNG.

"With a third Train under Qalhat LNG, the fuel has played an even greater role in contributing to the national economy as the two companies, which integrated in 2013 and now operate as Oman LNG, have worked intensely to drive their organisations forward," the Omani statement said.

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LNG turbo-machinery provider Baker Hughes-GE is optimistic even as demand for plants is low

LNG Journal editor

Baker Hughes-GE, the LNG turbo-machinery provider and oil services company created in a merger six months ago by General Electric of the US, said in its fourth-quarter earnings that there was continued low demand for new LNG projects because of a lack of final investment decisions.

BH-GE said orders across its whole business amounted to \$5.8 billion for the quarter, down 2 percent year-over-year on a combined business basis as the company posted an operating loss for the three months of \$92 million.

Progress

"In the first 180 days as BHGE, we have made strong progress on our integration efforts and aligning our team to the priorities of growing market share, improving margins and generating more cash," said Lorenzo Simonelli, BH-GE Chairman and Chief Executive.

"We secured important customer wins in a market environ-



Simonelli is pleased with progress on the merger

ment that continues to be uncertain. Our team continues to execute on critical integration steps as planned, delivering approximately \$80 million of synergies in the quarter," added Simonelli, former CEO of GE Oil & Gas.

Simonelli said the company noted growth in its shorter-cycle businesses and declines in its longer-cycle businesses.

"For 2017 orders were \$22Bln on a combined business basis. Orders in Turbomachinery & Process

Solutions were up slightly versus 2016 despite the continued low demand for new LNG projects. We delivered revenues of \$21.9 Bln on a combined business basis," stated Simonelli.

"In our Turbomachinery & Process Solutions segment, onshore and offshore production driven demand is improving, however new LNG activity is muted as the market remains oversupplied.

"Downstream application driven demand continues to grow as re-

finery utilization increases and petrochemical demand rises," the CEO added.

The company said its Oilfield Services segment achieved solid growth driven by its well construction product lines in North America, the Middle East and Latin America.

"All product lines grew in North America, despite the rig count being down versus the third quarter.

"International activity remains muted with some pockets of healthy activity. The Asia-Pacific rig count saw an increase in the fourth quarter after having been flat much of the year, while Latin America increased steadily through the quarter.

"The Middle East held stable for the year as rig count growth in Iraq and the UAE offset declines in other markets," said BH-GE.

The company said that in its Oilfield Equipment segment, the subsea market remained challenging with low activity levels and pricing issues.

Rio Grande LNG project developer NextDecade names Schatzman as CEO as Eisbrenner becomes Chairman

NextDecade Corp., the US LNG portfolio company and developer of the Rio Grande LNG export plant in Texas, said Chief Executive Kathleen Eisbrenner was handing over executive leadership to former BG Group executive Matthew K. Schatzman while she would become Chairman.

Former Royal Dutch Shell senior LNG executive Eisbrenner founded the company in 2010. It eventually became NextDecade and is now listed on the Nasdaq stock exchange.

Analysts said the appointment of Schatzman puts NextDecade on the path of being transformed into a smaller version of the UK BG Group, which became a global LNG portfolio player before being taken over by Shell.

Schatzman was previously Executive Vice President, Global Energy Marketing and Shipping, and a member of the Group Executive Committee at BG, now part of Shell.

"Schatzman was responsible for the company's global marketing, trading, and shipping activities for LNG, crude oil, and natural gas and played a pivotal role in the success and growth of BG's LNG business, transforming it from a US market-focused business into a global leader in flexible LNG supply and trading," said NextDecade.

NextDecade said that it was agreed by Eisbrenner and the Board in 2017 that Schatzman was "the ideal person to serve as NextDecade's President and CEO and lead the company and its

major development projects" including Rio Grande LNG and its affiliated pipeline.

"I am proud of our achievements and the tremendous growth and development of our company since its inception in 2010," said Eisbrenner.

"We have assembled a world-class management team to commercialize our market-leading US LNG project and, after more than seven thrilling years as CEO, it is a perfect time to pass the baton to Matt's capable hands to lead NextDecade through its next phase of development," she stated.

"He is a deeply respected leader within our organization and throughout the global energy industry and, as Chairman, I look forward to supporting him as we

work to realize our vision of providing highly competitive LNG to customers around the world," added Eisbrenner.

Schatzman, who has almost 30 years of experience in the energy industry, said it was a privilege to succeed Eisbrenner as CEO.

"Her leadership has benefitted our employees and stockholders. On behalf of them all, I thank Kathleen for her commitment and vision that have positioned us as a leader in the next wave of US LNG projects," said Schatzman.

NextDecade intends to develop a portfolio of LNG projects, including the Rio Grande export plant at the port of Brownsville with capacity of 27 million tonnes per annum.

Singapore LNG indices are solid for spot and various cargoes

Singapore LNG cargo indexes for March were in the solid US\$9.90 per million British thermal units to US\$10.337 per MMBtu range before declining in April for spot market cargoes as well as North East Asia and for Dubai-Kuwait-India shipments.

The March Singapore spot LNG cargo index was at US\$9.908 per MMBtu, while the second half of March was quoted at a price of \$9.637 per MMBtu, before declining in the first half of April to \$7.970 per MMBtu.

Sling is an index series for LNG developed by the Singapore Exchange (SGX) and its subsidiary Energy Market Company (EMC).

The North Asia LNG March price was last at US\$10.337 per MMBtu and is seen declining to \$10.033 per MMBtu later in March and to \$8.369 in the first half of April.

The Dubai-Kuwait-India Sling March index is assessed in collaboration with London-based, inter-dealer global brokerage Tullett Prebon for regional cargoes shipped to India and the Middle East and was last at US\$10.013 per MMBtu.

The DKI index, based on a cargo of between 138,000 cubic metres capacity and 170,000 cubic metres, is seen declining in the second half of March to \$9.676 per MMBtu and in the first half of April to \$8.090 per MMBtu.

The SGX LNG Index Group (Sling) is an initiative by SGX and EMC for spot LNG price discovery. It is a benchmark based on assessments of LNG cargo value by market participants.

Participants provide assessments based on the value of an LNG cargo at a specific location for delivery.

Japanese LNG imports edge higher as costs rebound and sources widen

LNG Journal editor

Japanese liquefied natural gas imports ended the year with a rally after falling for four months as the world's largest importer took delivery of 83.63 million tonnes of LNG in 2017, though there were fewer shipments from traditional suppliers in Asia and the Middle East and more cargoes delivered from Australia and new supplier, the US.

Annual imports to Japan were just 0.4 percent higher than the 2016 total but with a reversal in costs.

Expense

Japan paid 19.3 percent more in 2017 for its LNG with 3,915 billion yen (\$35.58 Bln) of expenditure versus 3,281 Bln yen (\$29.81 Bln) in 2016 for its 83.34MT.

Thermal coal imports to Japan rose more than LNG with 114.5MT purchased, a rise of 4.3 percent over 2016.

LNG imports in December amounted to 7.95MT compared with 7.54MT in December 2016, a rise of 5.4 percent, according to the preliminary trade figures from



Japanese terminals handled LNG imports worth \$35 billion

the Japanese Finance Ministry.

LNG imports for November had amounted to 6.41MT compared with 7.54MT in November 2016.

Japan's nuclear power plants, numbering more than 50, were largely still offline in December with only four currently operating.

The Ministry data on 2017 LNG imports showed that Asian shipments from nations such as Malaysia and Indonesia, Papua New Guinea and Brunei dropped by 5.1 percent from 2016 to 25.17MT.

Imports from the Middle East region dropped 10.4 percent compared with the previous year. The shipments from countries like

Qatar, the United Arab Emirates and Oman totalled 17.59MT.

Annual Russian shipments from the Sakhalin Island plant in the Far East were down 3.4 percent at 7.6MT.

Imports from the US during the year from the Cheniere Energy-owned Sabine Pass plant in Louisiana amounted to 954,000 tonnes.

The balance of annual imports from other nations in the preliminary figures amounted to 32.65MT, with around 26MT coming from Australia and countries like Nigeria and from the spot market.

Chinese LNG imports rose by almost 35 percent with records surpassed

Chinese LNG imports in December rose by 34.8 percent to a monthly record of 5.03 million tonnes compared with the 3.73MT logged in December 2016, according to data from the General Administration of Customs.

The shipments to China's network of 16 import facilities surpassed the previous monthly record set in November 2017 of 4.05MT.

Chinese imports for all of 2017 were up 46.3 percent compared with the previous year to 38.13MT, also a record.

For the whole of 2016, China's LNG imports had risen by almost 33 percent to 26.06MT versus

20.02MT in 2015.

Chinese LNG imports had climbed by an even bigger margin in December 2016 by 77 percent to 3.73MT as cold weather and anti-pollution measures also led to more use of cleaner gas instead of coal.

The Customs data as well as shipping information showed that Australia and Qatar supplied the most cargoes to Chinese terminals.

Among China's import network, the Qingdao facility in the north-east province of Shandong received a steady flow of cargoes from Australia.

The owner of the Qingdao import terminal is Sinopec, a stake-

holder in the Australia Pacific LNG export plant in Queensland, operated by ConocoPhillips.

Other volumes of LNG arrived in the form of spot cargoes from many producing nations as well as contracted shipments from Western Australia.

These were shipped to China's cluster of import and regasification facilities in the southeast provinces such as Guangdong.

The LNG surge was spurred by a government-led campaign aimed at ending winter air pollution in the nation's largest cities and suppliers pointed their cargoes at China because of higher prices.

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NEWS NUDGES

Small LNG carrier named

The small-scale Ice Class 1A carrier, "Coral EnergiCE", was formally named at a ceremony in the Port of Turku in Finland. The 18,000 cubic metres capacity vessel had been delivered to its owner, Dutch shipping line Anthony Veder, by the Neptun Werft shipyard in Rostock, Germany. The "Coral EnergiCE" is specially designed and constructed to operate in the Baltic Sea. The vessel will be managed by LNG supply company Skangas, a subsidiary of Finnish natural gas company Gasum.

Oil Search hits output record

Oil Search, the Australian-listed company with a stake in the Papua New Guinea LNG plant and its expansion project, said its full-year production was 30.31 million barrels of oil equivalent, its highest ever. Oil Search said its fourth-quarter revenue was US\$389 million and the average realised gas and LNG price was US\$7.86 per million British thermal units. Managing Director Peter Botten commented: "ExxonMobil, on behalf of the PNG LNG project participants, completed its evaluation of proposals received for the additional 1.3 MTPA of LNG being marketed.

Further gas discovery

SDX Energy Inc., the oil and gas company focused on North Africa and whose shares are listed in London and Toronto, said it made another natural gas discovery at its Onz-7 development well on the Sebou permit in Morocco. The latest Moroccan gas find is relatively small in scale and the country is still planning to import LNG to supplement its growing energy needs.

Petronas says LNG deliveries unaffected by pipeline explosion in Sarawak state

LNG Journal editor

Malaysian energy company Petronas said LNG shipments from its Bintulu plant in Sarawak were unaffected by a gas explosion on the Sabah-Sarawak Gas Pipeline and customers would continue to be supplied.

"As a result of the incident, gas supply from the Sabah Oil and Gas Terminal to the Petronas LNG complex in Bintulu has been stopped to ensure the safety of the incident site," said Petronas.

Reliable

"However, gas supply to customers remains unaffected," it added.

"Petronas as a reliable LNG supplier, with no missed deliveries since 1983, will continue to uphold its commitment to its customers," stated the Malaysian company.

Petronas produces more than 28 million tonnes per annum of LNG from the onshore Bintulu plant where seven liquefaction Trains are now in operation.

Petronas explained that investi-



Malaysia's seven-Train Bintulu liquefaction plant

gations into the cause of the gas leak and explosion were ongoing.

"Petronas is working closely with the authorities and community to ensure safety at all times," it said.

This is the first mention of the incident by Petronas. The incident happened on January 10 and included an explosion on a section of the interstate gas pipeline in the northernmost district of Sarawak.

The blast happened at about 2am local time and the Malaysians

said no lives were lost in the incident.

In addition to operating the Bintulu plant, Petronas also owns the "PFLNG Satu" floating LNG processing hull that entered commercial service in early 2017 after being deployed over the Kanowit gas field offshore Sarawak.

The FLNG venture has nameplate capacity of 1.2 MTPA and was the first in the world to come on stream in commercial operations.

Bordeaux's LNG-powered dredger from French yard to work on estuary

The Atlantic Port of Bordeaux in Southwest France, which is spread over 100 kilometres of the Gironde River estuary, the largest estuary in Europe, has ordered an LNG-powered dredger from a French shipyard to work on the navigation channels.

The Bordeaux Port has ordered the dual-fuel dredger from the Socarenam Shipyard in the Channel Port of Boulogne sur Mer.

The Port's partner in the new-build order is GIE Dragages Ports, a state company that ensures dredging fleet management in France's seven main ports and is part-owned by the French Ministry of Transport.

"This will be the first dual-fuel newbuild vessel with LNG capabil-

ity built in France, excluding LNG carriers," they added.

With the dual-fuel engines, the dredger will be able to operate with LNG and Marine Light Diesel (MLD).

"This innovative and eco-efficient dredger will replace the grab hopper dredger "La Maqueline" in the summer of 2019," the companies said.

Bordeaux uses two dredgers at present to maintain the navigation channel and quaysides. The dredger "Pierre Lefort" was replaced in 2013 by the trailing suction hopper dredger "Anita Conti", and in 2017 a decision was made to replace "La Maqueline", a grab hopper dredger dating from 1984, by a water injection dredger.

After a European call for ten-

ders in 2017, the two companies awarded the contract to France's Socarenam shipyard.

The new LNG-powered dredger is to be called "L'Ostrea" and will have a service speed of 12 knots.

The vessel will be fully equipped with a specially designed dredging system, azimuth thrusters, dynamic positioning and a heavy lift crane.

The shipbuilding contract for the Boulogne yard contract is valued at 20 million euros (\$24.5M).

"It is also the opportunity for Socarenam to demonstrate its expertise in building this new type of vessel, a precursor to ships of the future with a lower environmental impact," the companies stated.

Australian LNG operator firm Santos surprised by speed of turnaround with jump in revenues

LNG Journal editor

Asia-Pacific LNG project stakeholder Santos reported record annual LNG sales volumes of 3.1 million tonnes, driving up its Australian and Papua New Guinea LNG sales revenues by 33 percent to US\$1.2 billion.

Santos said its total production was 57.5 million barrels of oil equivalent and sales revenue for 2017 increased by 20 percent to US\$3.1bn versus US\$2.59bn in the previous year.

Debt reduced

Santos also reported cost reductions and a revised picture on its corporate debts as revenue and production rose from the Exxon-Mobil-led PNG LNG project, the Darwin LNG plant operated by ConocoPhillips in the North Territory and the Gladstone coal-seam-gas-to-LNG plant in Queensland, operated by Santos itself.

"Darwin LNG sales volumes and production were higher than the previous quarter in-line with the delivery schedule," said Santos.

"During the quarter, PNG LNG continued to operate well above nameplate capacity at an annu-



Gladstone LNG plant annual output rose 15 percent

alised rate of approximately 8.3 million tonnes per annum," it added.

Gladstone LNG production rose 15 percent in 2017 to 5.2 million tonnes. During the fourth quarter, the plant reached a maximum day rate of 8.9 MTPA, 14 percent above nameplate capacity.

Santos explained that GLNG production and sales volumes were higher than the previous quarter primarily due to gas purchases from the nearby Queensland Curtis LNG plant, owned by Royal Dutch Shell, during a scheduled LNG plant shutdown in October.

Fourth-quarter LNG sales volumes amounted to 839,500 tonnes compared with 741,900 tonnes in

the same three months of 2016.

LNG sales revenue in the fourth quarter was US\$323M versus US\$270M in the 2016 quarter, a rise of more than 19 percent.

Average realized LNG prices for Santos were US\$7.33 per million British thermal units compared with US\$6.94 per MMBtu in the 2016 quarter.

For all of 2017 the average LNG price was US\$7.31 per MMBtu compared with US\$6.03 per MMBtu in 2016.

"Upstream unit production costs are down 5 percent to US\$8.07 barrels of oil equivalent and towards the lower end of guidance," the company said.

Santos said net debt had been

reduced to US\$2.7 billion at the end of 2017, down from US\$3.5 billion at the end of 2016.

Santos Chief Executive Kevin Gallagher said the turnaround strategy to deliver a low-cost, reliable and high-performance business had progressed in 2017 ahead of expectations.

"Santos is now a stronger, more resilient company with the capacity to execute and bring on-line growth opportunities across its core long-life natural gas assets," explained Gallagher.

Gallagher stated that LNG was a strong performer, particularly PNG LNG and the ramp-up of GLNG on Curtis Island.

"Santos's new operating model has set a disciplined framework to drive shareholder value as we seek to further reduce costs, build production and maximise operating cash flow," added Gallagher.

"In 2018, we will increasingly focus on the build and grow phases of our strategy as we progress growth opportunities in Northern Australia, PNG and Narrabri, and ramp-up drilling in the Cooper Basin and GLNG," said the CEO.

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PennEast wins approval to bring shale gas to East Coast

The US Federal Energy Regulatory Commission has approved the PennEast pipeline and issued its permits, saying there was a clear need for the infrastructure and that it could be operated safely and with minimal impact on the environment.

The five companies involved in the joint venture said it represented a \$1 billion investment for a 118-mile pipeline of 36 inches in diameter to help reduce energy costs and support thousands of jobs.

The pipeline will bring natural gas from the Marcellus Shale at a rate of 1 billion cubic feet of gas per day to customers in Pennsylvania, New Jersey and New York at a time of unprecedented applications with the US regulator for LNG projects and pipelines to monetize the shale boom.

The project will connect Luzerne County in Pennsylvania to the Trenton area of New Jersey, terminating at Transco's pipeline interconnection near Pennington.

The success of the pipeline project, when the final state approvals are in place, will help end natural gas shortages in the US Northeast during the peak winter season that previously required LNG supplies or Canadian gas to meet needs amid soaring prices.

The PennEast Pipeline has also been a focus for environmental and anti-fracking protesters versus supporters who are seeking the economic benefits of shale gas in terms of jobs and lower energy prices.

"FERC's approval process for pipelines is a stringent one, as it should be," said Stephen Westhoven, Chief Operating Officer at New Jersey Resources.

Alaska LNG expects progress on all fronts with regulators and partners

LNG Journal editor

Alaska Gasline Development Corp., the state body charged with the planning and construction of the Alaska LNG export project, said it had submitted its final responses to post-application data requests made by the US Federal Energy Regulatory Commission regarding the venture that has attracted huge interest from Asian buyers.

AGDC said it answered more than 800 questions on various aspects of its application submitted on April 17, 2017, to obtain a permit to proceed with the LNG plant and the associated pipeline from the North Slope resources.

Timetable

The state body said it was optimistic and expected the FERC would complete its analysis and soon publish a schedule outlining activities over the next year to develop a draft Environmental Impact Statement (EIS).

AGDC reached a final agreement at the end of 2016 with the North



AGDC's Meyer (right) previously briefed US VP Mike Pence

Slope resource owners BP, ExxonMobil and ConocoPhillips to take over technical and regulatory responsibility for the Alaska project.

Alaska LNG is an integrated gas infrastructure venture with three major components: a gas treatment plant located at Prudhoe Bay, an 807-mile pipeline to Southcentral Alaska with offtakes for in-state use and a natural gas liquefaction facility in Nikiski to export cargoes.

"AGDC's thorough and quick response to FERC's 801 data requests advances Alaska LNG closer to construction," said Keith Meyer,

President of AGDC. "On top of recent commercial agreements, it is a clear signal to the markets that Alaska LNG is on track to deliver energy stability at competitive prices by 2024-2025," added Meyer.

Alaska LNG in December 2017 signed an accord with Japanese utility and importer Tokyo Gas for the sale of cargoes as well as a commitment to explore other opportunities for the Japanese utility and city-gas company serving more than 11 million customers in the Greater Tokyo area.

Mexico plans to launch online natural gas trading platform in next quarter

Mexico, a recipient of US pipeline natural gas and LNG cargoes from nations such as the US, Nigeria and Peru, plans to launch an online gas trading platform by mid-2018 at the latest.

The plans were outlined in a speech by a senior executive of the state-owned grid operator, the Federal Electricity Commission (CFE).

Javier Gutierrez Becerril, Director of Operations at CFE Energy, said Mexico would also offer gas pricing points.

Mexico is currently an importer of LNG at its Altamira facility in the Gulf of Mexico and at Manzanillo on the Pacific Coast.

It takes cargoes from the

Sabine Pass plant across the Gulf in the state of Louisiana and from other nations. There is also a third import terminal at Costa Azul, north of the Pacific port of Ensenada.

In addition, there are multiple natural gas pipelines from the US and others are being built.

Becerril added that an efficient power market had to be backed up by strong and reliable natural gas pipeline transportation so that the CFE must have closer cooperation with Mexico's Natural Gas Control Centre, known as Cenagas.

"Before the end of the next quarter, we hope to have the online service operating, which we

have been working on for a year," said Becerril.

The executive said details were being finalized and would include the day-ahead pricing and monthly indexes available in other markets.

"We envisage a combination of everything and we will do it in a conventional way, flows-of-the-month and daily intra-day data. We're not trying to re-invent the wheel," he added.

He said there would be natural gas hubs and these were still subject to confirmation, though would include Hermosillo, Encino and La Laguna, all areas where several pipelines inter-connect.

Indian East Coast LNG import terminal planned by Hiranandani Group and Japan's K-Line

LNG Journal editor

Indian businessman Darshan Hiranandani and his H-Energy company is making progress on plans for a floating storage and regasification unit (FSRU) on the East Coast of India by signing a joint venture agreement with Japanese shipping company Kawasaki Kisen Kaisha, known as K-Line.

The Indian company said it envisaged an FSRU being deployed in the offshore Digga region of West Bengal to provide regasified LNG to customers in the Indian state and neighbouring Bangladesh.

West Bengal

The West Bengal facility would be among the first on the East Coast as all four of India's operating terminals are on the West Coast. Three of them are near Mumbai at Hazira, Dahej and Dabhol for use by importers Shell, Petronet LNG and Gas Authority of India respectively.

The fourth terminal is at Kochi in the southwest state of Kerala



H-Energy plans import project with Japanese FSRU

and is owned by Petronet.

The Hiranandani Group is one of the largest Indian companies with its main offices in Mumbai and Dubai in the United Arab Emirates.

While it started as a property investment business it has broadened its interests into other areas such as energy and power.

"We greatly value the relationship with K-Line and are happy that a global shipping company with vast experience in LNG shipping operations is part of our East

Coast LNG project," said Hiranandani, Chief Executive of H-Energy.

H-Energy will own 74 percent of the West Bengal venture and K-Line will hold the remaining 26 percent.

"Both the companies will further strengthen their relationship through collaboration in other areas such as LNG bunkering at major ports on the East Coast and West Coast of India and the supply of LNG ships for other projects," added the H-Energy CEO.

"These are currently under dis-

cussion and are expected to fructify shortly," added Hiranandani.

"All necessary studies related to navigation simulation, uptime assessment, mooring analysis and several others are underway to ensure the safe and smooth operation of the West Bengal project," he said.

"We have been able to achieve the key milestones of the project and expect to start commercial operations by 2020 with the unstinting support of the Government of West Bengal and the Ministry of Shipping and the Government of India," stated Hiranandani.

H-Energy has previously proposed an LNG import project at Jaigarh port near the West Coast city of Mumbai.

The company awarded an engineering, procurement and construction contract for a 60-kilometres pipeline from Jaigarh port to Dabhol, where one of the West Coast terminals is located.

Indian LNG imports rise year-on-year while increasing costs put pressure on purchases

Indian liquefied natural gas imports jumped in December as the total of deliveries for the fiscal year to date also increased along with prices and domestic natural gas output.

LNG imports for the month of December 2017 increased by 6.8 percent, amounting to 1.50 million tonnes of LNG (2.03 billion cubic metres of gas) versus 1.40MT (1.90 Bcm of gas) delivered to the country in the same month of 2016.

The cumulative imports of LNG for the nine months of the fiscal year from April through December amounted to 14.34MT of LNG, an increase of 3.4 compared with the previous fiscal-year total of 13.87MT.

Gross production of natural gas

in India increased 3.4 percent to 24.68 Bcm for the fiscal year to December versus 23.88 Bcm in the previous year, according to the figures from the Ministry of Petroleum and Natural Gas.

India paid 23 percent more for deliveries in the first nine months of the fiscal year. They cost US\$5.3 billion compared with \$4.3Bn in the same period of 2016-2017.

However, the LNG imports in December were lower than the previous month of November when the shipments had amounted to 1.91MT of LNG versus 1.49MT in November 2016.

Indian LNG imports could have been higher if East Coast destinations were available. A better

pipeline network nationwide is being developed as a government priority.

One Indian company, network operator Gas Authority of India (GAIL) will import more shipments in 2018 from the US and Australia, where it has long-term supply contracts now in force.

The three main operating terminals of Dahej, Hazira and Dabhol are all near Mumbai on the northwest coast of Gujarat state, while the limited Kochi facility is in the southwest state of Kerala.

India has plans to bring on line East Coast LNG terminals in the next couple of years and a more extensive natural gas pipeline network.

LNG volumes available to Indian companies have edged higher this year from Trains in Australia and the US in addition to regular supplier Qatar. More shipments are also coming from Angola, Nigeria and Equatorial Guinea.

Among the deliveries, the 217,000 cubic metres capacity Q-Flex carrier "Al Kharsaah" unloaded a cargo on December 9 at the Indian Dahej import facility near Mumbai from the Ras Laffan plant in Qatar.

The 160,400 cubic metres capacity carrier "Soyo" delivered a shipment on December 20 to Dahej, India's most used terminal, from the Angola plant in southwest Africa.

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