LNG Unlimited

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New wave of LNG arrives early to benefit TechnipFMC earnings

Franco-US company reports revenue surge and boosts orders for LNG and subsea

LNG Journal editor

TechnipFMC, the Franco-US energy engineering company, signalled a resurgence in energy investment as it posted healthy second-quarter earnings amid a year-on-year increase in orders for LNG ventures in nations such as the US, Mozambique and Russia as revenues also jumped.

However, TechnipFMC reported a drop in net income of 8.2 percent even as its revenues grew along with the company's backlog of contracts.

Technip to double down with second Russian LNG project

Jump

Company revenues jumped 16 percent to \$3.43 billion from \$2.96Bln in the prior-year quarter, while second-quarter net profits fell to \$97 million compared with \$105.7M in the same quarter of 2018.

Before the earnings were issued, TechnipFMC announced it had been awarded the engineering, procurement and construction contract by Novatek of Russia and its joint venture partners for the Arctic LNG II project proposed for the Russian Gydan Peninsula of northern Siberia.

TechnipFMC said the Arctic LNG contract was valued at around \$7.6Bln. Technip had also worked on Novatek's Yamal LNG plant in Russia that shipped its first cargo in December 2017.

The company, listed on the Euronext exchange and the New York Stock Exchange, said the year-on-year backlog of orders had soared 73.4 percent by July 2019 to \$25.78Bln from \$14.87Bln.

"We achieved record inbound orders in the quarter, with total company orders reaching \$11.2Bln," said Chairman and Chief Executive Doug Pferdehirt.

"In Onshore-Offshore, we are benefiting from the new wave of LNG projects," said Pferdehirt.

"The LNG market growth continues to be underpinned by the structural shift towards natural gas as an energy transition fuel, helping to meet the increasing demand for energy while lowering greenhouse gases," he added.

"Our demonstrated leadership in this important growth market will continue as we anticipate additional LNG awards in the coming quarters," stated the CEO.

"In the second quarter, we were awarded the Arctic LNG II project. This award exemplifies our experience in the delivery of large-scale modularized fabrication for harsh environments," he explained.

"Onshore-Offshore inbound of \$8.1Bln was a new record for the business segment, driven by the award of Arctic LNG II," he added.

In Subsea, first half orders have already exceeded the levels achieved in all of 2018, with inbound of \$2.6Bln.

TechnipFMC said its integrated project awards exceeded \$3Bln for the first half of the year.

"Importantly, integrated awards have accounted for more than 50 percent of ourinbound orders in 2019," said CEO Pferdehirt.

"This momentum is evidenced by our recent award for Anadarko's Golfinho development (for LNG) in Mozambique," he added.

"TechnipFMC was a first-mover in the country, and this award further strengthens our leadership position. Golfinho is also our largest integrated subsea project to date," said the CEO.

Pferdehirt concluded that the unprecedented level of order activity demonstrates that the company was winning, with an intense focus on project selectivity and commercial differentiation.

"The strength of these results and significant growth in backlog give us even greater confidence," he said.

UNLIMITED AGENDA

France's Total doubles LNG sales and secures Mozambique stake from Occidental Petroleum

LNG Journal editor

French energy major Total said second-quarter adjusted net income dropped 19 percent to $2.88 billion from $3.55Bln in the same three months of 2018 in results offset by a more than doubling of liquefied natural gas sales and the acquisition of Mozambique LNG assets from Occidental Petroleum.

Total said second-quarter LNG sales more than doubled to 8.5 million tonnes from 3.9MT in the same three months a year ago.

Chief Executive Patrick Pouyanné pleased with strategy

Volumes

First-half LNG sales came to 16.2MT versus 7.7MT in the first half of 2018.

The company said that while gas prices fell sharply there was an increase in LNG sales.

"Compared to the second quarter of 2018, operating cash flow before working capital changes increased by 77 percent, driven by a doubling of LNG sales," said Total.

"Total LNG sales more than doubled compared to last year for the second quarter and first half 2019 thanks to the start-up of Yamal LNG Trains 2 and 3 in Russia, Ichthys LNG in Australia, the first Cameron LNG Train in the US and the acquisition of the portfolio of LNG contracts from Engie in 2018," explained Total.

Total also stated that its signing of an agreement with Occidental Petroleum of the US to acquire Anadarko Petroleum's assets in Africa, including its LNG stake in Mozambique, would capitalize on the French company's strengths.

"In Mozambique, it leverages its expertise in LNG, in Ghana, the deep offshore and, in Algeria, its historic presence," said Chairman and Chief Executive Patrick Pouyanné.

"The Group continues to grow in LNG with the signing of a sales contract with the Chinese company Guanghui, the takeover of Toshiba's LNG portfolio (Freeport LNG) and the start-up of Cameron LNG," added Pouyanné.

"This strategy is complemented by the divestments such as the recent sale of mature assets in the UK North Sea," stated the CEO. ■

French major signs deal for floating LNG terminal and imports for small West African nation of Benin

Total plans to develop liquefied natural gas imports in the tiny West African nation of Benin, whose neighbour Nigeria is the world's fifth-largest LNG exporter.

Total said it signed a Gas Supply Agreement and the Host Government Agreement for the development of a floating LNG import facility to supply 500,000 tonnes per annum to Benin for 15 years, starting in 2021.

Total will develop and operate the floating storage and regasification unit (FSRU) and its associated infrastructure.

"It will include an offshore pipeline connection to the existing and planned power plants in Maria Gléta," said Total.

The Benin government has signed a contract for a second power plant with financial backing from Denmark and to be located at Maria Gléta in the outskirts of the country's largest city, Cotonou.

Total said its FLNG import project was in line with its strategy to develop new gas markets by unlocking access to LNG for fast-growing economies.

"We are very pleased to have been entrusted by the Benin authorities to develop LNG imports and support a broad adoption of natural gas in the country," said Laurent Vivier, Senior Vice President Gas at Total.

"Access to LNG will help Benin to meet growing domestic energy demand and add more natural gas to the country's current energy mix, hence reducing its carbon intensity," added Vivier.

West African nations have mixed fortunes on the energy front with countries like Benin and Ghana seeking pipeline gas supplies or access to LNG while others such as Nigeria, Cameroon, Senegal and Mauritania have adequate reserves to have current or developing LNG export projects.

Nigeria, which borders Benin, exported 19.68 million of LNG last year from its onshore plant at Bonny Island in the Niger Delta, making it the fifth-largest exporter in the world behind Qatar, Australia, Malaysia and the US and just ahead of Russia and Indonesia.

The Minister of Energy of Benin, Dona Jean-Claude Houssou, thanked Total for helping to build energy supplies for the power connections.

"I congratulate the Total Group on its willingness to support the revitalization of the energy sector, which is at the heart of the Government's Action Plan as evidenced by the signing of the gas import contract," explained Houssou.

"I would like to highlight the Government's efforts to restore Benin's energy independence, which is the foundation of the country's ambitious economic and social development," he added.

Benin has been putting in place a legislative framework to welcome participation of private capital in the energy sector with independent thermal, solar and hydroelectric power generation projects.

"The gas import project will supply plants in Benin, such as the new 127 MW power station at Maria Gléta, with imported LNG on preferential terms and will position Benin, capital of the WAPP (West African Power Pool), as the crossroads for gas and electricity in the subregion," said Minister Houssou. ■

Vietnam gas find won't halt plan for two terminals

Vietnam has logged another natural gas discovery in the offshore Song Hong Basin in a prospect explored by Italian energy company Eni and Essar Oil of India as the Vietnamese also advance with two LNG import projects.

The Milan-based oil and gas player, the operator of the discovery, said the well result indicated "significant potential" for hydrocarbon accumulation.

Eni has a 50 percent stake in Block 114 and the balance of the shares is held by Mumbai-based Essar.

The Italian company has been in Vietnam since 2013 and currently operates four blocks all located in the under-explored Song Hong and Phu Khanh basins, offshore central Vietnam.

The Vietnamese have emerged over the past few years as sizeable natural gas producers in Southeast Asia and the government is also contemplating LNG imports to help its economic expansion.

All of Vietnam's natural gas output is consumed domestically and the nation as yet has no imports, neither in the form of LNG nor by pipeline.

Novatek, the owner and developer of two Russian Arctic region LNG export plants, is the latest company to have signed an accord to help Vietnam develop an LNG import terminal.

The latest project would be Vietnam's second venture and would be sited next to a gas-fired power station in Ninh Thuan province south of Cam Ranh Bay.

The first LNG import terminal venture involves General Electric of the US and is located in Bac Lieu Province in the southern Mekong Delta. That venture is being developed with full foreign infrastructure investment.

China LNG imports rise and stay on track for record at end of 2019

LNG Journal editor

Chinese liquefied natural gas imports for June increased by 14.9 percent and the shipments for the first half put the country on track for another year of record regasification volumes.

Shipments of LNG to China's network of more than 20 terminals rose to 4.53 million tonnes compared with 3.95MT in the same month a year ago and higher than 4.43MT reported in May 2019.

Companies like the ENN Group are increasing shipments

First half

LNG imports for the first six months of 2019 rose 19.3 percent from a year earlier to 28.37MT compared with 23.81MT for the half year to June 2018, according to data from the state body, the General Administration of Customs.

Among the main suppliers of shipments to China in June 2019 were nations such as Qatar, Australia and Indonesia.

China receives cargoes at its more than 20 import facilities spread around the coast. In addition to its 19 onshore LNG terminals, China also operates a floating storage and regasification unit at Tianjin port in northeast China to serve Beijing.

The country recently received at least one LNG cargo per day, though has been receiving more as demand has risen.

Chinese LNG imports increased by 38 percent last year to 53.81MT compared with just over 39MT in 2017.

China National Petroleum Corp. said recently it had increased its efforts to import more pipeline natural gas from Central Asian countries and Russia to complement LNG imports.

The China-Central Asia natural gas pipeline built by CNPC, which runs through Turkmenistan, Kazakhstan and Uzbekistan to China, has transported 270 billion cubic metres of natural gas to China since it was put into operation some 10 years ago.

The current capacity for annual natural gas transmission from Central Asia to China is up to 55 Bcm.

India imports increase for third month amid expansion plans

Indian liquefied natural gas imports increased for a third month of the current fiscal year as the nation received more than 30 cargoes, with the main suppliers being the West African nations of Nigeria and Angola as well as Qatar.

LNG imports last month rose to 2.02 million tonnes (2.73 billion cubic metres) versus 1.92 MT in June 2018, an increase of 4.9 percent.

The main operating terminals on India's West Coast are at Dahej, Hazira and Dabhol, near Mumbai, and there is one East Coast terminal at Kamarajar, 25 kilometres north of Chennai Port in Tamil Nadu.

The cumulative imports for the first three months of the fiscal year came to 5.86MT for the current year to June, 5.9 percent high than the 5.53MT recorded for the same three months a year ago.

LNG imports in May had amounted to 1.86MT, a 4.40 percent increase on the 1.78MT received in May 2018.

The cost of Indian imports for June was around $900 million, little changed from the same month of 2018, according to the Ministry of Petroleum and Natural Gas.

LNG imports for the first three months came to $2.4 billion versus $2.5Bln in the same period of last year.

The Ministry data also showed that production of domestic natural gas for the month of June was 2.63 billion cubic metres, which was 1.6 percent lower than the 2.67 Bcm of output in June last year.

The cumulative production of natural gas was 8.03Bcm for the first three months of the financial year, down 0.5 percent from the 8.07 Bcm logged last year.

The major natural gas consuming sectors for the combined LNG and domestic gas output in the last fiscal year were the fertilizer industry (29 percent), gas-fired power (21 percent), city-gas distribution (17 percent), refineries (13 percent) and petrochemicals (7 percent).

Analysts noted that India could easily import and use double its current capacity were it not for its lack of infrastructure.

NEWS NUDGES

Woodside's pipeline deal

Woodside, the Western Australian LNG plant operator, said it signed a long-term gas sale and purchase agreement with the Worsley Alumina joint venture for the supply of pipeline gas. Woodside said the natural gas will be supplied to the joint venture from Woodside's portfolio of domestic gas facilities, including the North West Shelf, Pluto and Wheatstone plants from where LNG is also exported. The Worsley Alumina bauxite mine and alumina plant is located in the southwest corner of Western Australia.

Russian LNG east route

Novatek, the Russian natural gas company and LNG plant operator, said that the ice-class LNG carrier "Vladimir Rusanov" completed the Northern Sea Route passage in the Eastern direction and delivered a cargo from the company's Yamal LNG plant in the port of Sabetta in Siberia to the port of Tianjin in northeast China. "The 172,000 cubic metres capacity 'Vladimir Rusanov' transited the ice-covered part of the route in only six days, setting a new record for independent passage via the NSR without ice-breaking support with cargo on board," said Novatek.

Stolt-Nielsen LNG ship

Stolt-Nielsen, the Norwegian shipping and services company, has launched the first of two 7,500 cubic metres capacity liquefied natural gas carriers ordered from the Keppel Nantong Shipyard in China. The ship was designed for Stolt-Nielsen by Marine Engineering Services (MES) of Italy. The Italian firm said in a statement that the China-built vessel was launched during the night of the 20th of July. ■

Chart Industries of US boosts its revenues and profits as LNG surges amid company expansion

LNG Journal editor

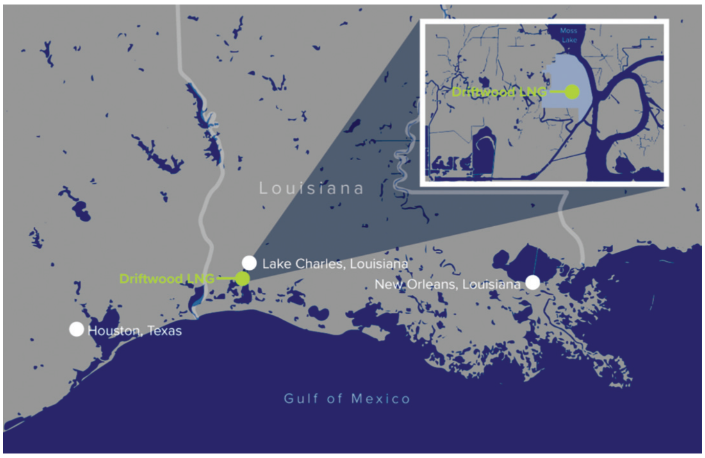


Chart has foothold on Gulf Coast with developers like Tellurian and other firms such as Venture Global

Chart Industries, the maker of equipment for the liquefied natural gas and industrial gas industries, posted a rise in net income and revenues as it benefited from orders across all sectors from large liquefaction plants to small-scale LNG and completed another acquisition.

Chart, whose headquarters are in the suburbs of Atlanta, said it continued to see revenue and orders strengthen in particular in the liquefaction, storage and transport markets for global LNG and for industrial gas infrastructure.

Key ventures

The company is a supplier of equipment to US LNG export projects on the Gulf Coast being developed by Cheniere Energy, Tellurian Inc. and Venture Global.

Second-quarter revenue of \$309.6 million increased 7.0 percent over the first quarter of 2019 and 11.4 percent compared with the year-ago quarter when it was \$277.9M.

Quarterly net income from continuing operations rose 45.5 percent to \$14.4M compared with \$9.9M in the same three months a year ago.

Chart completed the acquisition of Harsco Corp.'s Air-X-Changers business, specializing in gas compression coolers, on July 1, 2019. This creates a fourth part of Chart's business, now called Energy & Chemicals FinFans.

"The growing global LNG infrastructure build-out from liquefaction to storage to transport is benefitting both Distribution & Storage as well as Energy & Chemicals," said Jill Evanko, Chart's President and Chief Executive.

"In addition to taking advantage of our global manufacturing footprint to be close to the developing LNG markets, we are able to offer our customers a full suite of products and solutions, enhanced even further with the addition of the Air-X-Changers products which officially entered the Chart portfolio in July," she added.

Chart's overall orders in the second quarter increased 1.8 percent over the second quarter of 2018.

In the second quarter 2019, the company said it received 15 orders that each were greater than \$2M in value, totaling \$80.2M, and this was the first time there had been 15 orders of this magnitude in a single quarter.

However, orders of \$322.0M for the second quarter decreased \$139.2M from the \$461.2M recorded in the first quarter, which included \$135M bookings from Venture Global's Calcasieu Pass project in Louisiana and \$20M from Golar LNG as part of its "Gimi FLNG" (production hull) conversion.

Total backlog of \$752.8M increased 2.6 percent from the first quarter of 2019 without any big LNG orders.

Chart's "big LNG" orders also continue to develop, with significant regulatory movement and several LNG export terminal operators making progress towards final investment decisions.

"Not only does Venture Global's Calcasieu Pass project, for which we booked a \$135M order in March 2019, have all necessary permits to proceed, Venture Global secured additional equity funding in May, and have commenced construction on the 10 MTPA project," said Chart.

"Tellurian and subsidiaries of Total SA entered into definitive agreements last week, and we continue to expect an FID in the second half of 2019 for Tellurian's Driftwood phase 1 (16.6 MTPA)," it added.

"Cheniere advanced its 9.5 MTPA Corpus Christi Stage 3 project (CCL 3), planned for a 2020 FID, with the announcement of a supply-side liquefaction agreement," stated Chart.

Both Driftwood and Corpus Christi Stage 3 will utilize Chart's IPSMR® process technology, which recently received a process patent covering the use of the Cold Vapor Separator.

"This is the fifth US patent in the IPSMR® family covering liquefaction, heavy hydrocarbon removal and end flash gas cold recovery," said Chart.

The backlog of all three segments increased more than 2 percent sequentially from the first quarter of 2019. Small-scale LNG and utility-scale LNG activity also accelerated in the second quarter. ■

Osaka Gas and Japan Bank for International Cooperation invest in Asian LNG expansion

LNG Journal editor

Japanese utility Osaka Gas and the Japan Bank for International Cooperation (JBIC) have decided to invest in AGP International Holdings of Singapore to help expand the city-gas and LNG markets in southeast Asia and India.

Under the agreement, AGP International has sold a minority stake to Osaka Gas and the JBIC for $100 million.

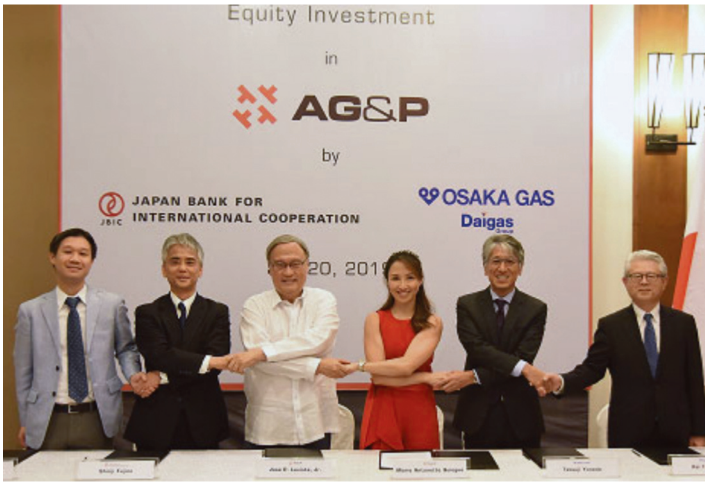
Direction

The funds will be invested in AG&P's growing city-gas distribution and LNG import terminal activities in Asia.

AGP International is part of the Filipino infrastructure group AG&P.

Osaka Gas has also entered into a collaboration agreement specific to AGP International and its natural gas value chain.

AGP Group has expanded from its construction and engineering business to the acquisition of Gas Entec Co., Ltd. (Gas Entec), which designs small-scale to medium-scale LNG vessels.



Signing even for Osaka Gas, AGP and the Japanese bank

"AGP possesses high engineering skills and marketing abilities in LNG industry, actively involved in developing the LNG businesses with floating LNG platforms and city-gas business to meet the growing demand mainly in Southeast Asia and India," said Osaka Gas.

The Japanese utility said it was presently active in Singapore, Thailand and Indonesia, growing the gas supply business for industrial customers, as well as the energy services business.

Osaka Gas said there were also plans to begin operating in Vietnam this year.

"With this (AGP) investment and entry into a collaboration agreement, there will continue to be synergy from the project development know-how and engineering skills that the AGP Group has in LNG businesses as well as the knowledge that Osaka Gas has accumulated domestically for LNG and gas pipelines," explained the Japanese company.

"Moving forward, the companies will be actively involved in developing LNG terminals, power plants and LNG supply businesses to create a natural gas value chain in Southeast Asia and other countries which have growing demand for LNG," it added.

AG&P said it was developing LNG and gas-related projects in emerging markets including the ones in Southeast Asia and Osaka Gas was a good partner.

JBIC said that its investment supports the overseas business of Osaka Gas and contributes to Japanese industry in maintaining and enhancing its international competitiveness.

"In addition, based on the Japanese government's policies, it is considered that expansion of the LNG market in Asia contributes not only to overseas business for the Japanese energy industry, but also to securing stable supply of LNG for Japan," it added.

US firm tries to advance its Delaware River terminal plan

New Fortress Energy, the owner of LNG facilities in Florida and in Jamaica, is attempting to advance with developing an LNG export terminal on the Delaware River in New Jersey for cargo containers produced from two small liquefaction plants in the Marcellus Shale in Pennsylvania.

The US Army Corps of Engineers has reopened a public comment period for the project's permit as environmental protesters increase pressure to block the project.

The small LNG export terminal permit process is being overseen by the Delaware River Basin Commission (DRBC), a regulatory agency involving four states and the US government that oversees the Delaware River watershed on the Atlantic Coast.

New Fortress affiliate Delaware River Partners in 2017 requested a waterway suitability assessment from the US Coast Guard, saying that it wanted to construct a multi-use, deep-water port and logistics center for a variety of uses, including the handling of automobiles, other bulk freight, and LNG and liquefied petroleum gas.

The company told the Coast Guard that the terminal would have an LNG export capacity of 1.5 million tonnes per annum and an LPG export capacity of 9.6 million barrels per annum.

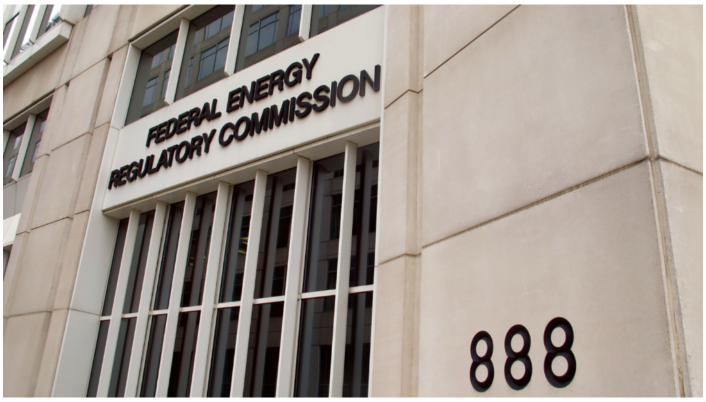
The company is also developing two small-scale liquefaction projects in the Marcellus Shale Basin in Northeast Pennsylvania that would have a combined capacity of 7.3 million gallons per day, according to filings with the US Securities and Exchange Commission.

US regulator to open Houston office for staff to be near 20 LNG projects

LNG Journal editor

US Federal Energy Regulatory Commission Chairman Neil Chatterjee said the agency is creating a new division in its Office of Energy Projects to accommodate the growing number and complexity of applications to site, build and operate LNG export plants.

There are around 20 LNG export projects being developed along the Gulf Coast of Louisiana and Texas and at various stages of the permit process.



More LNG expertise required in Houston rather than DC

Division

The new Division of LNG Facility Review & Inspection (DLNG) will consist of 20 existing LNG staff members in Washington, DC, and eight additional full-time staffers recruited in the Houston area and based in a new Houston Regional Office.

"As the demand for US LNG and the number and complexity of project applications has grown, the Commission has experienced a similar growth in the need for FERC to expand its oversight in this program area," explained Chatterjee.

"Much of the work related to these LNG projects, and the expertise it requires, is based in and around Houston," he added.

"For that reason, after careful research and evaluation, the Commission has determined we should direct our newest efforts to recruiting staff in the area to build upon the good work already being done on these issues at our DC headquarters," stated Chatterjee.

The FERC said that as recently as April 2018, it had 13 staff dedicated to working on LNG engineering and review issues.

That number has since grown to 20 staffers whose efforts are critical to completing engineering reviews.

The Commission also coordinates safety reviews with the Pipeline and Hazardous Materials Safety Administration at the Department of Transportation and prepares engineering analyses for inclusion in environmental documents.

"The creation of DLNG and expansion in Houston will help prepare FERC for the additional work necessary once LNG project applicants make final investment decisions and move toward construction," said the FERC.

"The Office of Energy Projects and the Office of the Executive Director have begun coordinating with the General Services Administration on space requirements and office configuration in Houston," it added.

Magnolia and Bear Head project company to re-domicile to the US

Australian company Liquefied Natural Gas Limited, developer of the US Magnolia LNG project in Louisiana and the Canadian Bear Head venture in Nova Scotia, has decided at a board meeting to re-domicile to the United States and list on the Nasdaq global exchange.

LNG Ltd said that after the vote by the board the company currently listed on the Australian Securities Exchange would proceed to list on the Nasdaq following regulatory and judicial approvals and an affirmative shareholder vote.

"After continued evaluation by the Board and management team and given the Company's confidence in raising new capital to fund our business and marketing efforts, we believe a US re-domiciling is in the company's best interest," said Paul J. Cavicchi, Chairman.

The Magnolia and Bear Head projects have plans for combined production plans of up to 20 million tonnes per annum, 8 MTPA at Magnolia at Lake Charles and as much as 12 MTPA at Bear Head, proposed for Richmond County in Nova Scotia.

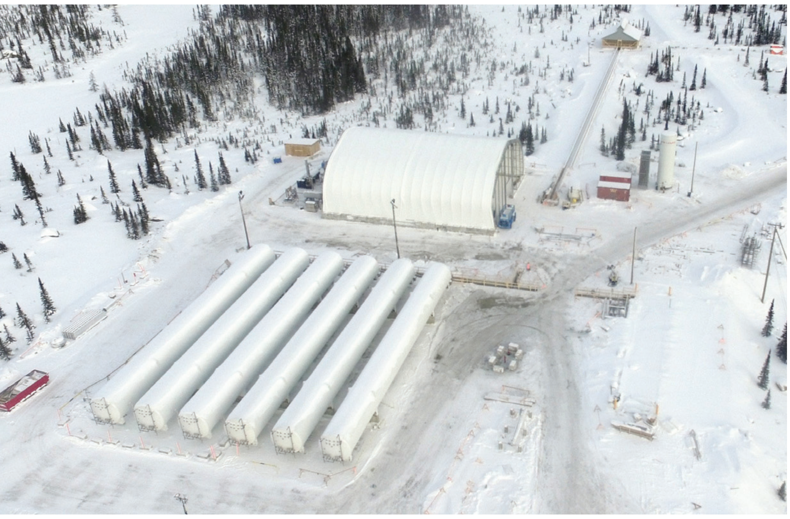
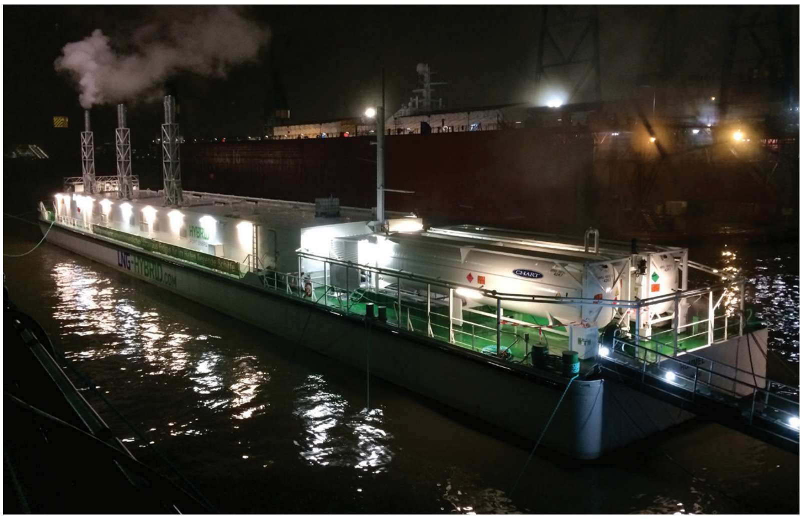
"This listing change is expected to benefit LNGL and its shareholders by properly positioning and valuing the Company for future success," added Cavicchi.

LNG Ltd, based in Sydney, said it believed the US listing change would increase awareness of the stock among North American investors who are familiar with the LNG industry and have significant capital to deploy to such assets.

The company also expected better valuation and better trading liquidity for the stock, given the current valuations for LNG Ltd's US-listed peers.

LNG Ltd. additionally forecasts that the change would make the company more attractive to potential future business partners.

Powering the Energy Future through LNG

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Eni of Italy says installation work has started in Korea on Mozambican Coral South FLNG hull

LNG Journal editor

Italian energy company Eni said it started installation work on the hull of the Coral South floating liquefied natural gas production plant to be deployed offshore Mozambique for start-up in 2022.

The FLNG hull is part of the Coral South project, which will put in production 450 billion cubic metres of natural gas from the giant Coral feed-gas reservoir.

Launch

The hull is expected to be launched in 2020 at the Samsung Heavy Industries shipyard at Geoje Island in South Korea where it is being constructed for the partners in the Eni Area 4 offshore resources licence in the Mozambican Rovuma Basin.

The Coral South FLNG facility will have a gas liquefaction capacity of 3.4 million tonnes per annum when completed and will be the second FLNG vessel to be deployed offshore Africa.

An FLNG project has been operational offshore Cameroon in West Africa since 2018 led by European energy firm Perenco and two further FLNG ventures are being developed off Mauritania and Senegal by BP of the UK and US company Kosmos Energy of Dallas, Texas.

FLNG hull for Africa will emerge from South Korean yard

The vessel, which will be 432 metres long and 66 metres wide and weigh about 220,000 tonnes, will house up to 350 personnel in its eight-storey accommodation module.

The facility will be anchored at a water-depth of around 2,000 metres by means of 20 mooring lines that weigh a combined 9,000 tonnes.

US major ExxonMobil has signed an agreement to acquire a 25 percent interest in Area 4 from ENI's stake. The remaining interests in Area 4 are held by China National Petroleum Corp. (CNPC) through its exploration and development subsidiary CNODC (20 percent), Korea Gas Corp. (10 percent), Galp Energia of Portugal (10 percent) and Mozambique's state-owned Empresa Nacional de Hidrocarbonetos (10 percent).

Construction works on Coral FLNG started in 2018 and is ongoing in seven operational centres across the world.

Construction of the mooring turret began in March and construction of the hull's 24 modules that contain the LNG storage tanks and sections of the treatment facilities began in September in South Korea.

Construction of the topside, consisting of 12 gas treatment and LNG modules, started last November, along with the living-quarters.

"By the end of 2019 the overall progress of the project is expected to exceed 60 percent completion," said Eni.

"Drilling and completion activities for the six subsea wells that will feed the liquefaction unit will begin in September 2019," noted the Italian company.

"The wells will have an average depth of approximately 3000 metres and will be drilled in about 2000 metres of water depth," stated Eni.

These activities are being carried out by the Italian-owned "Saipem 12000" drilling rig and will be completed by the end of 2020.

"Alongside the LNG infrastructure under construction, the Coral South project also includes a number of initiatives aimed at enhancing the overall capabilities of the local workforce," said Eni. ■

Eni and Qatar Petroleum hope to discover natural gas resources by sharing exploration off Kenya

East African exploration and production is now gathering pace with Mozambique developing multiple LNG projects, Tanzania looking to monetize discovered gas reserves and now Kenya entering the race with Italian energy company Eni and Qatar Petroleum joining forces offshore.

Eni said it had just signed an agreement with Qatar Petroleum that will see the Qatari national oil and gas company acquiring a share in the exploration blocks L11A, L11B and L12, in deep offshore Kenya.

The proposed deal is pending and is still subject to the approval of the Kenyan authorities.

Block L11A, L11B and L12 are located in water depths ranging between 1,000 and 2,700 metres.

"The blocks cover a total surface of about 15,000 square kilometres and hold high exploration potential," stated Eni.

Eni has already had success further south in the Rovuma Basin offshore Mozambique where it operates the Area 4 licence.

The Italians are leading their shareholders in a floating LNG project and an onshore liquefaction and export venture at Pemba in northeast Mozambique.

Tanzania, for its part, said in May 2019 it expected to join the group of LNG exporters by 2023 in a project involving companies such as Norwegian oil and gas player Equinor and Singapore-based Pavilion Energy as well as two oil majors, ExxonMobil and Royal Dutch Shell.

Offshore Kenya, Eni and French major Total currently hold 55 percent and 45 percent interests in the three blocks, with Eni acting as the operator.

Qatar Petroleum, whose Qatargas subsidiary operates the world's largest LNG export complex at Ras Laffan in Qatar, would acquire a 25 percent interest in each of the blocks, of which 13.75 percent would be purchased from Eni and the remaining stake from Total.

Accordingly, the composition of the Kenya joint venture should become Eni 41.25 percent, Total 33.75 percent and Qatar Petroleum 25 percent.

This is the latest in a series of Eni-Qatar Petroleum agreements for E&P joint ventures.

"Eni and Qatar Petroleum are already partners in Oman, Mexico, Morocco and Mozambique," said the Italian company.

Eni has been present in Kenya since 2014, through its subsidiary Eni Kenya. ■