

Woodside set to supply cargoes to new Australian LNG terminal

Viva Energy's proposed regasification facility is at the Geelong refinery in southern state of Victoria

LNG News Editor

Woodside, the operator of two liquefied natural gas export plants in Western Australia, has signed an accord which could enable Woodside to supply LNG to the East Coast market through Viva Energy's proposed regasification terminal at Geelong in the southern state of Victoria.

Woodside and Viva Energy, the refinery operator and leading supplier of Shell fuels in Australia, have entered into a memorandum of understanding to progress discussions on capacity rights at the LNG terminal at the site of Viva Energy's Geelong oil refinery.

Discussions

"Under the terms of the MoU, Woodside will discuss with Viva Energy the opportunity to acquire regasification capacity usage rights at the terminal to regasify LNG," said a statement.

"This could help underpin the Gas Terminal Project as a key infrastructure solution to address the expected gas supply shortfall in the East Coast Australian market from the mid-2020s, and support the National Electricity Market's transition to lower-carbon energy," the companies added.

In addition, Viva Energy said it signed a Heads of Agreement with Höegh LNG to charter a floating storage and regasification unit (FSRU) for the proposed Geelong Gas Terminal.

Melbourne-based Viva Energy said Höegh LNG was an industry leader in FSRU import solutions



Terminal will be near Geelong refinery in Victoria state

and currently operates a fleet of 10 FSRUs and two LNG carriers.

"The HoA sets out a framework and key terms for the negotiation of a binding Time Charter Party (TCP) agreement and is a material step in the delivery of the Viva Energy Gas Terminal project, confirming an FSRU provider for the project," added Viva Energy.

Viva Energy's existing LNG regasification terminal partners are Engie Australia & New Zealand, Mitsui & Co. of Japan and global commodities firm Vitol.

The Woodside-Viva Energy accord outlines terms for ongoing discussions of a capacity rights agreement at the LNG terminal, which subject to definitive agreements and approvals, would enable Woodside to supply LNG and to regasify it at Geelong.

"The MoU provides a framework and timeline to negotiate binding regasification capacity commitments, which are targeted to be executed following Woodside and Viva Energy approvals and are subject to a final investment decision," said the companies.

Woodside will work together with Viva Energy in the project on an exclusive basis in relation to LNG regasification terminals in southeast Australia.

Subject to regulatory approvals, Viva Energy is planning to take a

final investment decision to proceed with the project by the third quarter of 2022.

Woodside Chief Executive Meg O'Neill welcomed the collaboration with Viva Energy on potential LNG supply from Woodside's portfolio of the North West Shelf and Pluto liquefaction and export plants supplying Asia with cargoes.

"Our MoU with Viva Energy presents an opportunity for Woodside to supply reliable, cost-competitive LNG from our Western Australian projects and global portfolio into the East Coast gas market, which is predicted to face a shortfall in coming years," added O'Neill.

"Working to secure regasification capacity at Viva Energy's proposed import terminal aligns with Woodside's future production profile and the ongoing needs of East Coast Australian customers for reliable, lower-carbon energy sources," she added.

Viva Energy CEO Scott Wyatt said he was very pleased to be making progress in the talks with Woodside.

Experience

"Woodside's experience and capability in LNG supply, shipping, terminals and international gas markets will assist us in progressing the Gas Terminal Project," stated Wyatt.

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QatarEnergy signs yet another Chinese supply deal and this time with China's S&T International

LNG News Editor

QatarEnergy is continuing to build the company's Chinese sales portfolio with yet another Sale and Purchase Agreement, this time with China's S&T International Natural Gas Trading Co. for the supply of 1 million tonnes per annum over a 15-year period starting in late 2022.

"This agreement marks further expansion of our customer base in the People's Republic of China, which can count on Qatar as a trusted and reliable energy partner," said Saad Sherida Al-Kaabi, the President and Chief Executive of QatarEnergy.

Welcome

"We are pleased to welcome S&T into our family of long-term LNG customers and we are excited to work with them to help fulfil their long-term LNG requirements," added Al-Kaabi.

QatarEnergy said the LNG deliveries under the SPA would allow S&T to receive its volumes from Qatar's fleet of vessels, primarily



CEO Al-Saadi says China now a major Qatar customer

at the Tangshan import terminal located in Caofeidian Port in northeast Hebei Province.

The Chinese volumes would be produced at the Qatar Liquefied Gas Company (II) project at Ras Laffan.

QatarEnergy had disclosed on December 7 that it had signed an SPA with Guangdong Energy Group based in southern China for the supply of 1 MTPA of LNG over a 10-year period starting in 2024.

With the conclusion of the S&T deal and the Guangdong Energy agreement, China will be supplied with around 17.5 MTPA of LNG

from Qatar under long-term SPAs.

Deliveries under the Guangdong Energy SPA would be made to the Dapeng and Zhuhai receiving terminals on the Pearl River Delta.

Al-Saadi said that China was considered a major customer for the State of Qatar and a strategic partner in the energy sector.

Other supply deals with China have been previously arranged, though a landmark accord was reached in September 2021 when QatarEnergy signed an SPA with China National Offshore Oil Corp. for the supply 3.5 MTPA over a

15-year period starting in January 2022.

That SPA was signed during a virtual ceremony involving Al-Kaabi and Wang Dongjin, the Chairman of CNOOC.

QatarEnergy signed a previous deal in July 2021 in the form of 10-year SPA with Shell for the supply of 1 MTPA of LNG to China.

QatarEnergy is in the midst preparations for LNG expansion and its various projects, including the North Field South venture, will cost around \$35 billion spread over the next five years, though the Qataris will have several equity partners from the energy majors and whose names have yet to be disclosed.

The expansion of output at the Ras Laffan LNG plant will comprise the construction of four Trains for liquefaction to take the Arab Gulf state's output from 77 MTPA up to 110 MTPA.

Qatar is additionally considering boosting capacity beyond 126 MTPA with a future second expansion already announced.

COSCO Shipping Energy of China orders three LNG newbuilds and gives ship purchase details

COSCO Shipping Energy Transportation of China has ordered three liquefied natural gas newbuilds from Hudong-Zhonghua Shipbuilding of Shanghai to take its future fleet numbers up to 44 LNG vessels.

COSCO gave details in a statement to the Hong Kong stock exchange of the payments plans for the vessels and delivery dates.

The company said that the combined price of the three vessels would be \$554 million.

"The board is pleased to announce that on 7 December 2021, 'United Auspicious LNG', 'United Peace LNG' and 'United Success LNG' (each being a wholly-owned subsidiary of United Liquefied Gas

Shipping, an indirect non-wholly-owned subsidiary of the Company) entered into the shipbuilding contracts with Hudong-Zhonghua Shipbuilding and China Shipbuilding Trading," added the statement.

The indirect non-wholly owned subsidiary of COSCO, United Liquefied Gas Shipping, is owned 81 percent by the company and the 19 percent balance is held by PetroChina International.

COSCO currently has an LNG fleet of 41 LNG carriers in total, of which 38 are in operation with a shipping capacity of 6.42 million cubic metres.

COSCO noted that its LNG shipping projects involved two subsidiaries, COSCO Shipping LNG

Investment (Shanghai), a wholly-owned subsidiary, and China LNG Shipping (Holdings) of which COSCO has a 50 percent stake.

Costs

The newbuilds just ordered each have capacity of not less than 174,000 cubic metres and guaranteed deadweight of 80,000 metric tons at design draught each.

"Pursuant to the shipbuilding contracts, the consideration for each of the vessels is approximately US\$185 million," said COSCO.

"The price of each of the vessels is payable in four instalments of 10 percent, 10 percent, 10 percent and 70 percent, respectively

based on the shipbuilding progress," added the company.

COSCO said that the fourth instalment of 70 percent could be adjusted to take account of certain issues such late delivery and performance deficiencies of the vessels.

The company said the cost of the three newbuilds would be funded by the group with 80 percent bank borrowings and around 20 percent from financial resources.

"The delivery of the three vessels is expected to take place on a date no later than 30 September 2024, 31 December 2024 and 31 March 2025, respectively," the statement concluded.

FERC opens way for delays on LNG front

The Federal Energy Regulatory Commission (FERC) has appointed a new Commissioner, Willie L. Phillips, who has been sworn in and now takes the agency to its full complement of five sitting members.

Phillips was nominated by President Joe Biden in September 2021 and confirmed by the Senate in November.

He replaces Republican Neil Chatterjee for a term expiring on June 30, 2026, and gives the left-wing Democratic Party a 3-2 FERC majority.

"He most recently serving on the Public Service Commission of the District of Columbia (DC), where he has been chairman since 2018 and a commissioner since 2014," said FERC.

"Before being appointed to the DC commission, Phillips served as the assistant general counsel for the North American Electric Reliability Corp.," added the statement.

"He has also worked as a private lawyer, advising clients on regulatory compliance and policy matters and assisting in litigation and administrative proceedings at both the federal and state levels," it added.

Phillips was awarded a doctorate from Howard University School of Law and a bachelor of science from the University of Montevallo in Alabama.

With Phillips officially sworn in, FERC will now move ahead and use its 3-2 majority to pursue FERC Chairman Richard Glick left-wing agenda.

Glick has pushed for change at the agency on a number of issues, including greenhouse-gas emission regulations and what the left-wingers call "environmental justice" in which they take any term and add the word "justice" to the end.

JERA secures stake in Barossa gas field to supply Darwin LNG plant

LNG News Editor

JERA Co. Inc., the largest Japanese LNG buyer and power asset holder, said it would invest in the Barossa natural gas field offshore northwest Australia to underpin production at the Darwin LNG export plant.

JERA concluded an equity purchase agreement with Australian energy company Santos, the Darwin LNG plant operator, for a 12.5 percent stake in the gas field offshore Australia's Northern Territory.

Acquisition

"As a result of this acquisition, JERA will participate in the project to develop a successor gas field for the Darwin LNG project in Australia," explained JERA, which gave no details of the value of the deal.

JERA said it would receive about 425,000 per annum of LNG from the project, the equivalent to its equity stake in the Barossa gas field.

"Securing a stable supply of competitive LNG is becoming increasingly important," declared JERA.



Japanese firms have received Darwin supplies since 2006

"Because the Barossa gas field is medium-sized, and existing facilities such as the Darwin LNG project's liquefaction plant, an LNG storage tank, and jetty can be utilized, the project enables JERA to secure highly competitive LNG with extremely low development risk," it added.

The Tokyo-based company has participated in the Darwin LNG project since 2003 and when it was first operated by ConocoPhillips before the US major sold its stake to Santos.

"The project has produced LNG at the Darwin liquefaction plant using natural gas supplied from the Bayu-Undan gas field, located

in waters off Timor-Leste, and has contributed to the stable supply of LNG for approximately 15 years since production began in 2006," said JERA.

"Production at the Bayu-Undan gas field is expected to end within a few years. Development of the Barossa gas field as a successor to supply feed gas to the Darwin LNG liquefaction plant is now underway," it added.

The project will develop the Barossa gas field and link it by pipeline to the Darwin liquefaction plant for LNG production, which is expected to start around 2025.

Santos-Oil Search energy and LNG merger sees new shares trading

Final shareholder and court approvals were obtained for the US\$6.25 billion merger of Papua New Guinea-based energy company Oil Search and Adelaide-based Santos to create a major Asia-Pacific energy player.

The all-share transaction brings together LNG and other energy assets in PNG, in the Timor Sea, in the Australian state of Queensland and in Alaska.

Under the deal Oil Search shareholders will own around 38.5 percent of the merged entity and Santos shareholders will own 61.5 percent.

Oil Search's own shareholders

on the 7th of December voted to accept the proposed merger.

"In summary, the resolution to approve the scheme, as set out in the Notice of Meeting, was approved by the requisite majority of Oil Search shareholders with 95.07 percent of votes cast in favour," said a statement.

Oil Search had also applied to the PNG Court for orders to be issued on December 9 approving the merger.

Oil Search applied for its shares to be suspended from trading on the PNG stock exchange and the Australian Securities Exchange with effect from the, the

10th of December 2021.

New Santos shares for the combined company are set to commence trading on the ASX on a deferred settlement basis on December 13 and on an ordinary settlement basis on December 20.

Both companies have said the transaction represents an attractive combination of two industry leaders to create a regional champion.

The merged group will be the biggest stakeholder in the PNG LNG plant, located northwest of the capital Port Moresby and operated by ExxonMobil.



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Höegh LNG merger

Höegh LNG Holdings is planning to buy all the publicly held common units of New York-listed Höegh LNG Partners to combine both entities. "The Board received an unsolicited non-binding proposal from Höegh LNG Holdings pursuant to which Höegh LNG would acquire through a wholly owned subsidiary all publicly held common units of the Partnership in exchange for \$4.25 in cash per common unit," said Höegh LNG Partners. Höegh LNG has proposed that a transaction would be in the form of a merger between the Partnership and a subsidiary of Höegh LNG.

US LNG fuel barge

Fincantieri Bay Shipbuilding, based in Wisconsin near the Sturgeon Bay Ship Canal and Lake Michigan, has delivered the LNG bunkering barge "Clean Canaveral" to US NorthStar Midstream's subsidiary Polaris New Energy. The latest US bunkering barge has 5,400 cubic metres of capacity and will refuel LNG-powered vessels at ports in Florida. The LNG fuel will be sourced from a small-scale liquefaction plant near the port of Jacksonville.

Burckhardt expansion

Swiss LNG-equipment firm Burckhardt Compression has strengthened its service business in the maritime and petrochemical industry with expansion into the LNG port of Rotterdam in the Netherlands. Burckhardt said it signed an agreement to acquire 100 percent of the shares in Mark van Schaick BV. "The company has more than 20 years of experience in machining and is a leader in servicing complex repairs such as crankshafts," explained Wintertur-based Burckhardt.

US forecasts LNG exports will stay high through March 2022 amid increased demand in Europe and Asia

LNG News Editor

The US Government estimates that liquefied natural gas exports levels will remain high from December through to March 2022, supported by increased natural gas demand in the Northern Hemisphere winter in Europe and North Asia.

"We expect that LNG exports will average 11.1 billion cubic feet per day from December through March," said the latest short-term outlook from the Energy Information Administration.

Capacities

"We expect high levels of LNG exports to continue into 2022, averaging 11.5 Bcf per day for the year, a 17 percent increase from 2021," said the EIA.

"The forecast reflects our assumption that global natural gas demand remains high and US LNG export capacity increases," stated the report.

The Henry Hub benchmark natural gas spot price is forecast to average \$4.58 per million British thermal units from December 2021 through February 2022.

The EIA then sees a general Henry Hub price decline through 2022 with an average forecast of \$3.98 per MMBtu in 2022 amid rising US natural gas production and slowing growth in LNG exports.

"We forecast that US inventory draws will be similar to the five-year average this winter, and we expect that factor, along with rising US natural gas exports and relatively flat production through March, will keep US natural gas prices near recent levels before downward price pressures emerge," said the US agency.

"Because of uncertainty around seasonal demand, we expect natural gas prices to remain volatile over the coming months, and winter temperatures will be a key driver of natural gas consumption and prices," the report added.



A general Henry Hub price fall is seen from first quarter

US LNG exports had averaged 10.7 Bcf per day in November 2021, a 0.8 Bcf per day increase from October, supported by large price differences between the Henry Hub price in the US and spot prices in Europe and Asia.

It noted that among the six large-scale US plants in operation, exports resumed from Cove Point LNG in Maryland in late October after that facility's annual maintenance was completed.

"In our forecast, LNG exports average 9.8 Bcf per day for all of 2021, a 50 percent increase from 2020," said the EIA.

In November, the Henry Hub had averaged \$5.05 per MMBtu, down from the October average of \$5.51 per MMBtu but up from an average of \$3.25 per MMBtu in the first half of 2021.

"After rising in recent months, natural gas prices declined in November amid mild weather across much of the country that resulted in less natural gas used for space heating than expected," said the report.

"Decreased demand for natural gas also contributed to inventory levels moving closer to the five-year (2016-2020) average," it added.

US natural gas inventories ended November 2021 at more than 3.5 trillion cubic feet (Tcf), 3 percent less than the five-year average for this time of year.

"Less natural gas was injected into storage this summer than the previous five-year average, largely

as a result of more electricity consumption in June because of hot weather, and because of increased exports," said the EIA.

Gas injections

"However, storage levels moved closer to average as injections outpaced the five-year average in September, October and early November," the report explained.

"We expect natural gas inventories to fall by 2.0 Tcf during the November-to-March withdrawal season, ending March below 1.7 Tcf, which would be 2 percent less than the 2017-2021 average for that time of year," it added.

The report said dry US natural gas production averaged 96.1 Bcf per day in November, up 1.0 Bcf per day from the average in October.

Production in November was up from an average of 91.9 Bcf per day in the first half of 2021.

"Natural gas production in the forecast rises to an average of 95.3 Bcf per day during the rest of this winter (December-March) and averages 96.0 Bcf per day for all of 2022, driven by natural gas and crude oil price levels that we expect will be sufficient to support enough drilling to sustain production growth," the report declared.

North Sea Brent crude oil spot prices averaged \$81 per barrel in November, a \$3 per barrel decrease from October 2021 but a \$38 per barrel increase from November 2020.

Global commodities firm Trafigura suggests 2022 could be another bumper year for LNG trading

LNG News Editor

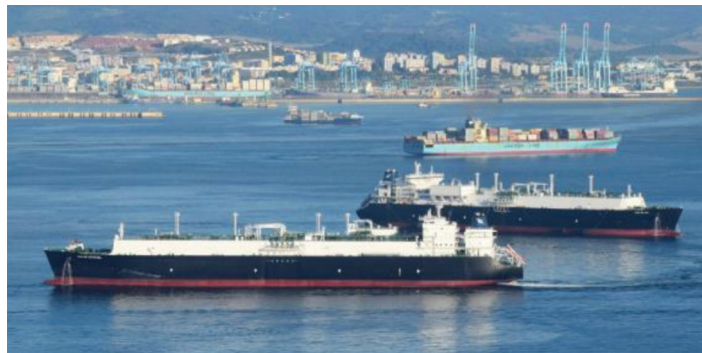
Global commodities firm Trafigura said in its fiscal 2021 report that revenues, earnings and liquefied natural gas volumes increased amid rising prices, partly because of stronger LNG demand from Asia due to low hydropower reserves this year in China and also lower coal production.

Trafigura said LNG spot cargo values, the Japan-Korea Marker price, reached a record level of \$35 per million British thermal units as the region attracted increasing numbers of shipments despite production disruptions in Russia, Australia, Nigeria and Norway.

Inventories

"European inventories were also at extremely low levels coming out of summer 2021," said Trafigura.

"This points to the potential for further disruptions if the continent sees another cold winter and Europe is not the only area that has had to deal with power-related curtailments with China enacting production cuts, primarily in the energy-intensive steel and aluminium sectors," explained the firm.



Trafigura is also a big shipping market participant

Trafigura's LNG volumes rose about 10 percent in the fiscal year to the end of September as the firm continued to expand the business and volumes increased to 14 million tonnes compared with 12.7MT in the prior-year period.

Trafigura said its integrated LNG and natural gas team had "performed well, weathering the multitude of storms the gas market experienced" during the year.

Trafigura posted 57 percent higher fiscal 2021 revenues of \$231.3 billion for all commodities sectors, reflecting higher commodity prices and increased trading volumes.

Underlying gross earnings rose 13 percent to \$6.86Bln from \$6.07Bln in 2020.

Net profits amounted to \$3.07Bln, almost double the prior

year's result, despite including a one-off, non cash accounting adjustment which reduced net profit by \$716M due to international accounting rules on the treatment of a foreign currency reserve following the consolidation of Puma Energy into the Trafigura Group.

"In these extremely volatile times, simplicity of supply chains remains our guiding principle," Trafigura said.

Looking forward, Trafigura said its goal over the next 12 months is to work with the company's customers to "create solutions that protect them as much as possible against such price fluctuations" in the future.

The firm noted that recent events have illustrated that natural gas is vitally needed to fuel baseload power supply alongside

renewable power and, in some applications, as a transition fuel.

"Trafigura's performance in 2021 again set new records in terms of volumes handled and overall profitability," said Jeremy Weir, Trafigura's Executive Chairman and Chief Executive.

"We also made excellent progress over the course of the year in further diversifying our business to play a meaningful role in the ongoing energy transition," added Weir.

Tight market

Trafigura believes that LNG supply would have been tight in any case as plants were subject to maintenance that had been delayed by Covid-19 and a number of facilities experienced greater than usual reliability issues.

"Europe and the Far East out-competed each other to attract US LNG, pushing the price up as low inventories in Asia and Europe caused market concern," said Trafigura.

"We complemented our existing natural gas trading operations in Europe, Mexico and the US by acquiring licences to trade gas in other liberalising domestic markets," it added.

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ICE reports surge in Dutch TTF and JKM

Intercontinental Exchange, the leading global provider of trading platforms and clearing, said November average daily volumes of trade derivatives contracts surged for European natural gas and LNG as well as North Asia spot cargo contracts as well North Sea Brent crude oil trading also jumped.

The total ADV trading in the Dutch Title Transfer Facility, Europe's main LNG and natural gas trading benchmark, jumped 50 percent in November 2021 compared with the same month last year.

The Dutch TTF is increasing in importance as energy traders and asset owners manage their global gas price risk amid record prices for natural gas. ICE said the monthly average daily volume (ADV) in November 2021 for the Japan-Korea Marker contract for Asian spot LNG increased by 25 percent.

The total natural gas complex ADV as well as the open interest ADV were both 4 percent higher versus November 2020.

In the overall natural gas complex, average day trading volumes in November amounted to 910,000 derivatives contracts, down on the previous month of October when the monthly ADV was 1,120,000 contracts, though the total was up on the 871,000 monthly ADV in November 2020.

According to independent data, The Dutch TTF moved from the equivalent of around \$22.95 per million British thermal units to about \$31.70 per MMBtu on November 29.

The Japan-Korea Marker January 2022 spot price for North Asia traded between around \$37.565 per MMBtu on November 26, up from around \$30.140 per MMBtu on November 5, according to the data.

Québec Port and Energir building LNG bunkering for Saint Lawrence River

LNG News Editor

Canadian company Energir and the Québec Port Authority have completed their 100th liquified natural gas re-fuelling operation as the French-speaking province embraces maritime bunkering, though rejects LNG production for export.

"This major achievement is a testament to both companies' leadership to supply the maritime industry in LNG, and to their expertise in bunkering operations in Canada," said Energir, the main gas distribution company in the province.

Oldest port

The bunkering takes place in or around the port of Québec City, which sits on the Saint Lawrence River and is the oldest Canadian port and the second-largest after Montreal.

The LNG bunkering station, implemented by Energir's subsidiary, Gaz Métro Transport Solutions in 2018, is available to all shipowners passing through.

"These 100 LNG bunkers completed at the Port of Québec have



Vessel owned by Québec shipowner Desgagnés is re-fuelled

supplied five vessels owned by Desgagnés, a Québec shipowner that has shown great vision in adopting LNG as a marine fuel and who also actively participated in the implementation of the bunkering system," said Energir.

The Desgagnés fleet includes cargo shipping, ferries and tankers with more LNG-powered vessels being added in the future.

Energir noted that LNG as a maritime fuel was expanding in North America to meet new emissions standards in ports.

"This solution is one of the concrete actions included in the Port of Québec's Sustainable Development Action Plan, which aims

to develop maritime trade by adopting environmentally friendly practices while favoring transitional energy," added Energir.

"Being one of the best sources of energy available to shipowners on the market, LNG is experiencing significant growth and is recognized elsewhere in the world, particularly in Europe," stated the company.

Energir is also present in the US where it generates electricity from renewable sources, while serving as the leading electricity distributor and the sole natural gas supplier in the northeast US state of Vermont.

Greek shipowner Maran Gas orders GTT No. 96 storage for newbuilds

French liquefied natural gas storage technology firm Gaztransport and Technigaz (GTT) and its South Korean shipyard partner Daewoo Shipbuilding and Marine Engineering received an order for the tank design of two new LNG carriers from Greek shipowner Maran Gas Maritime.

"As part of this order, GTT will design the tanks of the vessels which will each offer a capacity of 174,000 cubic metres capacity," said GTT.

"The tanks will be fitted with the GTT No. 96 GW membrane containment system, a technology developed by GTT," said the company.

GTT said that the deliveries of the Maran Gas vessels was scheduled during the second half of 2024.

"We are pleased to pursue this partnership of excellence with DSME and Maran Gas Maritime," said Philippe Berterottière, Chairman and Chief Executive of GTT.

"The GTT teams are proud and excited to continue to support our partners in their decision to use our membrane technologies widely recognized by the LNG industry," stated Berterottière.

GTT and DSME received another order earlier in December 2021 for the tank designs for four newbuilds on behalf of the Japanese

shipowner Mitsui OSK Lines.

GTT will design the tanks of these four LNG carriers for navigation in cold temperatures and with a total tank capacity of 174,000 cubic metres per ship.

Each tank will be fitted with the GTT's membrane containment system adapted to the extreme conditions of navigation in Arctic waters.

The deliveries of the MOL vessels from DSME will be staggered during 2024.

The latest orders for Japan's MOL for vessels with ARC notation were made as GGT is also expanding business in China.

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Venture Global moves on fourth plant as state of Louisiana to overtake Qatar as LNG exporter

Venture Global, the US LNG export plant developer, is now in the process of investing in and constructing four liquefaction and export plants in Louisiana with 70 million tonnes per annum of output as the latest facility applied for regulatory permits.

The most advanced plant in terms of construction, the Calcasieu Pass facility in Cameron Parish in Louisiana, south of the city of Lake Charles, is scheduled to start commercial production in 2022 with exports 10 MTPA of LNG on completion.

Calcasieu Pass II

Venture Global's fourth LNG export plant, after Plaquemines LNG and Delta LNG, is called the CP2 LNG project and would be built on a 540-acre site in Cameron Parish, adjacent to the Calcasieu Pass facility.

These three plants will each have a combined 60 MTPA of nameplate capacity versus 10 MTPA at Calcasieu Pass.

The Plaquemines and Delta facilities will be built near river



The Arlington, Virginia-based firm seeks new permits

mile-marker 55 on the banks of the Mississippi River, about 30 miles south of New Orleans.

The Arlington, Virginia-based company has just submitted a formal application requesting authorization from the Federal Energy Regulatory Commission to site, construct and operate the CP2 LNG facility and the CP Express pipeline.

CP2 LNG comprises of a facility with nameplate liquefaction of 20 MTPA and the CP Express will provide feed gas sourced from resource rich North American onshore natural gas basins.

Venture Global will be the state's largest LNG exporter and when the four plants are completed, Louisiana will have seven industrial-scale facilities, including Cheniere Energy's Sabine Pass plant, the Cameron plant operated by California-based Semptra Energy and the Driftwood facility being developed by Charif Souki's Tellurian Inc.

Seven plants

The seven Louisiana plants are expected to have up to 144 MTPA of output, including current expansion plans, which would be well

ahead of the Middle East state of Qatar, and will make the US Gulf Coast state the World's No. 1 LNG exporter.

Venture Global and the Governor of Louisiana, John Bel Edwards, jointly announced the latest CP2 LNG project comprising an investment of \$10Bn and the creation of more jobs.

"Venture Global has invested significantly in Louisiana's economy, and I am proud to celebrate this exciting new project with them," said the Governor.

"The CP2 facility in Cameron will create more than 1,000 new permanent jobs and thousands of construction jobs in the area, which will have a significant impact on our economy," he explained.

"The direct new jobs created by the project will have average annual salaries of \$120,000 plus benefits," said the joint statement.

Venture Global Chief Executive Michael Sabel said the company was proud to continue its expansion in Louisiana with the launch of its next project, CP2 LNG.

US LNG engineer McDermott awarded contracts by Aramco for four Arab Gulf oil and gas fields

McDermott, the US LNG project engineering and oil and gas developer, has been awarded three prestigious contracts by the Saudi Arabian Oil Company (Aramco) covering four oil and natural gas fields in the Arabian Gulf.

"McDermott continues its decades-long partnership with Saudi Aramco with three new awards for engineering, procurement, construction and installation (EPCI) projects," said the Houston, Texas-based company.

In total, McDermott will provide EPCI of four drilling jackets and seven oil production deck modules (PDMs) in Saudi Arabia's Zuluf, Ribyan, Abu Sa'fah and Safaniya fields.

"These awards are a direct result of our long track record of successfully delivering shallow water infrastructure for Saudi Aramco and our commitments to the growth of Saudi Arabia's energy sector as well as In-Kingdom execution in line with Vision 2030," said Tareq Kawash, McDermott's Senior Vice President for Europe, Middle East and Africa.

In addition to the seven PDMs and four drilling jackets, the scope of work for the three contract release purchase orders (CRPOs) includes EPCI of more than 28 miles (45 kilometres) of pipelines, more than 62 miles (100km) of subsea cables and tie-in works to existing facilities.

"Fabrication is expected to begin in the first quarter of 2022,

with offshore installation commencing fourth quarter of 2022 and overall completion expected second quarter of 2023," said McDermott.

Analysts note that several giant oil and gas fields in Saudi Arabia have been producing for years and require multiple stages of brown-field investments to maintain their production profile.

Among the fields Abu Sa'fah is a super-giant offshore oil field located in a maritime area shared by Saudi Arabia and Bahrain.

The field has capacity of around 300,000 barrels per day of Arabian medium crude as well as 370 million standard cubic feet per day of associated gas.

The Zuluf field, a super-giant off-

shore oil field located about 40km off the northeast coast of Saudi Arabia, is undergoing expansion.

The Safaniya oil field, located 200km north of Dhahran, is one of the largest offshore oil fields in the world, with 37 billion barrels of oil reserves.

LNG contracts

In the LNG sector, McDermott won an engineering, procurement and construction (EPC) project in November 2021 after successfully completing front-end design services for a booster compression module for the Australian Ichthys LNG project operated by Inpex Corp. of Japan.