

LNG Unlimited

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Australia-Pacific LNG ships landmark cargo as Chinese gas demand to rise

The 'Cesi Tianjin' carrier lifted a 500th shipment as South China to build more gas-fired power
LNG Journal editor

The Australia-Pacific LNG plant in Queensland, owned by ConocoPhillips, Australian utility Origin Energy and Chinese major Sinopec, has shipped its 500th cargo, with the destination being China, where there are plans to boost gas-fired power in southern provinces.

The 174,100 cubic metres capacity LNG carrier "Cesi Tianjin" loaded the cargo and departed the Curtis Island facility near Gladstone on June 11, according to ConocoPhillips Australia.

Celebration

"We are celebrating the safe loading and sailing of our 500th LNG cargo at the Australia Pacific LNG facility, nearly four and a half years since our first cargo sailed in January 2016," said ConocoPhillips Australia President Nicholas McKenna.

The APLNG plant on Curtis Island in Queensland produces almost 9 million tonnes per annum from two Trains and 7.6 MTPA has been contracted to Sinopec since the plant came on stream in 2016.

Sinopec holds a 25 percent stake in APLNG while Origin and ConocoPhillips each hold 37.5 percent of the shares.

The "Cesi Tianjin" was scheduled to deliver the APLNG cargo to the Jiangyin port area on June 22, according to shipping data.

As well as the 20-year sales agreement with Sinopec, APLNG also has a long-term contract with



LNG carrier at Curtis Island to load Chinese shipment

Japanese utility Kansai Electric for 1 MTPA.

ConocoPhillips is operator of the APLNG plant and has pledged to retain its stake even after selling LNG and natural gas assets in the Northern Territory.

APLNG exports most of its shipment to China, but other plants in Western Australia and elsewhere have a focus on southern Chinese terminals, Japan and south Korea.

ConocoPhillips and other oil and gas majors as well as regional companies such as Adelaide-based Santos will see a build-up in Chinese LNG demand, particularly from south China.

Guangdong province in southern China, where the nation's first LNG imports arrived from Australia in 2006, is planning to boost gas-fired power capacity and LNG supply needs.

The province is planning to increase gas-fired capacity to about 35 gigawatts from 23 gigawatts now, according Shenzhen Energy Group. LNG power expansion is also being studied in neighbouring provinces.

There are five main LNG termi-

nals in and around Guangdong province. They include China's first LNG terminal at Dapeng on the Pearl River Delta.

The terminal started LNG imports from Australia after it was conceived by China National Offshore Oil Corp. and UK major BP.

The other four key imports facilities in South China are Diefu, Yuedong, Zhuhai and Dongguan.

Gas hub

Guangdong province remains a main hub for LNG imports as it is far from the coal mines of the north of China, which provide most of the nation's power.

In Guangdong, gas-fired power already makes up more of the energy mix than other areas of China with 18 percent of capacity compared with 48 percent for coal.

China's main LNG suppliers are Australia, Qatar, Malaysia and Indonesia, while the US has just resumed LNG shipments at the same time as cargoes have started arriving from the Russian Yamal plant via the Northern Sea Route.

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LNG trans-shipment facilities at the Russian ports of Murmansk and Kamchatka progress with FSUs order

LNG Journal editor

Russia is proceeding with the world's largest LNG trans-shipment facilities at the ports of Murmansk and Kamchatka and has signed contracts with a South Korean shipyard to build two floating storage barges as part of the project.

Daewoo Shipbuilding and Marine Engineering (DSME) signed the newbuild deal with the project participants, Russian natural gas company Novatek and Japanese shipping company Mitsui OSK Lines.

Big capacities

The agreement with DSME is for two very large FSUs worth a total of 901 billion South Korean won (\$750 million) and the vessels will have capacity of up to 360,000 cubic metres.

"These ships are expected to depart the shipyard by the end of 2022," said DSME in a statement.

"This order has proved Daewoo Shipbuilding and Marine Engineering's overwhelming technological



Executives from South Korea's Daewoo and MOL of Japan

capabilities once again to the market," added the Korean company.

"In the wake of the Covid-19, some of the large-scale projects are being delayed, so this order secures a stable level of work. This will be a great help," stated DSME.

The initial trans-shipment facilities agreement between MOL and Novatek using FSUs was signed in September 2019.

The trans-shipment centre near the northwest Russian port of Murmansk will be for cargoes heading for Western Europe and at Kamchatka in the Russian Far East for

Asia-bound cargoes.

The FSUs will store LNG from the Yamal project in Arctic Russia and transfer loads to ice-breaking LNG ships or conventional LNG carriers.

The FSUs will also in the future handle cargoes from the Arctic LNG II project being advanced by Novatek with Chinese and Japanese partners.

The proposed trans-shipment projects will be partly financed by the Japan Bank for International Cooperation as they help in securing LNG cargoes for Asia via the

NSR from the Yamal facility and eventually from the second Novatek project planned for the Gydan Peninsula.

The Norwegian privately-held logistical and ship management company, Tschudi Shipping, had previously handled the reloading operations off Norway for Russian Yamal LNG trans-shipments after it signed an agreement with Novatek in September 2018.

During 2018 and early 2019 Novatek and its partners used an area off the Norwegian port of Honningsvåg as a trans-shipment point for several million tonnes of LNG transferred.

The last LNG tanker left Honningsvåg at the start of July 2019 and when the Northern Sea Route is closed at the start of this winter season.

By utilizing trans-shipment hubs in Kamchatka and Murmansk, marine transportation costs of LNG cargoes coming through the NSR will be optimised.

Russians sign engineering and supply contracts for the Baltic LNG and chemicals complex at Ust-Luga

Gazprom said an engineering, procurement and construction contract as well as supply accords had been signed as part of the Baltic LNG and chemicals complex development at Ust-Luga, west of St Petersburg.

Gazprom and RusGazDobycha, a special purposes company securing gas supplies for Russia's chemicals industry, said they expected the various facilities to require the processing of 45 billion cubic metres of natural gas per annum.

The statement said that RusKhimAlyans, a 50-50 joint venture between Gazprom and RusGazDobycha, signed 20-year commercial contracts for supplies of feed gas and sales gas as well as ethane fraction for chemicals.

The EPC contract was signed for gas processing and off-site

facilities within integrated complex, but not for the liquefaction plant which would be signed later.

Gazprom is also seeking finance for the facility which would be the largest for LNG in north-west Europe with capacity for 13 million tonnes per annum of LNG in addition to production of 4 MTPA of ethane and 2.2 MTPA of liquefied petroleum gas.

Royal Dutch Shell had been a former partner in Baltic LNG, though formally pulled out of the venture in mid-2019 after Gazprom decided to switch part of the output for the chemical project.

Gazprom explained that RusKhimAlyans had entered into an EPC contract with Nipigaz, part of Russian petrochemicals company, the Sibur Group, for a full cycle of op-

erations for gas processing and off-site facilities at the complex.

"The contractor will prepare the working documentation, ensure the delivery of equipment and materials and the execution of construction and installation and start-up and commissioning works," said Gazprom.

Nipigaz has already completed a set of engineering surveys and developed basic technical solutions for RusKhimAlyans under a contract signed in September 2019.

"Later on, RusKhimAlyans will select EPC contractors to build natural gas liquefaction facilities, a storage facility for raw materials and marketable products, a marine shipment terminal and other non-production facilities," added Gazprom.

"An EPCM contractor will be chosen to carry out integrated management of the construction process for the integrated complex," it said.

Gazprom said that the gas remaining after the processing for the total of 45 Bcm per annum, including extraction of ethane fraction and other components as well as production of LNG, will go into Gazprom's gas transmission system in the amount of about 18 Bcm per annum.

Efforts are also underway to attract project financing from Russian and international credit institutions.

Gazprom expects to put the first LNG Train of the complex into operation in the second half of 2023 and the second Train in late 2024.

Wheatstone cargo heads for Mexico in usual trade

An Australian liquefied natural gas cargo is heading to an import terminal in Mexico, reflecting the unbalanced state of regional markets hobbled by high inventories and low prices.

The 173,600 cubic metres capacity LNG carrier “British Mentor”, owned by BP shipping, is on its way to the Manzanillo import terminal on the Mexican Pacific Coast.

Manzanillo has in the past been supplied by US Gulf of Mexico export plants such as Sabine Pass in Louisiana and the Peru LNG facility at Pampa Melchorita.

The BP carrier “British Mentor” departed laden from the Chevron-operated Wheatstone LNG plant in Western Australia on May 16 without a destination being shown on marine tracking data.

However, the data now shows that the vessel is now scheduled to berth at the Manzanillo terminal on June 28.

Shipments from the Chevron’s Wheatstone plant are usually shipped to North Asia under existing supply contracts and because of geographical proximity.

The Wheatstone plant produces 9 million tonnes per annum from two Trains and is a joint venture almost 65 per cent owned by Chevron.

Other shareholders include Kuwait Foreign Petroleum Exploration Co., Australia’s Woodside Petroleum and Japanese utilities JERA Co Inc. and Kyushu Electric Power.

For the first time a Wheatstone cargo is headed across the entire Pacific Ocean to deliver to the plant in the Mexican state of Colima.

Tanks technology firm GTT gets contract for Germany’s FSRU

LNG Journal editor

Gaztransport and Technigaz, the French technology designer of LNG maritime and onshore storage systems, has received an order for the tanks to equip the floating storage and regasification unit to be deployed as Germany’s first LNG import terminal at the North Sea port of Wilhelmshaven.

GTT’s order comes from the South Korean shipyard, Daewoo Shipbuilding & Marine Engineering on behalf of the Japanese shipping company Mitsui OSK Lines (MOL), the owner and operator of the ship.

Membrane

The FSRU will have a capacity of 263,000 cubic metres and will be fitted with the No. 96 membrane cryogenic containment system, a technology developed by GTT.

The vessel delivery is scheduled for 2023 when it will be deployed at Wilhelmshaven.

“We are delighted to be working with DSME and MOL, two very long-term partners, on this new



French storage will make possible swift LNG imports at only German deepwater port on its North Sea coast

very large capacity FSRU project,” said Philippe Berterottière, Chairman and Chief Executive of GTT.

MOL and a subsidiary of the German utility Uniper signed a contract in May 2020 to build and charter the FSRU.

The FSRU constitutes the heart of the future terminal and will make it possible to offload, store and regasify LNG for the German market.

It will be moored off the coast not far from Wilhelmshaven and will handle incoming LNG tankers there.

Wilhelmshaven is one of two

LNG import terminals being planned by Germany.

The second is an onshore facility at Brunsbüttel, a port on the Elbe River, south of Hamburg.

The regasified natural gas from the Wilhelmshaven FSRU will be transported along a short connecting pipeline under the sea to the port facilities and be fed into the German gas transmission network.

Wilhelmshaven is Germany’s only deep-sea port and has the optimal infrastructure for offloading LNG tankers of all sizes.

Australian LNG exports to Asia offset by investment delays

Australian liquefied natural gas exports continue at near record levels, underpinned by demand from North Asia and while Train shut-ins are unlikely, the oil price fall has led to LNG and gas investment delays.

National production increased in the first quarter of 2020 to 19.9 million tonnes, up 11 percent from the same three months of 2019 and only marginally below the record levels of the previous two quarters, according to a report from Australian consultants EnergyQuest.

LNG exports from the eastern state of Queensland also hit a monthly record in April 2020 of 2.0MT.

“The oil price collapse from late March slashed A\$6.2 billion (US\$4.3Bln) in short-term spend-

ing while five major Australian projects, representing A\$60Bln in LNG investment, are in limbo,” said EnergyQuest.

The resilience of Australian LNG exports is shown by the volume of shipments to Asia.

“In the first quarter exports increased by 1.7MT, with growth in demand from Korea, China and Taiwan more than offsetting a small reduction in demand from Japan,” explained EnergyQuest.

The country’s LNG export sector is helped by the high proportion of shipments being under long-term contracts.

“It seems unlikely that there will be trains shut-in or major output cuts from Australian projects due to lower oil and LNG prices,” said the report.

“About 90 percent of Australian LNG is sold under long-term oil-linked contracts and oil prices would need to remain very low for a considerable period for there to be shut-ins,” it noted.

Australian West Coast LNG operator Woodside has responded to the collapse in oil prices in delaying a final investment decision on Scarborough and Pluto 2 into 2021 and indefinitely delaying Browse could markedly change the outlook for WA domestic gas.

“Overall, the WA gas supply outlook has become more uncertain,” said the report.

“Notwithstanding the increased uncertainty, calls for a West-East gas pipeline are on the table again,” it added.



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NEWS NUDGES

Total LNG shipping aim

French energy major Total has joined the "Getting to Zero Coalition" for shipping launched at the last United Nations climate summit. It comprises over 120 organisations and has been endorsed by governments of 14 countries, including France and the UK. Total said it was already actively working on improving the environmental footprint of the shipping industry through the development of LNG bunkering. It has also recently announced the long-term chartering of two LNG-propelled Very Large Crude Carriers.

GAIL has rating cut

The Indian LNG importer, Gas Authority of India, has had its credit rating cut by US agency Moody's Investors Service by one notch from "Baa2" to "Baa3". Indian pipeline network operator GAIL is also tolling contract holder at the Cove Point LNG export plant in the US state of Maryland. "The revision in the credit rating was done as Moody's has revised the rating of various Government-related issuers, including that of GAIL.

Spot charter rates firm

Shipping charter rates for LNG carriers in the spot market are little changed over the past week. Rates were quoted at an average of between \$33,000 per day and \$31,000 per day West of Suez and at rates of between \$31,000 per day and \$29,000 per day East of Suez for vessels of between 155,000-165,000 cubic metres capacity, according to various brokers. One-year time charters were steady for the most modern vessels and were seen at rates of around \$43,000 per day.

Tellurian supply accord signed with Petronet in front of Indian PM is allowed to lapse but talks continue

LNG Journal editor

Tellurian Inc., the developer of the Driftwood LNG plant in Louisiana, has confirmed that its prestigious accord with India's Petronet LNG for volumes and investment first signed in the presence of Indian Prime Minister Narendra Modi has now elapsed.

However, Tellurian said that while the memorandum of understanding (MOU) with Petronet LNG was not renewed when it expired at the end of May, talks with the Indian company were continuing.

Houston event

The Petronet agreement was first signed in Houston, Texas, in September 2019 and was seen as landmark on the path to reaching a final investment decision on the export plant.

Tellurian's Driftwood facility is proposed for the west bank of the Calcasieu River, south of Lake Charles, and with output of just over 26 million tonnes per annum.

The Petronet-Tellurian agreement suffered its first setback in February 2020 when a management group went with President Donald Trump to India, before the Covid-19 pandemic emerged on a global scale, and when a formal signing ceremony was expected to take place.

Instead, it was announced that the informal agreement would become a formal transaction by the start of June 2020, two months later than the March 31st date set out in the MOU signed in Houston.

Tellurian's accord with Petronet covered a possible equity investment in the project of up to \$2.5 billion as well as 5 MTPA of supplies.

Tellurian was founded by Chairman Charif Souk, the former Chief Executive of Cheniere Energy, and is continuing to pursue negotiations for the sale of LNG and inter-



Tellurian sponsored the 'Howdy Modi' event in Texas last year with President Donald Trump in attendance

ests in the Driftwood venture with several other companies.

Other supply agreements are already in place, including those with French energy major Total and global commodities company Vitol.

Total is also a principal investor as well as agreeing to purchase 1 MTPA of LNG and an additional 1.5 MTPA from Tellurian's offtake volumes from Driftwood.

Total's aggregate investment in the Tellurian portfolio will be around \$907M upon an FID being taken.

The Driftwood plant construction has already been contracted to Bechtel Inc. and in the meantime Tellurian has made economies to traverse the oil price slump and Covid-19 that have badly affected the energy industry as well as most other sectors.

Petronet currently operates India's largest regasification facility at Dahej, north of Mumbai, with 17.5 MTPA of capacity and six storage tanks.

The Petronet company was formed as a joint venture by the Government of India in 1998 specifically to import LNG and will be expanding its interests in the years ahead into LNG fuel distribution.

Shareholders in Petronet,

which began LNG import operations in 2004, include the big Indian energy players, Gas Authority of India, Indian Oil Corp., Oil and Natural Gas Corp. and Bharat Petroleum Corp.

Tellurian Chief Executive Meg Gentle said in May 2020 that the company was lean, resolved and focused on delivering the Driftwood project.

Gentle made her comments as Nasdaq-listed Tellurian reported a widening net loss of \$40.73M in the first quarter of 2020 compared with a loss of \$37.57M in the same three months of 2019.

The company said it continues to build its "integrated global natural gas business" and listed its achievements during and after the first quarter.

These included cost-cutting and reducing corporate overheads to around \$6M per month by June 2020.

Tellurian said that after the quarter ended it raised \$50M in gross proceeds through the issuance of \$56M of zero coupon, unsecured notes.

Gentle said Tellurian had taken actions to strengthen our balance sheet in the midst of extreme energy and financial market conditions.

Italy's Eni launches new business structure led by LNG and gas assets to traverse the energy transition era

LNG Journal editor

Italian energy company Eni, which has stakes in the leading global LNG projects such as Mozambique and whose offshore discovery of the Zohr gas field transformed the energy fortunes of Egypt, has launched a new business structure to lead the company through the next 30 years.

The Milan-based company said it was creating two new business groups, Natural Resources to develop the upstream oil and gas portfolio sustainably and Energy Evolution, dedicated to supporting the company's power generation and marketing.

Strategy

The overhaul will help the implementation of Eni's strategy to 2050, which it said combined value creation, portfolio sustainability and financial strength.

Eni's main current LNG asset is its stake in the Rovuma Basin projects in Mozambique as part of the Area 4 resources development with ExxonMobil and China National Petroleum Corp.

The new organisation, presented by Eni's Chief Executive Claudio Descalzi, sets down the markers for the evolution of the



Overhaul approved by board and Eni CEO Claudio Descalzi

business over the next 30 years.

"The key and unique element of this strategy is the combination of growth objectives with financial value creation as well as environmental sustainability, which will lead to a significant reduction in full life-cycle carbon emissions," said Eni.

The company stated that the new structure reflected Eni's pivot to the energy transition.

"To make the plan come true, and position us to accelerate its delivery, we are creating two new business groups in our company," explained CEO Descalzi.

The two new Eni business groups will maintain close links in the hydrocarbon value chain, with the objective of best managing the different phases of the energy

transition. "The Natural Resources business group will incorporate the company's oil & gas exploration, development and production activities, natural gas wholesale via pipeline and LNG," said Eni.

Alessandro Puliti will lead Natural Resources and Massimo Mondazzi will lead Energy Evolution.

A final investment decision on Mozambique LNG has been delayed for now but once it is sanctioned the project will produce LNG from three feed-gas reservoirs located in the Area 4 block.

ExxonMobil is the lead company for the Mamba gas fields and LNG project development and costs are estimated at around \$30Bln.

A separate project for Area 4

resources is the Coral floating LNG joint venture with capacity of around 3.4 MTPA already under construction and scheduled to come on stream in 2022.

Eni has already been a leading company in developing LNG projects in other nations such as Nigeria, Angola, Egypt, Trinidad & Tobago and Indonesia.

The Natural Resources division will continue to build up the value of Eni's oil and gas upstream portfolio, with the objective of reducing its carbon footprint by scaling up energy efficiency and expanding production in the natural gas business, and its position in the wholesale market.

Eni has been very successful in its E&P activities in Egypt and elsewhere.

The company discovered and developed the Zohr field in the East Mediterranean.

Zohr is located within the Shorouk concession, approximately 190 kilometres north of the city of Port Said.

Eni has a 50 percent stake in the block and is responsible for operations there. The other stakeholders are Russia's Rosneft, BP of the UK and Mubadala Petroleum of the UAE.

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LNG carrier repair yards of Sembcorp in recapitalisation

Sembcorp Marine of Singapore, ranked among the leading facilities in the world for LNG and cruise ship repairs and upgrades, was the subject of a rights issue of S\$2.1 billion (\$1.5Bln) to recapitalise the shipyard group.

Sembcorp Marine shipyards in the Asian city state have built a reputation for LNG-powered vessels, bunkering ships and floating LNG storage.

The boards and management teams of Sembcorp Marine and its parent company, Sembcorp Industries, believe that the proposed rights issue and demerger will strengthen the financial positions of both and unlock shareholder value.

"With greater flexibility following the demerger, both companies can pursue their own sustainable growth paths on the back of changes to their industries in recent years," it added.

Sembcorp Marine proposes to build on its core engineering solutions for the offshore, marine and energy industries.

One of its projects is the 12,000 cubic metres capacity LNG bunkering vessel ordered from Sembcorp's Tuas Boulevard Yard.

On completion, currently scheduled for early 2021, the dual-fuel bunkering vessel will be chartered to Singapore's Pavilion Gas for deployment for fueling ships with LNG in the Port of Singapore.

The vessel is the largest of its kind being built locally, in terms of size and LNG tank capacity and is Sembcorp's first LNG bunker vessel construction project.

Parent company Sembcorp Industries will continue to be focused on its core areas of energy and urban development and be poised to capture opportunities in the sustainable energy transition.

Japan contracted spot cargo prices plunge to low of \$2.20 per MMBtu

LNG Journal editor

Japanese contracted spot LNG cargo prices for May fell to a record low of \$2.20 per million British thermal compared with \$5.40 per MMBtu in May 2019 amid the current over-supply and the commercial effects of the Covid-19 pandemic.

The prices for the contracted cargoes were lower than the \$2.40 per MMBtu record in April 2020.

May values

Spot cargoes delivered in May were priced for Japan at \$2.60 per MMBtu, down from \$3.00 per MMBtu in April 2020, and from \$5.30 per MMBtu in April 2019, according to the data from the Japanese Ministry of Economy, Trade and Industry Ministry.

The monthly spot cargo numbers come from the Ministry's commerce division and are only issued if a minimum number of two trades are recorded.

Overall Japanese LNG imports dropped by 8.8 percent in April.



Nation's terminals handle up to 100 cargoes a month

Japan received 5.13 million tonnes of LNG in April compared with 5.62MT in April 2019 as the government also implemented a state of emergency for Covid-19.

The April volumes amounted to around 80 cargoes compared with the normal level of deliveries which at the start of the year had been 100 cargoes.

The shipments in April cost 268.54 billion yen (\$2.49Bln), 14.2 percent less than the April 2019 import bill of \$312.89Bln yen

(\$2.91Bln), according to the last monthly trade figures from the Japanese Finance Ministry.

For the fiscal year, April 2019 to March 2020, the Ministry had said LNG imports for the 12 months came to 76.50MT, down 5 percent.

The country's imports of LNG fell for the 2019 calendar year to 77.32MT, which was 6.7 percent lower than the 82.85MT of shipments that arrived in 2018.

Air Liquide engineering unit signs contract with Korean steelmaker

Air Liquide Engineering & Construction, a unit of France's industrial gases company, has signed a new contract with LNG importer, the POSCO Group and the leading steel producer in South Korea, to design and build an Air Separation Unit (ASU) at Pohang.

Air Liquide E&C, whose parent company is listed on the Euronext Paris stock exchange, said the new ASU in Korea will produce industrial gases oxygen, nitrogen and argon.

The oxygen and argon produced will be used to transform iron into high-quality steel and enable POSCO to improve efficiency of the production process.

Air Liquide said this new ASU, replacing two existing units on the Pohang site, will be designed and built using its best cryogenics technologies, thereby maximizing energy efficiency and reducing environmental footprint.

POSCO, as the largest integrated producer in South Korea, delivers 41 million tons of crude steel per year.

The POSCO Group has recently been restructuring its LNG storage and Kwangyang LNG terminal business, under a plan to transfer them to power generation affiliate, POSCO Energy Co.

Air Liquide said it had been

working with POSCO for more than 30 years and had supplied 20 ASUs to POSCO's Pohang and Kwangyang sites.

There are gas-fired power plants at Pohang and Kwangyang fueled by LNG imports.

"We are proud to continue our partnership with POSCO and contribute to POSCO's development for more than 30 years," said David Maloney, Vice President and Chairman of Air Liquide E&C.

"Air Liquide's strong historical relationship with POSCO and mutual trust are major factors supporting our close collaboration today," he added.

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Mobile LNG firm chosen by US E&P company to help market stranded gas by truck delivery from Marcellus

LNG Journal editor

Edge LNG of the US, whose shareholders include specialist international private equity firm Blue Water Energy and Galileo Global Technologies, has been selected by Exco Resources to capture and liquefy gas from a stranded well in the Marcellus Shale in Pennsylvania.

The Edge-Exco agreement will see Edge LNG deploy its fully mobile, truck-delivered LNG equipment to the Marcellus site, including three Cryobox liquefaction units, with the potential to expand through the deployment of additional units.

Underway

"Initial operations are underway and expected to continue through 2022," said Edge LNG.

"The unique process, created by Galileo Global Technologies and



Truck-delivered LNG equipment includes Cryobox liquefaction for Edge-Exco Resources project

deployed exclusively by Edge LNG in North America, can be delivered to any site accessible by road," it added.

"After set-up and safety checks, production can begin within hours, with minimal investment required of the site owner and no need for pipeline infrastructure," stated Edge LNG.

The company will both produce the LNG and purchase it from Exco.

This LNG will then be sold and delivered to customers in the

northeast region via its truck-based delivery system whereby it will be used to provide natural gas to homes and businesses.

Additionally, Edge LNG said it expected this deal to generate surplus LNG beyond these agreements, allowing it to expand its customer base.

"We are proud to be expanding our footprint in the Marcellus, which we've identified as an important region given its large number of stranded wells," said Mark Casaday, Chief Executive of

Edge LNG. "This deal is yet another example of how Edge LNG is delivering value to operators, by monetizing wells that would otherwise remain dormant, and helping to grow the domestic LNG market in the US," added Casaday.

"In a challenging operating environment, we can help operators by maximizing the value of their assets and providing new sources of revenue," explained the CEO.

"We have a lot of interesting projects underway and we expect to have our technology deployed and producing LNG in the Permian and the Bakken, in addition to the Marcellus, before the end of this year," said Casaday.

"The environmental and cost efficiencies the Edge LNG solution can bring, are considerable and it is great to see producers recognizing this," he added.

US sees falling LNG exports will decline even further in third quarter on reduced global cargo demand

US government forecasts expect the nation's liquefied natural gas exports will average 5.6 billion cubic feet per day in the second quarter of 2020 and they will decline further through the end of the Northern Hemisphere summer as a result of reduced global demand.

According to the short-term energy outlook covering oil and gas and supply and demand, the level of LNG exports is seen falling to 3.7 Bcf per day in the third quarter of 2020.

The outlook from the Energy Information Administration said that in May 2020 the Henry Hub natural gas spot price averaged \$1.75 per million British thermal units.

The report forecasts that that relatively low natural gas demand will keep spot prices lower than \$2.00 per MMBtu through August.

However, EIA said it expected prices would generally rise

through the end of 2021.

It expects that natural gas price increases will be sharpest in September through January 2021 when they are seen reaching \$2.06 per MMBtu and \$3.08 per MMBtu respectively.

"Despite EIA's forecast of record end-of-October storage levels, EIA expects that rising demand heading into winter, combined with reduced production, will cause upward price pressures," said the report.

The EIA also forecasts that Henry Hub natural gas spot prices will average \$2.04 per MMBtu in 2020 and \$3.08 per MMBtu in 2021.

Total US consumption of natural gas is expected to average 81.9 billion cubic feet per day in 2020, down 3.6 percent from 2019.

"The decline primarily reflects less consumption in the industrial sector, which the EIA forecasts will average 21.0 Bcf/d in 2020, down

8.7 percent from 2019 as a result of reduced manufacturing activity," the report noted.

US dry natural gas production set an annual record in 2019, averaging 92.2 Bcf per day and the EIA forecasts production will average 89.7 Bcf per day in 2020, with monthly production falling from 96.2 Bcf per day in November 2019 to 83.6 Bcf per day in March 2021, before increasing slightly.

"Natural gas production declines the most in the Appalachian and Permian regions," said the report.

"In the Appalachian region, low natural gas prices are discouraging producers from engaging in natural gas-directed drilling, and in the Permian region, low crude oil prices reduce associated natural gas output from oil-directed wells," it added.

In 2021, the EIA forecasts production of dry natural gas in the US will average 85.4 Bcf per day.

It then expects production to begin rising in the second quarter of 2021 in response to higher prices.

The EIA estimates that total US working natural gas in storage ended May at almost 2.8 trillion cubic feet (Tcf), 18 percent more than the five-year (2015-2019) average.

In the latest forecast, inventories rise by 2.1 Tcf during the April-through-October injection season to reach more than 4.1 Tcf on October 31, which would be a record.

Daily Brent crude oil spot prices averaged \$29 per barrel in May, up \$11 per barrel from the average in April.

The EIA expects monthly Brent prices will average \$37 per barrel during the second half of 2020 and rise to an average of \$48 per barrel in 2021.



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