

LNG Unlimited

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LNG producer Oman gains time for strategy rethink after Khazzan start

BP-led tight gas field project will help nation overcome its immediate domestic gas concerns

Our Middle East editor

The Sultanate of Oman, a long-term LNG producer in the Arabian Peninsula and supplier of cargoes to Japan, South Korea and the spot market, has gained time to rethink its future strategy after BP started production at the giant Khazzan tight gas field and removed domestic gas supply concerns.

The Khazzan field will help the nation overcome domestic gas shortages that had led to doubts over future of LNG production.

Partnerships

"The start of production from Khazzan, BP's sixth and largest major project start-up so far this year, is an important milestone in our strategic partnership with Oman," said Bob Dudley, BP Chief Executive.

"With further development already planned, this giant field has the potential to produce gas for Oman for decades to come," stated Dudley.

The Omani Minister of Oil and Gas, Mohammed Al Rumhy, said the Phase One start-up of the Khazzan field was important.

"This will result in realizing more gas reserves and more production of gas that our country needs to support our energy planning and requirements," said the minister, who is also Chairman of Oman LNG.

Oman has been an LNG producer since 2000. Oman LNG is, owned by a consortium including the government, Royal Dutch Shell and Total, operates three liquefac-



Long-term contracts for Oman LNG run until 2025

tion Trains at the company's plant near the town of Sur on the Gulf of Oman.

Small stakes are also held by Korea LNG and Japanese companies Mitsubishi Corp., Mitsui & Co and Itochu Corp.

Unused capacity amounted to 1.9 million tonnes in 2016.

However, a total of 133 cargoes were loaded and revenue amounted to US\$1.92 billion for Oman LNG and Qalhat LNG's income was US\$855 million.

Feed-gas comes from the Central Oman Gas Field complex, operated by Petroleum Development Oman (PDO) on behalf of the Government along a 360-kilometre pipeline.

Long-term supply contracts run until 2024 and 2025 by which time new arrangements would have to be in place for feed-gas if LNG exports are to continue.

BP is not part of that LNG value chain as the Khazzan gas comes from another field location.

However, the PDO remains relatively optimistic about Oman LNG's future and in August signed a three-year partnership agreement to enhance technical and

commercial co-operation. Oman LNG last year exported a total of 8.12 million tonnes of LNG compared with 7.56MT in the previous year, an increase of 7.4 percent.

Oman consumes slightly more than 70 percent of the natural gas it produces. Natural gas is also becoming a key source of energy to the development of the Omani economy.

The concern over rising natural gas consumption prompted the Oman LNG company to announce in 2015 that it would eventually divert all its exported volumes of natural gas away from foreign markets and toward domestic consumers.

However, this aim could change as the Sultanate has also focused on diversifying its LNG export destinations with sales of spot cargoes outside its long-term cargo commitments to contract holders such as Japan and South Korea.

The Khazzan field is a tight gas formation and BP is developing two phases to access 10.5 trillion cubic feet of recoverable gas resources.

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Australian PM praises LNG plants for East Coast gas deal but slams Victoria for plan to import

Our Asia-Pacific editor

Australian LNG export projects in the state of Queensland led by Royal Dutch Shell, ConocoPhillips and Santos have assured Australian Prime Minister Malcolm Turnbull that they will boost natural gas supplies to the East Coast in 2018 to help avert an energy crisis.

Executives of Australian company Santos, operator of the Gladstone LNG plant on Curtis Island, from Origin Energy of the Australia Pacific plant and Shell, owner of the Queensland Curtis facility, appeared with Turnbull in Sydney after detailed talks when they gave their assurances.

Warning

However, the Prime Minister warned that the Australian states of Victoria and New South Wales will still face higher prices if the states don't allow access to their own natural gas resources by energy companies.

The commitments given by the GLNG, APLNG and QCLNG projects, who produce LNG from coal-seam gas transported by pipeline from the Surat and Bowen Basins



Three Curtis Island LNG plants have led to supply concern

of central Queensland, mean the federal government has no need to follow through on its threat to restrict LNG exports.

"They have stated that they will offer, as a priority, domestic customers any uncontracted gas in the future," said Turnbull.

The LNG production project shareholders have also agreed to report regularly to the competition and consumer regulators on sales, offers to sell and bids they've declined to buy natural gas supplies.

Turnbull said the LNG agreement was an important step that

will shine a light "on what has been a very opaque industry" to outsiders.

"That sunlight will ensure more gas at better prices for Australians," said the PM.

While Turnbull was pleased with the help extended by the LNG producers to avert gas shortages he said he would continue to encourage Victoria and NSW to unlock their onshore gas resources.

Queensland produces most of the gas for the East Coast, meaning the cost of transporting it to the southern states is paid for by consumers.

"The failure of Victoria and NSW to get their onshore gas resources developed means residents of NSW and Victoria and businesses in those states are going to continue to pay more for gas than they otherwise would," the PM stated.

"We strongly encourage the New South Wales Government to approve the development of the Narrabri Gas Project, for example, which will add over 58 petajoules of gas per year," said Turnbull.

"The sooner that is brought online the better. That is critical to the energy security of Australia, the energy security of this state New South Wales, which I might say imports about 95 percent of the gas it uses, so it needs to generate more gas," he said.

"Victoria is an even worse example, where the Labor Government under Daniel Andrews has prohibited the development of gas onshore and there are enormous onshore gas resources in Victoria, regardless of whether it's conventional or unconventional. That is extraordinary," he added.

Origin Energy raises US\$1.24Bln from asset sale to pay high costs of Australian LNG plant

Origin Energy, a major shareholder in the Australia Pacific LNG export plant, has sold its Lattice Energy subsidiary to Australian company Beach Energy for A\$1.58 billion (US\$1.24Bln) as it seeks to recover from the high costs of setting up the APLNG project in the East Coast state of Queensland.

As part of the sale, Origin has secured access to a significant portion of Lattice Energy's future East Coast natural gas production under long-term supply agreements to support its domestic gas business.

Origin, whose partners in APLNG include ConocoPhillips and Chinese energy company Sinopec, is Australia's largest gas and power re-

tailer and the Lattice sale is part of a restructuring under which it retains its APLNG stake as well as its entire energy markets portfolio.

Beach Energy is acquiring gas assets spanning the Otway, Cooper, Bass, Perth and Bonaparte basins of Australia, as well as interests in New Zealand's Kupe gas project and Canterbury Basin.

Origin will retain its 37.5 percent stake in APLNG and other assets including the Ironbark coal-seam gas field in Queensland and the Beetaloo shale prospect in Australia's Northern Territory.

Origin's Chief Executive Frank Calabria, who originally planned to spin-off the Lattice business, opted

instead for a straight sale to reduce the company's debt following high costs and asset write-downs at the US\$20Bln APLNG plant built on Curtis Island in Queensland.

"Proceeds from the sale will be used to pay down debt, putting Origin on track to reduce adjusted net debt to below A\$7Bln by 30 June 2018," the company said.

Beach Energy is based in the South Australian city of Adelaide, as is another Queensland LNG plant operator, Santos, one of the shareholders in the Gladstone LNG plant adjacent to APLNG on Curtis Island. Santos has also restructured to cope with its high LNG project debts.

The third LNG plant on Curtis Island is the Queensland Curtis plant, owned by Royal Dutch Shell. The three Queensland coal-seam-gas-to-LNG facilities cost a combined US\$60Bln to construct.

"In signing these agreements, we have delivered on our commitment to divest Lattice Energy consistent with our plan to simplify the Origin business, reduce debt and improve returns to shareholders," said Origin CEO Calabria.

"Importantly, Origin retains access to future Lattice Energy East Coast gas production to help us continue to meet the energy needs of our domestic customers."

South Korea launches plan for market share of LNG-fuel ships

South Korea has launched a government programme with shipyards, state institutions and banks to back the development of a class of large vessels with liquefied natural gas propulsion.

The Korean Ministry of Oceans and Fisheries is coordinating the design, planning and financing aspects of the new LNG-powered vessels to complement the leadership role Korea plays in building the carriers that deliver LNG worldwide.

It now is seeking its market share of the LNG fuel market as shipping companies try to meet stricter regulations such as Emission Control Areas and the International Maritime Organization's new 0.5 percent global sulphur cap on fuel content coming into force in 2020.

The government launched a task force in 2017 to develop the shipbuilding needs of the global marine transport sector seeking cleaner fuel such as LNG.

"This pilot programme is aimed at building the world's largest LNG-propelled ship, which is expected to pave the way for related industries to take root in the nation," said Kang Joon-Suk, the Vice Minister of Marine Affairs.

"We will expand support for LNG-powered vessels to help benefit the nation's overall marine industry," he added.

LNG-powered ships are considered an eco-friendly option to meet strengthened international regulations, though high costs have posed challenges for shipping companies.

"South Korean shipyards have outstanding expertise in building LNG carriers, LNG-fueled ships and bunkering shuttles but are still in the early stages when it comes to LNG-powered ships and bunkering infrastructure," said the Ministry.

Indian company Essar plans port development of medium-scale LNG

Our Asia editor

Essar Ports, the Indian company with established port terminal operations, said it was considering the development of up to four medium-scale liquefied natural gas import facilities on India's west and east coasts.

The company, part of the Essar Group with interests in the LNG-related ports and shipping sectors, has identified land on both coasts and plans to have two regasification facilities in the first phase and a further two terminals in a second phase of development.

Capacities

Essar said each LNG import terminal would have capacity ranging from 2.5 million tonnes per annum to 5 MTPA.

India's four current operating LNG import terminals are at Hazira, Dahej and Dabhol near Mumbai and at Kochi in the south-west state of Kerala.

The nation's two main terminals, Dahej and Hazira, were each first established with 5 MTPA of capacity before expanding.

Dahej is owned and operated



Essar is already an east and west coast port operator

by Petronet LNG and Hazira is operated by Shell India.

Essar aims to compete with both facilities and others planned around India where LNG and gas demand is increasing as the preferred clean-fuel alternative for power needs as well as transportation.

"We are adopting this cluster based approach for LNG instead of having one large terminal as the market is spread all over and hence, you need to go to the market rather than expect the market to come to you," said Essar Ports Chief Executive Rajiv Agarwal.

"Also, with low prices of LNG and increasing usage by automobiles and industries, the demand for this fuel is growing," he added.

Essar said it expected that each facility would cost up to \$300 million and it expected the first facilities to be established within the next 18 months.

Essar CEO Agarwal said the company was considering various locations, including Hazira and Salaya in the West Coast state of Gujarat where it already operates port facilities.

Merged Canadian firm to pursue project across border in Oregon

Veresen Inc., the Canadian energy company currently being acquired by Calgary-based Pembina Pipeline in an agreed US\$7.5 billion takeover, has formally re-applied to develop a US LNG export plant across the border in the US state of Oregon.

The project includes a liquefaction plant in Coos Bay in Oregon and a 370-kilometre pipeline that will bring natural gas originating in the US Rockies and the Canadian province of British Columbia from a southern Oregon hub to the plant.

Veresen Chief Executive Don Althoff said the new proposal submitted to the US Federal Energy

Regulatory Commission had undergone changes to overcome objections, including one that demand for the project had not been adequately demonstrated.

The new Jordan Cove venture has also dropped the construction of an affiliated 420-megawatt power plant and makes more than 50 pipeline route adjustments.

Veresen said it hopes to make a final investment decision on the project in 2019 and start shipping LNG in 2024.

The FERC is expected to issue a draft environmental impact statement early in 2018 with a further year of consideration of mitigation

and opposition, which in the past has been organized by anti-hydrocarbon industry activists.

The project will be pursued by the merged Veresen-Pembina combination with a combined capitalization of around US\$18Bln, bringing more expertise and investment to the project.

Veresen's main business at present includes a pipeline transportation business comprised of interests in the North American Alliance Pipeline, the Ruby Pipeline and the Alberta Ethane Gathering System, and a midstream business with assets in western Canada.

At the Core of LNG

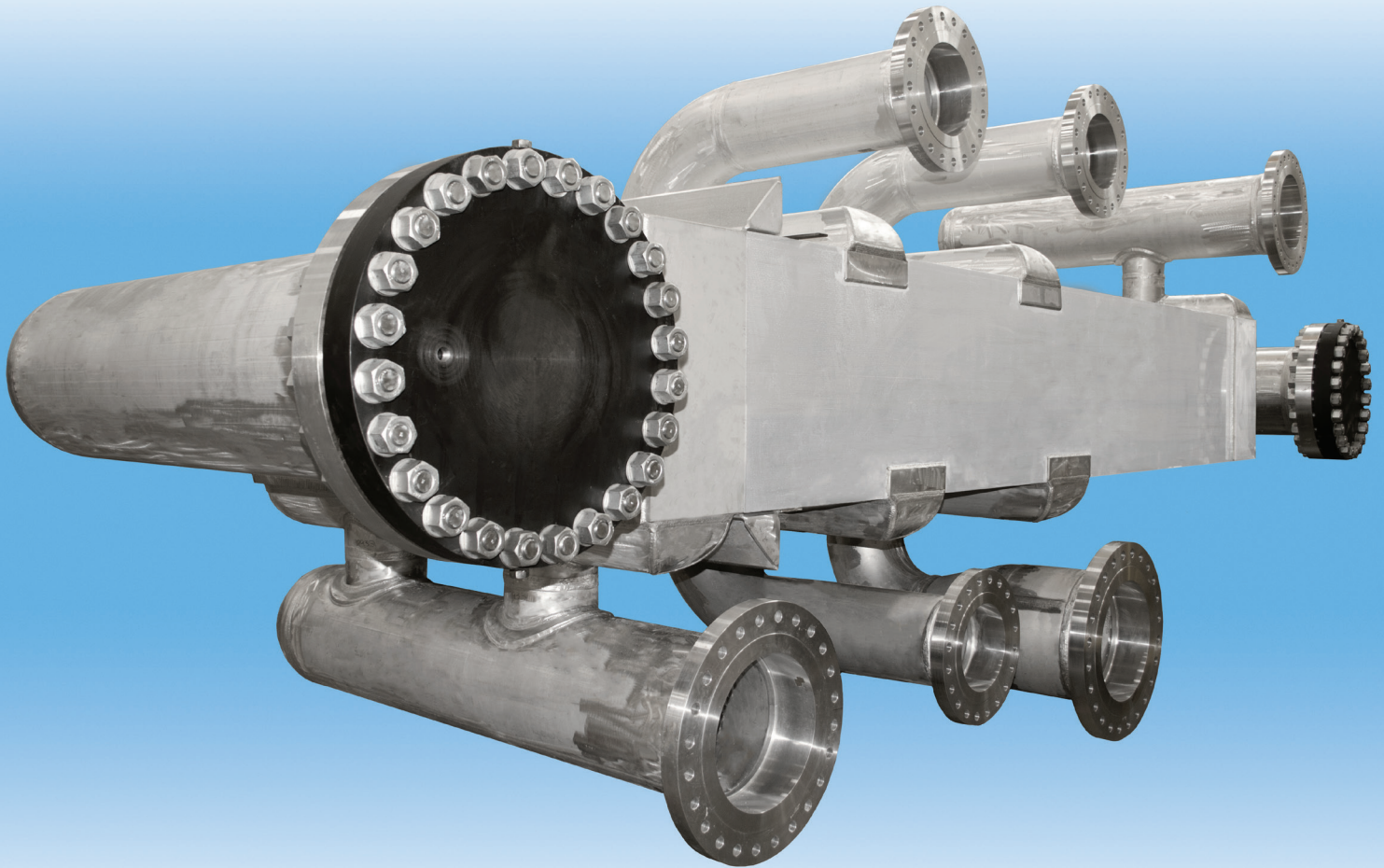


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NEWS NUDGES

Tangguh LNG expansion

Swiss electric power system maker ABB said it was selected by LNG project contractors in Indonesia to supply prefabricated electric substations for the Tangguh LNG expansion project. The engineering, procurement and construction group comprises Indonesia's Tripatra along with Chiyoda Corp. of Japan, Italy's Saipem and Indonesian firm Suluh Ardhi Engineering. The Tangguh expansion project will add a third processing Train and 3.8 million tonnes per annum of production, taking total plant output to 11.4 MTPA.

DNV GL promotion

European classification society DNV GL has named Liv Hovem as Chief Executive of its oil and gas business division, which provides integrated technical assurance and advisory services to operators, suppliers and regulators. She will be based at the DNV GL Oil and Gas headquarters in Hovik in Norway and be a member of the DNV GL Group's Executive Committee. Hovem succeeds Elisabeth Torstad, who has been appointed CEO of DNV GL's new Digital Solutions division. Commenting on her appointment, Hovem says: "I look forward to leading the oil and gas business in its next phase of development."

Cargoes for early October

The 177,000 cubic metres capacity "Spirit of Hela" will deliver a cargo on October 4 to the Yung-An import terminal in Taiwan from the Papua New Guinea plant near Port Moresby. The 138,375 cubic metres capacity "SK Splendor" will unload a cargo on October 6 at the South Korean Pyeongtaek import terminal, operated by Korea Gas Corp, from the Australian Gladstone plant in Queensland. ■

Singapore's Keppel and Shell Eastern complete first truck-to-ship bunkering

Our Asia-Pacific editor

Keppel Corp of Singapore and Royal Dutch Shell have completed the first liquefied natural gas truck-to-ship bunkering for a liquefaction and production vessel built at the Keppel shipyard for service offshore the West African nation of Cameroon.

Keppel said the LNG bunkering was carried out in batches from 22 July to 23 September with Shell unit Shell Eastern Petroleum for the Floating Liquefaction (FLNG) vessel, "Hilli Episeyo".

Progress

The operation marked the first LNG trucking operation for the Keppel-Shell venture called FueLNG.

It followed on from a maritime fueling involving the Singapore LNG terminal at Jurong Island when a successful gas-up, cool-down and reloading was performed for the Shell LNG bunkering vessel "Cardissa" before it left for its European base at Rotterdam in the Netherlands.

FueLNG said it was committed to building the LNG bunkering in-



FueLNG committed to building Singapore bunkering

dustry in Singapore and was working to provide safe truck and vessel bunkering solutions in the city-state.

"The development of proven LNG bunkering infrastructure will give confidence to the industry that LNG can be widely adopted as a marine fuel and is sustainable for the long-term," said Michael Chia, Chairman of FueLNG.

FueLNG added that it had also secured contracts from Keppel Smit Towage and Maju Maritime to provide LNG bunkering services for two dual-fuel LNG harbour tugs.

These contracts will commence in 2018 when construction of the

tugs is completed. To promote Singapore as an LNG bunker-ready port, the Maritime and Port Authority of Singapore (MPA) commenced its LNG bunkering pilot programme in 2017.

Under the programme, the Port has provided various companies with grants of up to S\$2 million (US\$1.5M) per LNG-powered vessel constructed.

"This successful operation by FueLNG attests to Singapore's ability to provide safe, efficient, and reliable LNG bunkering in the Port," said Andrew Tan, Chief Executive of the Port Authority. ■

France's GTT delays availability of its Mark V system over technical concerns

Gaztransport and Technigaz (GTT), the French LNG maritime storage technology company, said it had decided to re-validate some aspects of its Mark V tank system after the discovery of a technical concern.

"This may result in a delay in its general availability to the market," said GTT.

"GTT also recognizes that today's market conditions and LNG prices are not propitious to the general application of the current version of Mark V, considering the incremental cost of the system compared to GTT's other technologies.

"The company will, therefore, use this additional time to seek

improvements in the cost of this system," it stated, "while remaining fully confident" in the potential of the Mark V technology.

Philippe Berterottiere, Chief Executive of GTT, said the company was working with its customers who are considering using the Mark V tank.

"We are discussing the timing of the modification to this new system and other containment options, including our recently introduced Mark III Flex technology improved version," said the CEO.

Shareholders in GTT were not immediately concerned with the news and the stock was last up 0.4 percent on the Euronext stock ex-

change at 46.8 euros per share.

GTT recently posted a rise in net income as 13 new contracts contributed to the reconstruction of its order book with more activity in the sector for floating storage and regasification units.

Berterottiere had said that during the first half of 2017, in a challenging market, GTT had experienced "very robust" commercial activity.

The company said there were eight orders for LNG carrier tanks, including four from two South Korean shipyards, Hyundai Heavy Industries and Daewoo Shipbuilding & Marine Engineering. ■

Thais plan tender for second onshore import terminal after Mozambique supply deal signed

Our Southeast Asia editor

The state-run Thailand energy company PTT has signed an agreement to purchase 2.6 million tonnes per annum of LNG from a Mozambique project after securing a stake in the latest Malaysian production Train as it is also plans to have three import terminals operating by 2022.

PTT Exploration & Production (PTTEP) is the Thai company's main overseas operating unit and it has outlined its plans from 2017 to 2022 in a presentation to investors.

Decision time

The company said the Mozambique LNG production project is scheduled to make a final investment decision by the end of 2018.

A liquefaction and export joint venture is proposed for near the port of Pemba in the southeast

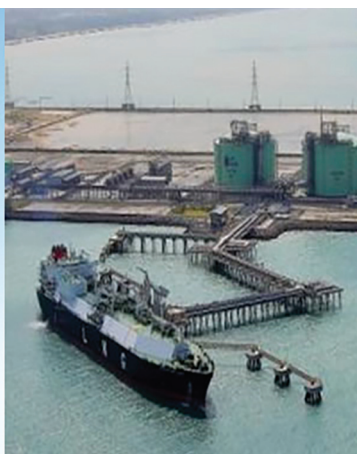


PTT plans additional facilities to back up Map Ta Phut

African nation led by Anadarko Petroleum of the US.

PTTEP holds an 8.5 percent stake in the Area 1 licence offshore Mozambique operated by Anadarko.

There are substantial recoverable resources in the Rovuma



Basin Area 1 amounting to around 70 trillion cubic feet of natural gas and initial development plans are for 12 million tonnes per annum of LNG from two onshore liquefaction Trains.

The Coral South floating LNG project is also being developed by

Italian energy company Eni and its shareholders in the adjacent Area 4 licence in the Rovuma Basin.

PTT said the Mozambique Gas Sales Agreement brings to 7.8 MTPA its expected volumes by 2022 and with more deals planned.

The Thai company already has long-term purchasing contracts for a combined 5.2 MTPA with Qatar-gas, Royal Dutch Shell, BP of the UK and Petronas of Malaysia.

PTT has a 10 percent investment in the newest Train 9 constructed at the Malaysian LNG plant at Bintulu in Sarawak.

The Train has 3.6 million tonnes per annum of capacity. The other shareholders are Malaysia's Petronas and JX Nippon of Japan.

Thailand began LNG imports at its first regasification terminal at Map Ta Phut, near Bangkok, in 2011.

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Italian class society to validate Eni FLNG project

Registro Italiano Navale (Rina), the Italian maritime classification society, said it was chosen by Italian energy company Eni to certify the design and fabrication of subsea structures and equipment for the Coral South floating LNG project offshore the southeast African nation of Mozambique.

Rina said it would also provide technological validation services for the Italian-led project's FLNG unit that will be deployed over natural gas fields in the Rovuma Basin.

The FLNG production hull will be one of the only three existing globally and will be installed in the South Part of the licence block known as Area 4.

"The Coral South LNG project, with its size, quality of resources and geographical position is expected to boost Mozambique's economy," said Rina.

Discovered by Eni in 2012, the Coral natural gas field contains around 16 trillion cubic feet, or 450 billion cubic metres.

The first phase of the Coral field development will involve 5 Tcf of gas and production is expected to begin by 2021.

The FLNG hull will have a production capacity of around 3.4 million tonnes per annum of LNG.

The Coral South FLNG project is the first of its kind for the Italian oil major and is "breaking technical new ground".

Venture Global to supply Italy's Edison with Louisiana cargoes

Our North America editor in New York

Edison, the Italian utility owned by Electricite de France (EDF) and a capacity holder in the Adriatic LNG import terminal, has signed an agreement to receive 1 million tonnes per annum of shipments from a US export plant proposed for Calcasieu Pass on the Gulf Coast of Louisiana.

The US liquefaction plant is expected to come on stream in 2021 and is one of two facilities being developed by Washington DC-based company Venture Global.

FOB cargoes

Under the Sales and Purchase Agreement, Edison will purchase the LNG shipments on a free-on-board (FOB) basis for a 20-year term whereby the Italian utility provides its own shipping.

The Calcasieu Pass plant will be located on a 1,000-acre site at the intersection of the Calcasieu Ship Channel and the waters of the Gulf of Mexico.



Edison, owned by EDF, secures more gas for power plants

Venture Global is currently in the US regulatory process to construct two liquefaction plants to produce a combined 30 MTPA. The second facility is at Plaquemines on the Mississippi River.

LNG buyer Edison provides about 20 percent of Italy's natural gas imports through long-term agreements for pipeline gas from Algeria, Libya and Russia and LNG volumes from Qatar.

Edison is the second-largest integrated energy company in the Italian market after Enel and has been owned by the French energy company and utility EDF since 2012.

Venture Global's Calcasieu Pass plant is expected to produce 10 MTPA of LNG when on stream. In July 2017 it appointed CB&I, the US energy engineering company, to construct two LNG storage tanks at the Calcasieu Pass site.

The facility's design will use a liquefaction system with mid-scale modular Trains driven by electric motors to achieve optimum efficiency and reliability.

Venture Global's Plaquemines project is planned for 630 acres of land near river mile-marker 55 on the west side of the Mississippi, 30 miles south of New Orleans.

Israeli Tamar gas field in East Med restarts after pipeline is repaired

The Israeli Tamar natural gas field in the Eastern Mediterranean, the region's main competitor to LNG and owned by Noble Energy of the US and Israeli companies including the Delek Group, has restarted production after a five-day shutdown caused by a pipeline fault.

The Tamar platform, which began production in 2013, is located 20 kilometers offshore the Israeli city of Ashkelon.

The Tamar field supplies most of its gas by pipeline to Israel, though also supplies Jordanian customers.

Delek said that the fault came to light on September 22 during preparations for upgrade work on the Tamar platform and has now been repaired.

The Tamar project's owners said the temporary shutdown of the field would have little impact on revenues and company earnings.

"The partnership announces that the flow of natural gas was recommenced from the Tamar field after the operator completed the repair of the fault," said a statement from Delek.

"It should be noted that the operator (Noble) is continuing to carry out the planned upgrade works.

"According to the partnership's estimates, that the costs of repair of the fault and its impact on the partnership's revenues from sales of natural gas are not material," added the statement.

The fault was a crack in the

emission pipe used to release natural gas and pressure from the platform routinely and in emergencies.

After the fault was discovered routine safety procedures kicked in and the supply of natural gas from the Tamar reservoir to the platform was stopped in a controlled manner.

The owners of more than 90 percent of the Tamar field are Noble Energy, Delek and its subsidiaries and Israeli energy company Isramco Negev.

Tamar has more than 11 trillion cubic feet of reserves in place and supplied 2.5 billion cubic metres to Israeli and Jordanian customers in the second quarter.

Sovcomflot, Rosneft and partners advance with LNG-fueled tanker plans and bunkering

Our Europe editor

Russian fleet owner and operator Sovcomflot along with oil company Rosneft and the country's new Zvezda Shipbuilding complex have signed a set of agreements that entail the construction of five Aframax tankers with LNG propulsion that will also lead to infrastructure development to allow ships to be bunkered with LNG fuel at Russian ports.

The 114,000 tons deadweight vessels will be built by Zvezda jointly with Hyundai Heavy Industries of South Korea, the world's leader in Aframax construction and the technology partner of Zvezda.

Into service

The new vessels are due to enter service from the beginning of 2021 and will enable the export to global markets of Russian crude oil and petroleum products.

The LNG-fueled tankers will have an ice class of 1A/1B standard, sufficient to ensure safe year-round operations in regions with challenging ice conditions, including the Baltic Sea and sub-arctic seas.

The new Zvezda yard is owned by a consortium, including Rosneft, its natural gas subsidiary



Executives of Sovcomflot, Rosneft and Zvezda Shipbuilding

Rosneftegaz and the banking unit of gas company Gazprom.

The Zvezda complex is part of an expansion to the existing Zvezda shipyard owned by United Shipbuilding Corp. in the town of Bolshoi Kamen.

The Far Eastern Shipbuilding and Ship Repair Center (FESRC) is developing the Zvezda shipbuilding complex in Russia's Far East as part of the development works to organize domestic shipbuilding in the North-West, Far East and South regions.

Sovcomflot said it would operate the LNG-fueled tankers, first supervising their construction and then providing a range of services to ensure the effective and safe management of the vessels, including the recruitment of crews and their management.

"This series of tankers heralds

a new generation of merchant vessels with higher environmental safety standards.

"They are purpose-designed to use LNG as their primary fuel, which significantly reduces their environmental impact.

"The vessels were designed to comply with most stringent international Sulphur-oxide, nitrogen-oxide and carbon-dioxide emission standards, governed by new International Maritime Organization regulations that are scheduled to come into effect from 2020 and will apply, amongst other areas, to the Baltic and North Seas," explained Sovcomflot.

The technical specification of the new tankers was designed by SCF's specialists, with the close involvement of the FESRC.

Also part of the agreement is the Russian State Transport

Leasing Company. "On the global market, Sovcomflot has a strong reputation as a world-class operator of large-capacity tankers, as well as platform supply vessels, and we remain the world's No. 1 operator of Aframax tankers, which comprise over one-third of its fleet," said Sergey Frank, President and Chief Executive of Sovcomflot.

"Sovcomflot welcomes the further expansion of mutually beneficial cooperation with Rosneft, Russia's largest oil exporter. SCF Group is already operating three Rosneft-owned ice-class 30,000 DWT tankers (RN Arkhangelsk, RN Murmansk, and RN Privodino), all of them transporting oil and petroleum products across the Baltic Sea and in the Arctic," added Frank.

"We welcome the commitment of Zvezda to a project that exceeds the highest technical requirements of the market.

"We hope that the beginning of serial production of cutting-edge large-capacity LNG-fueled tankers in Russia will facilitate the further development of Russia's port infrastructure that will allow ships to be bunkered with LNG fuel at Russian ports," stated Frank.

Hyundai shipyard receives biggest Korean order for five years for 10 LNG-ready ships

Hyundai Heavy Industries of South Korea, the world's largest shipbuilder by orders, said it received its biggest order for five years in signing a contract to build 10 very large ore carriers to an LNG-ready design for Korea's Polaris Shipping line.

The ships, measuring 340 metres in length, will be designed to be readily converted to use LNG as a fuel to meet tougher environmental regulations.

Hyundai said it had previously received a total of 20 orders to build vessels for Polaris Shipping

and had delivered seven, including four 250,000-ton large ore carriers ordered in 2013.

During 2017, Hyundai said it had received a total of 99 ship orders worth \$5.8 billion, which is five times more than the same period last year.

Hyundai said the LNG-ready VLOCs would also be equipped with a ballast water treatment system and desulfurization scrubbers. The vessels are scheduled to be delivered by 2021.

The basic LNG-ready notation verifies that a vessel is compliant

with relevant rules in terms of its overall design for future LNG fuel operations and that the main engine can be easily converted to operate on gas.

Hyundai said the order was worth \$800 million and each ship would be 325,000 tons deadweight when delivered to Polaris Shipping, a prominent operator in the domestic dry-bulk market.

"The contract is the largest single order in the last five years since HHI received an order of 10 large-sized containerships from a Greek shipping company

in 2012," the Korean shipbuilder said.

The contract signing ceremony was held at Hyundai's office in the Korean capital, Seoul.

The signatories were Chung Ki-Sun, Executive Vice President of the Corporate Planning Office at HHI and Kim Wan-Jung, Chief Executive of Polaris Shipping.

"Even under unfavorable market conditions, we have proven our competitiveness with the biggest order in five years," said Hyundai.

Qatar and Bangladesh sign long-awaited deal for floating import terminal in Bay of Bengal

Our Middle East editor

Qatar has signed a 15-year liquefied natural gas supply agreement with Bangladesh to supply the Asian nation with 2.5 million tonnes per annum of LNG at its planned floating storage and regasification unit in the Bay of Bengal.

The agreement was signed in the Qatari capital Doha between Hamad Mubarak Al-Muhannadi, Chief Executive of Qatari liquefaction company RasGas and Abdul Mansur Faizullah, Chairman of Bangladesh Oil and Gas Corp. (PetroBangla).

FSRU first

RasGas said it marked the company's first ever long-term supply accord for regular deliveries destined for an FSRU. RasGas produces the fuel at the Ras Laffan complex in the Gulf state with parent company Qatargas.



Signing ceremony for agreement was in Qatari capital Doha

The PetroBangla FSRU will be deployed at Moheshkhali Island in Bangladesh.

The Moheshkhali terminal will include an FSRU with 138,000 cubic metres of LNG storage capacity supplied by Excelerate of the US and the installation of a subsea buoy system anchored offshore.

The Bangladesh project is backed by the World Bank and the terminal will enable PetroBangla to increase natural gas supply in the country by up to 20 percent, sufficient to support up to 3,000

megawatts of gas-fired power generation capacity.

"The agreement with Petrobangla asserts RasGas's continued commitment to ensuring energy security to its customers in Asia, as well as its position as a reliable supplier of LNG, a cleaner, more efficient source of energy," said RasGas.

The Doha signing ceremony was also attended by Mohammed bin Saleh Al-Sada, Qatar's Minister of Energy and Industry, Bangladesh State Minister Nasrul Hamid and Saad Sherida Al-Kaabi, the Presi-

dent and Chief Executive of Qatar Petroleum.

"Reliable access to energy plays a vital role in driving socio-economic growth and RasGas has fulfilled our promise to safely and reliably provide this access for more than two decades," said Al Muhannadi.

"Bangladesh has very ambitious growth plans and this landmark partnership between our two countries will support Bangladesh as it strives to achieve its 2021 and 2040 development goals," he stated.

Petrobangla Chairman Faizullah said Bangladesh under Prime Minister Sheikh Hasina has increased economic growth and is striving to ensure energy security.

"LNG would play a vital role in the growth of the Bangladesh economy, and we are happy to enter into this historic partnership with Qatar, a long-trusted friend," said Faizulla.

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