

LNG Shipping News

AN LNG JOURNAL TITLE ON LNG CARRIERS

23 July 2020

Demand to remain stagnant through next year

LNGC demand could be slack through 2021 and any tightness in the market will probably not be seen until the middle or end of 2022, according to a recent webinar.

Oversupply will continue to negatively impact the market next year, said Poten and Partners in a recent webinar.

Gas prices will stay low, floating storage LNGCs will remain and shipping rates will continue to struggle, not helped by the extra 20% of shipping capacity to be delivered in the next two to three years.

Poten's Kristen Holmquist thought that US cargo export cancellations would continue through the rest of the summer and into the autumn. She said that to keep the balance, another 20-25 US cargoes needed to be cancelled in the next few months.

It was noticeable that Qatar had snapped up storage space in Europe - Zeebrugge and Montoir - and had expanded in Croatia through a new company - PowerGlobe. The Russians are now using Ukrainian storage facilities mainly for pipeline gas. Europe is going to be a critical backstop if Asia cannot handle much more storage, Poten said.

Qatar is also making use of floating storage in the Atlantic and the Middle East, as the producer was willing to sit on cargoes to help keep market share. For example, some cargoes were discharged in Asia last month, which had been sitting offshore for weeks.

Holmquist thought that a cold winter would go a long way to re-balance the market. "We see growth in China," she added but said it would not be enough to make up for



'Energy Liberty' was reported to be slow steaming earlier this year

the lost demand earlier this year.

As for supply, there have been significant delays in project developers' FIDs. There maybe a couple of small projects taking FID this year but most have been pushed back to 2021-2022. It takes about four years to commission a project, so tightness could be seen in 2022-2023 and in 2025-2026.

Overall, Poten thought that 2021 would see a 6-7 mill tonnes increase in demand, which could come from Brazil, Japan, south-east Asia and India.

Oversupply

This year's winter storage and inventory figures will fall but the current oversupply will last through next year.

She also said that floating storage had started early this year, whereas it is normally seen around October.

Through June, there were about 10-15 LNGCs idle with cargoes, but this figure rose to around 20 ships in early July, according to cFlow, S&P Global Platts trade-flow software.

ClipperData said that there were 29 laden LNGCs floating worldwide on 15th July. About 20 had been idle for three to seven days, eight had been idle for 10-23 days, and one LNGC for 25 days.

Traders and portfolio partici-

pants were taking advantage of the market structure to conduct carry trades, by chartering ships at the current low prices and hedging their exposure by selling forward JKM Derivatives.

The September/October JKM Derivatives contango structure was assessed at 62.5 cents/MMBtu on 14th July. With spot charter rates close to \$30,000 per day, the cost of storing a cargo was estimated at around 30-35 cents/MMBtu.

Several ships were also slow steaming.

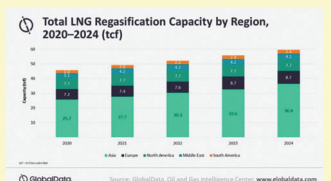
For example, Tokyo Gas' 'Energy Liberty' loaded at Cove Point on 23rd June initially for discharge at Sines in Portugal, showing an ETA of 28th June.

However, on 1st July, she changed her destination to Gate in Rotterdam giving an ETA of 27th July, but stopped on 3rd July in the middle of the Atlantic Ocean, and has been slow steaming since then, Platts said.

BP's 'British Contributor' was idle off South Korea near the Gwangyang terminal for three weeks having loaded from Freeport, Texas in late April. The ship was then diverted to CNOOC's Tianjin LNG terminal, where it discharged its cargo on 25th June, ship tracking data showed. ■

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Asia to dominate new LNG regasification capacity

Asia is expected to account for the highest global LNG regasification capacity increases.

The region is forecast to contribute about 69% of the total regasification capacity additions by 2024, according to a report from GlobalData.

This report, 'Global Capacity and Capital Expenditure Outlook for LNG Regasification Terminals, 2020-2024 - China Spearheads Global Regasification Capacity Additions and Capex Spending', revealed that Asia is likely to see total regasification capacity additions of 11.1 trillion cu ft by 2024. Out of this total, planned projects

capacity that had received the necessary development approvals accounted for nearly 7.9 trillion cu ft.

Haseeb Ahmed, GlobalData's Oil and Gas Analyst, commented: "Asia is expected to witness the start of operations of 53 newbuild LNG regasification terminals by 2024. Out of these, 39 are planned and the remaining 14 are announced terminals. China's Tangshan II is the largest upcoming LNG regasification terminal with a capacity of 584 billion cu ft by 2024, followed by Son My II with

a capacity of 450 billion."

Europe was identified as the second highest contributor to global LNG regasification capacity additions contributing around 10% by 2024.

In Europe, there are seven planned and three announced projects. Germany's Wilhelmshaven FSRU and Brunsbüttel are two of the largest forthcoming terminals with a capacity of 353 billion cu ft and 282 billion, respectively. Spain's El Musel is the third largest terminal with a total capacity of 247 billion due to come online by 2024.

Third is the Middle East contributing about 9% of world's LNG regasification capacity additions during the period. The region has two planned projects. Kuwait's Al-Zour is the largest with a capacity of 1,155 billion, while Bahrain FSRU is expected to have a total capacity of 292 billion cu ft by the end of outlook period.

Returning to Asia, China and India are expected to dominate the LNG regasification capacity

additions, contributing nearly 60% of the total between 2020 and 2024.

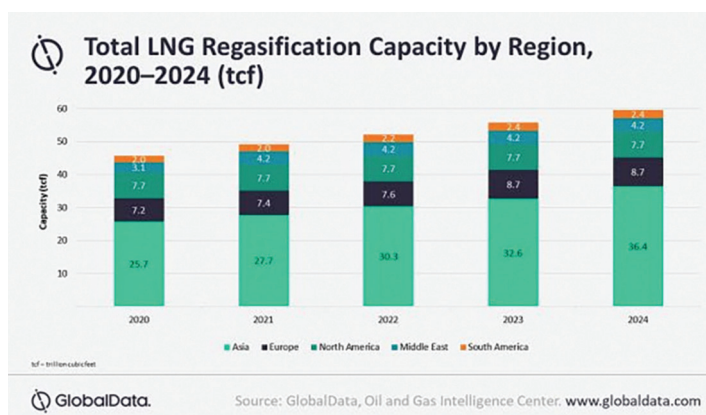
China is expected to develop newbuilding regasification capacity of 4,117 billion cu ft by 2024, while expansion projects account for the remaining 229 billion cu ft.

GlobalData expected India to add capacity additions of 2,511 billion cu ft by 2024.

India has 11 planned and four announced LNG regasification terminals expected to come online. The Karwar FSRU is the largest terminal in the country with a capacity of 365 billion cu ft followed by Yanam with 268 billion.

Pakistan and Vietnam are expected to add another 1,697 billion cu ft and 645 billion of LNG regasification capacity by 2024, respectively. The two countries are expected to have six and three upcoming projects each by 2024.

Thailand has two upcoming terminals - Nong Fab and Gulf of Thailand FSRU - with a total capacity of 609 billion cu ft to 2024. ■



Delfin LNG given a year's grace

The US Federal Energy Regulatory Commission (FERC) has approved Delfin LNG's request for an extension to bring online its onshore facilities.

The new startup date was set at 28th September, 2021.

According to local sources, Delfin had experienced difficulties in attracting LNG buyers, blaming the global pandemic, US/China trade disputes and the drop in global oil prices.

When built, the onshore facilities will deliver natural

gas to Delfin LNG's proposed deepwater port offshore Louisiana, which will consist of up to four FLNGs that could produce around 13 million tonnes of LNG per annum.

Delfin is also developing the 8 million tonnes per year Avocet LNG project, which could involve another two FLNGs ■



Delfin is based on FLNGs

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Jordan Cove gets final approval

US Secretary of Energy, Dan Brouillette, has issued the final order to authorise LNG exports from the proposed Jordan Cove LNG Terminal in Coos Bay, Oregon.

In 2014, the US Department of Energy (DOE) conditionally approved exports from the project. The US Federal Energy Regulatory Commission (FERC) had authorised the siting, construction, and operation of the terminal and the related Pacific Connector Pipeline in March of this year.

"(Today's) export authorisation for Jordan Cove, the first US West Coast LNG project, will ease access to further position the US as a top

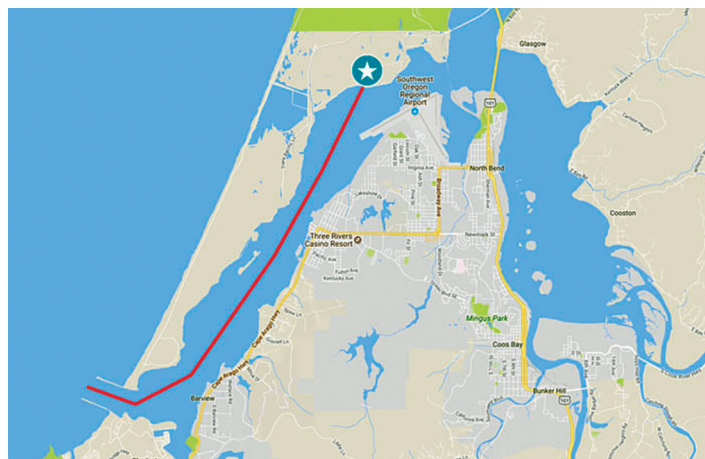
supplier of LNG around the world," said Secretary Brouillette. "(The) issuance to Jordan Cove serves to further expand opportunities for US LNG abroad, particularly in the growing markets of Asia, and encapsulates what the Trump Administration has been working hard on for the past three years - providing reliable, affordable, and cleaner-burning natural gas to our allies around the world."

Under the order, Jordan Cove

Energy Project, owned by Canada's Pembina Pipeline Corp, will be allowed to export up to 1,08 bill cu ft per day of natural gas as LNG.

The natural gas will be sourced from both Canada and the US and will be liquefied at Jordan Cove to be exported by LNGCs to any country with which the US does not have a free trade agreement and with which trade is not prohibited by US law.

"As we work to overcome the COVID-19 pandemic, LNG exports are going to be one of the building blocks toward the US' economic recovery," said DOE's Assistant Secretary for Fossil Energy, Steven Winberg. "The US has exported LNG to 38 countries, with this authorisation to Jordan Cove, the US can look to increase that number with expanded geographic coverage for LNG exports into key importing markets in Asia, providing enhanced economic opportunities both here in the US and globally."



Jordan Cove has received US DOE approval

Singapore seeks new LNG importers

The Singapore Energy Market Authority (EMA) has made a request for proposal (RFP) to select two new LNG term importers.

Having more LNG term importers will enhance competition and provide more options for Singapore gas buyers, the EMA said.

Natural gas is expected to be the dominant fuel for the island state in the near future, as it scales up its renewable energy options.

All interested parties were asked to submit proposals by 9th November, which will be evaluated based on their ability to provide reliable, secure and competitive LNG supply to Singapore.

Current importers are Pavilion Energy Singapore and Shell Eastern Trading. Both were appointed in 2017 through an RFP.

More Elba Island Trains ready

Kinder Morgan has asked US energy regulators for permission to put Train 7 into service at its Elba Island LNG export plant in Georgia.

It was also revealed that Train 8 was ready for service on 13th July, according to a US Federal Energy Regulatory Commission (FERC) filing.

Trains 1-6 are already operational with the latter entering into service in April. Each train is capable of liquefying about 0.3 mill tonnes per annum of LNG.

Kinder Morgan said that Train 7 was still in various stages of commissioning.

"Historically, we have not placed all of the units in service in sequential order, but we are still expecting to place all of the remaining units in service before the end of the summer," said

Katherine Hill, a Kinder Morgan spokeswoman talking with Reuters.

The first export cargo left Elba Island in December last year. However, no exports have left since January, as the US Government took steps to reduce the spread of coronavirus, amid cuts in global energy demand.

Elba, which is 51% owned by Kinder Morgan subsidiaries and 49% by EIG Global Energy Partners, is designed to liquefy a total of about 2.5 mill tonnes per annum of LNG.

Royal Dutch Shell has agreed a 20-year contract to offtake the LNG.

Botas opens tender for FSRU terminal work

Turkey's state-owned energy company Botas has opened a tender to build a jetty, measuring station and transit pipeline for its new FSRU LNG import terminal.

This terminal will be located on the Gulf of Saros in northwest Turkey, Platts said in a report.

According to the tender documents, the work involves the construction of a 320 m jetty, together with an onshore gas measuring station and 17 km of high pressure pipeline that will connect up with the Turkey/Greece interconnector pipeline.

Turkey has two onshore LNG import terminals and one FSRU in operation.

Bids for the tender are to be submitted by 5th August with work to be completed within 720 days of the contract being signed.

This follows April's expiry of Botas' lease on the FSRU 'MOL Challenger', which was moored at the company's terminal at Dortyol on Turkey's East Mediterranean coast.

A Botas official told S&P Global Platts last December that Botas had ordered another FSRU, which is currently under construction in South Korea and will be delivered this year. The FSRU will be used to import LNG at both Dortyol and at the planned Saros terminal, depending on market conditions.

According to data from Platts Analytics, only 15 LNG cargoes were delivered to Dortyol since its startup in February, 2018.

NEWS NUDGE

First Gen shortlists FSRU project winners

First Gen LNG Corp, a subsidiary of the Philippines-based Lopez-led First Gen Corp, has chosen three preferred bidders to participate in a competitive selection process (CSP) for an FSRU project.

"The three preferred tenders selected by FGEN LNG to participate in the FSRU tender process for the chartering of an FSRU for the project are BW Gas, GasLog LNG Services and Høegh LNG Asia Pte Ltd," First Gen said in a statement. ■

Petronet/Tellurian deal back on

India's largest gas importer Petronet LNG has resurrected a deal to invest \$2.5 bill in US LNG developer Tellurian's Driftwood project.

Under the revamped agreement, Petronet and Tellurian have until the end of December to sign a formal contract.

An earlier Memorandum of Understanding (MoU), which lapsed on 31st May, was renewed last week ahead of a virtual meeting between Indian oil Minister, Dharmendra Pradhan and US Energy Secretary, Dan Brouillette.

On 17th July, they co-chaired a virtual ministerial meeting of the US-India Strategic Energy Partnership (SEP) to review progress and prioritise new areas for co-operation.

The SEP, formed in 2017, organises co-operation focusing on oil and gas, power and energy ef-

ficiency, renewable energy, and sustainable growth.

Last September, Petronet signed a MoU to purchase up to 5 mill tonnes per annum of LNG from Driftwood for 40 years.

This deal hinged on Petronet making an investment of \$2.5 bill to take an 18% stake in the project.

Under the MoU, it was stipulated that the transaction should be finalised by 31st March, 2020. The timeline was extended to 31st May, 2020 after Petronet questioned the rationale behind an equity investment at a time when gas was so abundantly available worldwide.

At the time, Petronet also questioned locking into such large volumes from one supplier for a

40-year period when global rates were falling, due to the world's gas glut.

Earlier, to test the market, Petronet invited bids to buy 1 mill tonnes per annum of LNG for 10 years. Suppliers were asked to quote a price lower than 30 cents below the JKM LNG marker, which effectively brought the rate close to spot or current prices.

Tellurian was among the 13 suppliers to quote for the business but was not shortlisted. Only two companies qualified for the tender.

LNG prices under Petronet's current long-term deals with Qatar and Australia are around \$3.5-4.5 per MMBtu, compared to a spot price of about \$2 per MMBtu. ■

Lake Charles LNG construction bids evaluated

Energy Transfer is currently evaluating bids from contractors that have tendered to build the proposed Lake Charles LNG export facility, according to a regulatory filing.

The Louisiana project continues to be active and viable despite Shell's exit in March as an equity partner, the company said in a July monthly status report to the US Federal Energy Regulatory Commission (FERC).

Shell blamed market challenges when it pulled out of the export project, leaving Energy Transfer to go it alone.

"The project remains an active project fully-supported by Energy Transfer," the company said in the FERC filing.

Lake Charles LNG has received commercial bids from engineering, procurement and construction (EPC) contractors in response to a tender issued in December, 2019. In the filing, Energy Transfer did not disclose who the companies were or when a choice would be made.

The project involves adding liq-

uefaction facilities to the regasification terminal. FERC approved the scheme in 2015. To date, however, the developers have not disclosed any firm long-term offtake supply contracts.

After Shell quit the project, Energy Transfer said it was evaluating alternatives, including bringing in one or more equity partners and scaling back its size to two trains from three and reducing planned capacity to 11 mill tonnes per year from 16.45 mill tonnes.

In its status report to FERC, Energy Transfer said that Lake Charles LNG and BG LNG (Shell) are negotiating an amended regasification service agreement to replace the existing one.

In December last year, FERC granted Energy Transfer a five-year extension until late 2025 to complete the construction of the export facility. ■

NextDecade to reduce Rio Grande LNG trains

NextDecade Corp is to optimise its Rio Grande LNG (RGLNG) project by dropping a train.

The original front-end engineering and design (FEED) was based on six trains each capable of producing 4.5 mill tonnes per annum of LNG for export.

The technologies selected and filed with the US Federal Energy Regulatory Commission (FERC) in 2015 and 2016, have evolved over the five-year permitting period.

As a result, the LNG trains are now more efficient and will produce more LNG and lower the total carbon dioxide equivalent (CO2e) emissions.

Multiple optimisations have been identified that will lead to the delivery of an LNG project capable of producing 27 mill tonnes per year with just five LNG trains instead of six, NextDecade said.

Implementation of these initiatives will result in several environmental and community benefits when compared with the original six-train project including (i) about

21% lower CO2 emissions, (ii) shortened construction timeline for the full project, (iii) reduced facility footprint, and (iv) an expected reduction in road traffic.

"This is an extremely positive development for all of our stakeholders, as the environmental benefits from these optimisations are significant," said Matt Schatzman, NextDecade's Chairman and CEO. "In addition to the emissions reductions, we will achieve, these optimisations will reduce the project's footprint, traffic, and construction schedule, and demonstrate our ongoing commitments to the community in the Rio Grande Valley."

Any future development of Train 6 will require NextDecade to secure authorisation from FERC, the US Department of Energy, and any other relevant federal or state agency with jurisdiction over the export project, the company explained. ■



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Nakilat sees profit increase

Nakilat achieved a net profit of QR550 mill for the first half of this year, compared to QR476 mill during the same period in 2019 - an increase of 15.5%.

Its strong financial performance was primarily attributed to operational excellence in the management of its entire fleet and realising additional revenues from the strategic acquisition of the remaining 49.9% of four Q-Flex LNGCs in October, 2019, the company claimed.

Revenue increased by 11.3% to QAR2,021 mill, while general and administrative expenses decreased by 11.7%.

Despite the ongoing challenges of the global pandemic, Nakilat continued to uphold operational excellence in the management of its LNG and LPG carrier fleet and ensured no disruption to its business, the company said.

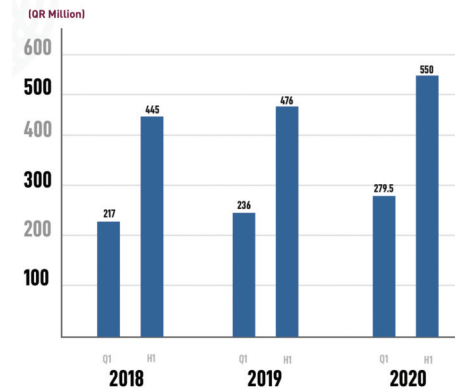
The successful commencement of Nakilat's second phase fleet management transition was among the main drivers of the positive financial results achieved, with

two vessels transitioned in the last quarter. In addition, the company took delivery of an LNGC new-building, which will be commercially and technically managed in-house and chartered by Qatargas.

The delivery of all four new-building LNGCs by the end of 2021 will bring Nakilat's fleet to 74 vessels, which is about 12% of current global LNG fleet in carrying capacity terms.

Nakilat CEO, Eng Abdullah Al Sulaiti, said: "In these uncertain times, Nakilat remains committed in delivering value for our shareholders, as we expand our international outreach to meet the growing demand for energy transportation. The company's sustained financial performance bears testament to our ongoing strategy on enhancing efficiency, rationalising expenditures, reduction of operational and adminis-

NAKILAT FINANCIAL PERFORMANCE FIRST HALF OF 2020



trative costs, as well as creating innovative solutions to uphold operational excellence in our services, without compromising safety and quality across our integrated operations.

"While we remain focused on achieving our strategic goals, we are also continually assessing the market and our current invest-

ments in relation to profitability to address any risk involved for the company and our shareholders. This allows us to navigate anticipated or unexpected challenges, to steer the company forward as a global leader and provider of choice for energy transportation and maritime services," he said.



FLEET SIZE

74 vessels

69* LNG Carriers

4 LPG Carriers

1 FSRU

*includes 4 newbuilds

GasLog refinances 2021 debt maturities

GasLog Ltd and GasLog Partners have signed three new loan agreements.

These are the GasLog Ltd \$577 mill facility, the GasLog Partners \$260 mill facility and the GasLog Partners \$200 mill facility.

These facilities will substantially refinance all of the Group's debt maturities, due in 2021, strengthen the balance sheet and create additional liquidity, GasLog said.

Key highlights of the transactions were:

- Refinances a total of about \$1 bill of debt outstanding across 12 vessels.
- Delivery of around \$30 mill of incremental liquidity for the Group.
- Amortisation profile of minimum 22-years and above with a five-year tenor.
- Attractive weighted average margin.
- Covenants in line with the

Group's existing bank credit facilities and its NOK 2024 bond.

- Simplifies the Group's bank debt into GasLog Ltd and GasLog Partners facilities.

The three new credit facilities are expected to close by the end of this month. They fully refund the \$266 mill due on the Five Vessel Refinancing credit facility and refund the majority of the \$724 mill due on the Legacy Facility Refinancing.

GasLog is currently arranging to refinance the remaining balance of the Legacy Facility Refinancing, secured by the 'GasLog Chelsea', due in 3Q20.

Citibank, ABN Amro, and Nordea Bank acted as global co-co-ordinators and bookrunners while HSBC acted as mandated lead arranger; Credit Agricole

Corporate and Investment Bank acted as lead arranger; and Uni-Credit Bank and National Australia Bank acted as arrangers for the syndicate in the \$577 mill facility.

BNP Paribas and Credit Suisse acted as co-co-ordinators and bookrunners and Alpha Bank acted as arranger in the syndicate for the \$260 mill facility.

DNB, London Branch and ING Bank, London Branch acted as co-co-ordinators and bookrunners for the \$200 mill facility.

In an organisational update, GasLog said that in November 2019, it announced plans to relocate more of its employees, including several members of senior management, to Piraeus, Greece, in order to reduce overheads.

Consequently, the headcount in the London office has now been

reduced to nine from 27. The plan is expected to generate annual savings of about \$6 mill beginning in 2021.

Peter Livanos, GasLog Chairman, stated; "I am very pleased to announce the continued delivery of our in-built growth, refinancing of our 2021 debt maturities a year ahead of schedule and further reductions in our cost base, all strategic priorities heading into 2020.

"Signing our largest refinancing during unprecedented uncertainty in credit and bank markets underscores the strength and scale of our platform to attract new capital providers. We appreciate the continued support from our banking partners which we are proud to say include leading financial institutions from around the world," he said.

Mozambique LNG financed - EPC work contracted

Mozambique's first onshore LNG project recently secured \$20 bill of financing.

The project is expected to reach financial completion by the third quarter of this year.

The sponsors, comprising of the project operator, Total, plus co-investors from Mozambique, Japan, Thailand and India, received legal advice from a cross-border team from Latham & Watkins, while the lenders received legal advice from White & Case.

Project investors included Mozambique gas company, Empresa Nacional de Hidrocarbonetos, two Japanese companies, namely Mitsui & Co and Japan Oil, Gas and Metals National Corp, plus Bangkok-based PTT Exploration and Production, and three Indian firms, Oil and Natural Gas Corp, Bharat Petroleum Corp and Oil India.

Comprising an integrated off-

shore gas development, and an onshore liquefaction plant, Mozambique LNG will be funded via a combination of \$16 bill senior debt facilities, pre-completion cash reserves, and equity. The senior debt consists of export credit agency facilities, commercial bank sources, and a loan facility, all with the African Development Bank.

"To date, Mozambique LNG is the largest project financing transaction in Mozambique and in Africa. On a global scale, this project will put Mozambique on the path to becoming a significant player in the LNG industry and a new global source of LNG. It is truly a ground-breaking transaction. It is a testament to the depth of Latham's global project finance practice and Africa expertise that

the sponsors entrusted us with this mandate," explained Latham & Watkins' co-head in Africa and co-lead of the advisory team, Clement Fondufe, in a statement.

Mozambique-specific legal matters were handled by Lisbon, Portugal law firms Vieira de Almeida & Associados, led by infrastructure and mobility partner Teresa Empis Falcão, and Miranda & Associados, led by managing partner Diogo Xavier da Cunha.

Latham & Watkins also played a key advisory role on a large refinancing for an Australian LNG project, last month.

For Mozambique, Belgium's marine construction specialist Besix, working with Mota-Engil, will build the marine facilities for the project.

Besix's two self-elevating platforms and crane barges will carry out the work, which is due to begin imminently. Besix and Mota-Engil signed an engineering, procurement and construction (EPC) contract with the CCS joint venture in April. CCS is made up of Saipem, McDermott and Chiyoda.

The EPC work will cover a material offloading facility and the LNG jetty and wharf. The jetty will be one of the world's longest, at 4,600 m, with five berths. Of these, four will be for LNG loading and the last will be for condensate. The work also covers associated mooring facilities.

This will allow two Q-Max and two Q-Flex LNGCs to berth simultaneously. Work is due to be completed in the first half of 2023. ■

GTT receives Chinese orders - to service Knutsen vessels

Last month, GTT received an order from Hudong-Zhonghua Shipbuilding (Group) for the tank design of three new LNGCs on behalf COSCO Shipping.

Each vessel will have a capacity of 174,000 cu m. GTT will design the vessels' tanks, which will be fitted with the NO96 L03+ membrane containment system.

The vessels' deliveries are planned for between the fourth quarter of 2022 and the second

quarter of 2023.

Also in the same month, GTT signed a global technical services agreement (TSA) with Knutsen OAS Shipping.

This new agreement will cover a fleet of 17 LNGCs by 2022 (12 currently in service and five under

construction), all equipped with Mark III Flex or NO96 containment technologies.

GTT will support Knutsen with the vessels' maintenance and operations, including on-site technical assistance for inspection, maintenance, repairs,

operations and engineering services.

Knutsen will also benefit from access to the patented HEARS emergency hotline, which enables shipowners and their crews to contact GTT experts 24/7 to respond to operational issues. ■

NEWS NUDGE

Nakilat brings another Q-Max in-house

Nakilat has assumed full shipmanagement and operations of the 2008-built Q-Max 'Bu Samra' from Shell.

The switch, which took effect on 8th July, was part of the sec-

ond phase of its planned fleet management transition programme.

She is the third LNGC to come under Nakilat Shipping Qatar Ltd's (NSQL) management this year, bringing the total number of vessels managed by NSQL to 22, comprising 18 LNGCs and four LPG carriers.

LISCR hires former USCG LNG expert

The Liberian Registry has appointed Dallas Smith as the Director of LNG and Offshore Technology.

He also takes on the role as General Manager of the Liberian International Ship and Corporate Registry's (LISCR) new Houston Office.

LISCR claimed that this move solidifies its position as a leading LNGC flag state.

Smith has had over 20 years of experience as an officer in the US Coast Guard. Before his retirement last month, he was head of the USCG Liquefied Gas National



LISCR has appointed Dallas Smith to look after the LNGC fleet

Centre of Expertise, where he was responsible for executing the USCG's entire liquefied gas safety, security, and environmental compliance mission worldwide. ■



Nakilat has taken the LNGC 'Bu Samra' in-house

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BSM launches new LNG cargo handling simulator facility

Bernhard Schulte Shipmanagement (BSM) has installed a new liquid cargo training facility at its Cyprus Maritime Training Centre (MTC).

This, combined with a structured career progression model, will ensure BSM's LNG crews are highly trained and competent to support its growing global LNG shipping operations, the company said.

The new initiative is part of a wider boost to LNG training across the whole company, reflecting increasing industry demand and more LNGCs entering the market.

A new liquid cargo simulator (LCS) was installed designed and developed by BSM's in-house technical team, which uses GTT Training software.

It offers realistic training on a wide range of vessel types: LNG fuelled ships and LNGCs with a combination of cargo containment systems and different propulsion systems, including steam turbine, DFDE, DF 2-stroke engines, with various options for LNG fuelled ship and LNG fuel supplier configurations.

BSM has also rolled out GTT's Training software in its MTCs in Mumbai, Manila and Poland. Crews in these locations will be able to complete the training in a classroom environment with the simulator display on screens.

However, the Cyprus MTC is the

first to have a dedicated simulator room, which offers a far more realistic and immersive experience, complimenting the existing training offered, BSM claimed. It makes the centre, which will also be open to seafarers from other companies and organisations, a valuable gas training hub for the whole region and will benefit new LNG seafarers, many of whom are expected to come from Eastern Europe.

The LCS will be used to train seafarers to meet the requirements of the STCW Code and of SIGTTO, as well as offering a range of bespoke in-house courses developed to a higher level of expertise (than STCW and SIGTTO) for the BSM-managed fleet and its seafarers.

BSM will also offer liquefied cargo operation training, approved by DNV GL to satisfy SIGTTO competency standards.

BSM's General Manager HR Marine, Andrew Hall, said: "Bernhard Schulte Shipmanagement has over 45 years of experience in the management of gas carriers, and currently manages more than 100 gas carriers, all staffed by our highly trained specialised gas fleet teams.

"We are committed to our sea-



BSM is installing LNG cargo simulators in its training centres

farer training at all levels, the new liquid cargo simulator will ensure that the technical and operational expertise, the understanding of key processes and knowledge of management best practice, of our seafarers working on board gas carriers and LNG fuelled ships is both industry leading and comprehensive.

"By only satisfying the minimum industry requirements we do not necessarily produce the best LNG crews, so we have added tailored development programmes to our range to ensure that we provide the best possible opportunities and to ensure we have highly competent seafarers on board our LNG

vessels," he said.

The courses offered by the BSM Cyprus MTC include:

- Advanced Liquefied Gas Tanker Operations (STCW).
- Basic Liquefied Gas Tanker Operations (STCW).
- Advanced Training for Service on Ships subject to the IGF Code (STCW).
- Basic Training for Service on Ships subject to the IGF Code (STCW).
- LNG Tanker Operations Management Level (SIGTTO).
- Liquefied Cargo Operations (non SIGTTO).
- A range of additional BSM and client specific training.

NEWS NUDGE

COSCO completes small-scale LNGC repairs

China's Cosco Shipping Heavy Industry has completed repairs on a 30,000 cu m LNGC, the second LNGC repair job undertaken by the yard.

Repairs were carried out on the CNOOC-owned small-scale LNGC, 'Hai Yang Shi You 301', which was drydocked at Cosco's Guangdong shipyard. The work took 28 days and the ship left the yard on 13th July.

Cosco said the inspection and repair work involved the vessels' dual-fuel main engine, liquid cargo pump and liquid cargo control system.

This ship is the first Chinese C-

type LNGC featuring bi-lobe cargo tanks. She was built in 2015 by Jiangnan Shipyard and is fitted with four TGE Marine C-type cargo tanks and a Wärtsilä dual-fuel propulsion system.

Hudong to deliver third Yamal LNG carrier

China's Hudong-Zhonghua Shipbuilding is set to deliver a third conventional Yamal LNGC out of a series of four.

The shipbuilder said that the 174,000 cu m 'LNG Phecda' left the Shanghai shipyard for gas trials on 3rd July.

Each of the 290 m long LNGCs, ordered by Mitsui OSK (MOL) and COSCO Shipping, features WinGD dual-fuel X-DF engines and GTT's cargo containment system (see page 7).

The fourth, 'LNG Megrez', is currently under construction.

Elsewhere, on 15th July, GasLog took delivery of the 180,000 cu m 'GasLog Westminster', fitted with WinGD's X-DF propulsion and GTT's Mark III Flex containment system.

GasLog said that the vessel was delivered on time and on budget and will immediately commence a seven-year charter with a wholly owned subsidiary of Centrica.

She is the third of seven vessels scheduled for delivery during 2020-21, all of which are fully funded and together are expected to generate around \$145 mill of EBITDA per annum.

Last week, Dutch gas shipping company, Anthony Veder reportedly took delivery of a 30,000 cu m LNGC from China's Zhejiang Xinle Shipbuilding in Ningbo.

She is the dual-fuelled 'Coral Encanto' primarily operating on LNG as a fuel but with the option to switch to conventional marine fuels.

Anthony Veder announced the purchase of the 181.3 m long small-scale LNGC fitted with type C tanks from Xinle in April, 2019.

Indonesian cargoes

Indonesia expects to ship about 203 LNG cargoes from its Tangguh and Bontang facilities this year.

The deputy head of finance at Indonesian oil and gas regulator SKK Migas, Arief Setiawan Handoko, told Reuters that Bontang will deliver about 82 cargoes while Tangguh is expected to supply about 121 cargoes.

Between January/June this year, Indonesia accounted for 104.8 cargoes.

Wärtsilä secures Arctic LNG-2 LNGC equipment orders

Wärtsilä is to deliver complete bridge systems for five icebreaking LNGCs to be built by Samsung for the Arctic LNG-2 project.

The navigational systems will be delivered by Wärtsilä Voyage, the new business responsible for digital solutions and decision support tools.

This order was placed in the first quarter of 2020 and Wärtsilä is now executing the order, in partnership with Samsung Heavy Industries' shipyard.

Under the contract, two similar bridges will be fitted in the vessels' superstructure; one will face 180 deg from the conventional position, which will allow the LNGCs to move both forward and aft, thus ensuring safe vessel navigation under adverse Arctic climate conditions.

Both navigation bridges on each ship will be equipped with a multi-function display system consisting of 12 multi-function workstations with a full set of basic applications, including ECDIS, Radar, Conning navigation information display system, BAMS alarm tracking system, and Navi-Planner for

advanced route planning.

Wärtsilä will also supply VSAT and IRIDIUM satellite communication systems.

The workstations will be fully integrated into a unified system, which allows the main operational functions to be duplicated, thereby improving safety of ice navigation.

Similar sets of equipment were installed on the Arc7s built at Daewoo for the Yamal LNG project during 2014-2018.

All the navigational systems planned for installation will be integrated with Wärtsilä Fleet Operations Solution (FOS) - which puts the previously fragmented services under one platform to build ship-to-shore synergies and improve operational processes.

"I'm sure that our experience in Yamal LNG project, along with the high professionalism of South Korean shipbuilders, and the ad-



Wärtsilä is to supply integrated bridge systems for Arctic LNG-2 LNGCs

vantages of integrated technologies, will make the LNG tankers under construction truly effective for solving urgent tasks and developing safe navigation in the Arctic," said Igor Gapesenko, Managing Director of Transas Navigator product line within Wärtsilä Voyage.

All the equipment installed on board will be fully compliant with the requirements of the Russian Maritime Register of Shipping (RS) and Bureau Veritas (BV). It is de-

signed and tested to operate year-round in heavy Arctic conditions at temperatures down to 52 deg C below zero. The equipment's installation is scheduled for 2020-2023.

The Arctic LNG-2 project involves the construction of three LNG production trains with a capacity of 6.6 mill tonnes per year, as well as stable gas condensate. The total capacity of three trains is projected to be 19.8 mill tonnes of LNG per year. ■

WinGD brings greater transparency to cylinder oil selection

LNGC engine designer WinGD (Winterthur Gas & Diesel) has prioritised collaboration and transparency in its new cylinder lubrication guide.

This was to ensure that selecting the right oil is even easier.

For the first time, the new documentation provides ship operators with consolidated, at-a-glance information highlighting the specific usage conditions for each and every approved cylinder oil.

The guidance is the result of several months' work with major oil companies to make usage requirements more transparent.

Previously, the guidelines for each oil were found only in the industry standard 'No Objection Letters' (NOL) issued by WinGD to oil companies, and available only upon request by a customer to an oil company.

Now this information is included in the full list of approved cylinder oils, the engine designer said.

To find an appropriate cylinder oil, users first select a suitable

Base Number (BN) range based on their fuel sulfur content and then look through the guide to see which oil products fall within this specified BN range.

The document then highlights whether each oil is approved for general, long-term use or whether further stipulations - such as a time limit or greater frequency of inspections - are required.

An additional category, labelled as 'DF validated' shows whether the oil has passed a validation trial while burning gas as the predominant fuel during that trial.

"Cylinder oil is not just another consumable on board - it's considered an important engine component that ensures reliable operation," said Frank Venter, WinGD Project Engineer Tribology Fuels & Lubricants. "Given the already wide variability in existing fuels available, it is important

that engine companies and oil suppliers work together to offer clarity for ship operators about which oils can be used and how.

"This will become increasingly important as we embrace a decarbonised future with potentially multiple varied sources of both liquid and gaseous fuels," he explained.

The development follows extensive work with oil majors in the run up to 2020 to ensure that cylinder oils could meet the challenges of new fuel types. The engine designer's validation procedure identified many cylinder oils with a broad spectrum of properties (including BN), which were fit for operation with both low and high-sulfur fuels, as well as for gas fuel operation.

WinGD designed 72-bore X-DF engines are fitted on board around 90% of the new LNGCs, either in operation or building. ■

LNG rate assessments

Spot market (155,000-165,000 cu m)

Region	This week	Change*
East of Suez	\$33,000	+\$2,000
West of Suez	\$36,000	+\$2,000
12 mos T/C	\$44,000	+\$1,000

*Since last report (08/07/20)

Source: Fearnleys (22/07/20)

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WORLD SMALL SCALE LNG FLEET*

Built	Name	CBM	Cargo Type	Trading area	Trading in LNG?	Ship Owner / Operator
1974	Seagas	187	LNG	Sweden	Yes	AGA
1988	Kayoh Maru	1,517	LNG	Japan	Yes	Daiichi
1993	Aman Bintulu	18,928	LNG	Malaysia - Japan	Yes	Perbadanan/NYK
1996	Surya Aki	19,475	LNG	Indonesia - Japan	Yes	MCGC
1997	Aman Sendai	18,928	LNG	Malaysia - Japan	Yes	Perbadanan/NYK
1998	Pelita Energy	18,800	LNG	Malaysia - Japan	Yes	Perbadanan/NYK
2000	Triputra	23,096	LNG	Indonesia - Japan	Yes	MCGC
2003	Pioneer Knutsen	1,100	LNG	Norway	Yes	Knutsen
2003	Shinju Maru No.1	2,540	LNG	Japan	Yes	Shinwa
2005	North Pioneer	2,500	LNG	Japan	Yes	Japan Liquid Gas
2007	Sun Arrows	19,531	LNG	Malaysia - Russia - Japan	Yes	Mitsui
2008	Kakurei Maru	2,536	LNG	Japan	Yes	Hogaki Zosen
2008	Shinju Maru No.2	2,540	LNG	Japan	Yes	Shinwa
2009	Coral Methane	7,551	LNG/LPG/Ethylene	Northwest Europe/Baltics	Yes, sometimes	Anthony Veder
2010	Coral Favia	10,000	LNG/LPG/Ethylene	Worldwide	No	Anthony Veder
2010	Coral Fraseri	10,000	LNG/LPG/Ethylene	Worldwide	No	Anthony Veder
2011	Akebono Maru	3,556	LNG	Japan	Yes	Chuo Kaiun
2011	Coral Furcata	10,000	LNG/LPG/Ethylene	Worldwide	No	Anthony Veder
2011	Coral Fungia	10,000	LNG/LPG/Ethylene	Worldwide	No	Anthony Veder
2011	Vision Spirit	12,000	LNG/LPG/Ethylene	Worldwide	No	Teekay
2011	Unikum Spirit	12,000	LNG/LPG/Ethylene	Worldwide	No	Teekay
2012	Coral Energy	15,600	LNG	Northwest Europe/Baltics	Yes	Anthony Veder
2013	JX Energy TBN	2,500	LNG	Japan	Yes	JX Energy
2013	Kakuyu Maru	2,500	LNG	Japan	Yes	Tsurumi Sunmarine
2013	Coral Anthelia	6,500	LNG/Ethylene			Anthony Veder
2015	LNG Barge TBN	3,000	LNG	US Coast	Yes	LNG America
2015	JS Ineos Ingenuity	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2015	JS Ineos Insight	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2015	JS Ineos Intrepid	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2015	PetroChina TBN	30,000	LNG	China		PetroChina
2016	Clean Jacksonville	2,200	LNG	US Coast	Yes	CME
2016	LNG Prime	2,250	LNG	Northwest Europe	Yes	Veka Deen LNG
2016	JS Ineos Indepence	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2016	JS Ineos Innvation	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2016	JS Ineos Inspiration	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2016	Hai Yang Shi You 301	30,000	LNG	Bali FSU	Yes	CETS (CNOOC)
2017	Oizmendi	600	LNG	Bilbao	Yes	Itsas Gas
2017	ENGIE Zeebrugge	5,000	LNG	Northwest Europe	Yes	NYK
2017	Coralius	5,800	LNG	Northwest Europe/Baltics	Yes, for Skangas	Anthony Veder
2017	Cardissa	6,500	LNG	Northwest Europe	Yes	Shell

For more information please visit <http://small-lng.com>

*Includes multi-gas, ethylene and LNG bunker ships with 40,000 cubic metres LNG cargo capacity or less

TBN = To Be Nominated indicates ships are still at construction/planning stage

** = project shelved † =Data to be verified Data last updated = 22nd July 2020

Built	Name	CBM	Cargo Type	Trading area	Trading in LNG?	Ship Owner / Operator
2017	LNG-Gorskaya TBN	7,300	LNG	Russia	Yes	LNG-Gorskaya
2017	LNG-Gorskaya TBN	7,300	LNG	Russia	Yes	LNG-Gorskaya
2017	LNG-Gorskaya TBN	7,300	LNG	Russia	Yes	LNG-Gorskaya
2017	Coral EnergiCE	18,000	LNG	Northwest Europe/Baltics	Yes	Anthony Veder
2017	JS Ineos Invention	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2017	JS Ineos Intuition	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2017	Coral Encanto	30,000	LNG	China	Yes	Anthony Veder
2018	HUA XIANG 8	13,720	LNG	China	Yes	Zhejiang Huaxiang
2018	LNG London	3,000	LNG	Northwest Europe	Yes	Shell
2018	Shell Bunker Barge TBN 2	6,500	LNG	Northwest Europe	Yes	Shell
2018	Shell Bunker Barge TBN 3	6,500	LNG	Northwest Europe	Yes	Shell
2018	Kairos	7,500	LNG	Baltic	Yes	Bernhard Schulte
2018	Bunker Breeze	0	LNG	Barcelona	Yes	Suardiaz Energy Shipping
2019	SM Jeju LNG1	7,500	LNG	Korea	Yes	Korea Line
2019	Stolt TBN	7,500	LNG	Mediterranean	Yes	Stolt-Nielsen Gas
2019	Stolt TBN	7,500	LNG	Mediterranean	Yes	Stolt-Nielsen Gas
2019	Gas Agility	18,600	LNG	NWE	Yes	MOL
2019	Flexfueller 001	1,480	LNG	Amsterdam	Yes	Titan LNG
2020	SM Jeju LNG2	7,500	LNG	Korea	Yes	Korea Line
2020	CNTIC VPOWER Global	28,000	LNG	Myanmar	Yes	Dalian Inteh Group
2020	Q-LNG 4000	4,000	LNG	US Coast	Yes	Q-LNG Transport/Harvey Gulf
2020	Stolt TBN (option)	7,500	LNG		Yes	Stolt-Nielsen Gas
2020	FuelLNG TBN	7,500	LNG	Singapore	Yes	FuelLNG
2020	CLS TBN	3,500	LNG	Japan	Yes	CLS
2020	Elenger TBN	6,000	LNG	NWE	Yes	Elenger
2020	ENN TBN	8,500	LNG	China	Yes	ENN
2020	Flexfueller 002	1,480	LNG	Antwerp	Yes	Titan LNG
2021	Stolt TBN (option)	7,500	LNG		Yes	Stolt-Nielsen Gas
2021	Knutsen TBN	30,000	LNG	Mediterranean	Yes	Knutsen OAS
2021	Gazprom Neft TBN	5,800	LNG	Russia	Yes	Gazprom Neft
2021	PE TBN	12,000	LNG	Singapore	Yes	MOL
2021	JMU TBN	2,500	LNG	Japan	Yes	JMU
2021	TBN	18,600	LNG	Mediterranean	Yes	MOL
2021	TG TBN	500	LNG	Korea	Yes	Trans Gas
2022	Stolt TBN	20,000	LNG	Worldwide	Yes	Stolt-Nielsen Gas
2022	Stolt TBN	20,000	LNG	Worldwide	Yes	Stolt-Nielsen Gas
2022	Clean Cañaveral	5,400	LNG	USG	Yes	PNE
2024	Stolt TBN (option)	20,000	LNG	Worldwide	Yes	Stolt-Nielsen Gas
2024	Stolt TBN (option)	20,000	LNG	Worldwide	Yes	Stolt-Nielsen Gas
2026	Stolt TBN (option)	20,000	LNG	Worldwide	Yes	Stolt-Nielsen Gas
2026	Stolt TBN (option)	20,000	LNG	Worldwide	Yes	Stolt-Nielsen Gas

For more information please visit <http://small-lng.com>

*Includes multi-gas, ethylene and LNG bunker ships with 40,000 cubic metres LNG cargo capacity or less

TBN = To Be Nominated indicates ships are still at construction/planning stage

** = project shelved † =Data to be verified Data last updated = 22nd July 2020

WORLD LNG CARRIER ORDERBOOK

Name	Containment system	Yard	Propulsion	Capacity	Delivery date	Primary Owner
Amberjack Lng	GTT Mark III Flex	Hyundai	XDF	174000	01/04/2020	Cardiff Marine
Gaslog Wales	GTT Mark III Flex	Samsung	XDF	180000	01/04/2020	GasLog
Qogir	GTT Mark III Flex	Samsung	XDF	174000	01/04/2020	Cardiff Marine
Elisa Larus	GTT Mark III Flex	Hyundai	XDF	174000	01/04/2020	NYK
Bonito Lng	GTT Mark III Flex	Hyundai	XDF	174000	01/04/2020	Cardiff Marine
Maran Gas Psara	GT NO 96	DSME	MEGI	173400	01/04/2020	Maran Gas Maritime
Gaslog Windsor	GTT Mark III Flex	Samsung	XDF	180000	15/04/2020	GasLog
Global Energy	GT NO 96	DSME	MEGI	173400	01/05/2020	Nakilat
Traiano Knutsen	GTT Mark III Flex	Hyundai	MEGI	180000	01/06/2020	Knutsen
Flex Aurora	GTT Mark III Flex	Hyundai	XDF	174000	01/06/2020	Flex LNG
Bw Pavilion Aramhera	GT NO 96	DSME	MEGI	173400	01/06/2020	BWGas
Flex Amber	GTT Mark III Flex	Hyundai	XDF	174000	01/07/2020	Flex LNG
Lng Phecda	GT NO 96	Hudong-Zhonghua	MEGI	174000	01/07/2020	MOL
SHI Gaslog #2	GTT Mark III Flex	Samsung	XDF	180000	15/07/2020	GasLog
SHI #1	GTT Mark III Flex	Samsung	XDF	174000	15/07/2020	Cardiff Marine
Scf Barents	GTT Mark III Flex	Hyundai	XDF	174000	01/08/2020	Sovcomflot
Energy Pacific	GT NO 96	DSME	MEGI	173400	01/08/2020	Alpha Gas
Flex Artemis	GT NO 96	DSME	MEGI	173400	01/08/2020	Flex LNG
Flex Resolute	GT NO 96	DSME	MEGI	173400	01/08/2020	Flex LNG
Vivit Americas Lng	GTT Mark III Flex	Hyundai	XDF	174000	01/09/2020	Cardiff Marine
Diamond Gas Metropolis	GTT Mark III Flex	Hyundai	XDF	174000	01/09/2020	NYK
Flex Freedom	GT NO 96	DSME	MEGI	173400	01/09/2020	Flex LNG
Cool Discoverer	GTT Mark III Flex	Hyundai	XDF	174000	01/09/2020	Thenamaris
Samsung 2297	GTT Mark III Flex	Samsung	XDF	180000	01/10/2020	Celcius Shipping
Samsung 2300	GTT Mark III Flex	Samsung	XDF	174000	01/10/2020	GasLog
Aristos I	GTT Mark III Flex	Hyundai	XDF	174000	01/10/2020	Capital Gas
Yiannis	GT NO 96	DSME	MEGI	173400	01/10/2020	Maran Gas Maritime
Samsung 2276	GTT Mark III Flex	Samsung	XDF	174000	01/10/2020	Cardiff Marine
LNG Megnez	GT NO 96	Hudong-Zhonghua	MEGI	174000	01/10/2020	MOL
Aristidis I	GTT Mark III Flex	Hyundai	XDF	174000	01/11/2020	Capital Gas
Global Star	GT NO 96	DSME	MEGI	173400	01/11/2020	Nakilat
Flex Volunteer	GTT Mark III Flex	Hyundai	XDF	174000	01/11/2020	Flex LNG
Daewoo 2498	GT NO 96	DSME	MEGI	180000	01/12/2020	MOL
Hyundai Samho 8008	GTT Mark III Flex	Hyundai	XDF	174000	01/12/2020	Sovcomflot
Samsung 2301	GTT Mark III Flex	Samsung	XDF	174000	01/12/2020	GasLog
Energy Endeavour	GT NO 96	DSME	MEGI	173400	01/12/2020	Alpha Gas
Daewoo 2481	GT NO 96	DSME	MEGI	173400	01/12/2020	Minerva Marine
Celcius #2	GTT Mark III Flex	Samsung	XDF	180000	15/12/2020	Celcius Shipping
Lngships Athena	GTT Mark III Flex	Hyundai	XDF	174000	01/01/2021	Cardiff Marine
Cool Racer	GTT Mark III Flex	Hyundai	XDF	174000	01/01/2021	Thenamaris
Samsung 2304	GTT Mark III Flex	Samsung	XDF	174000	01/01/2021	Minerva Marine
Samsung 2313	GTT Mark III Flex	Samsung	XDF	180000	01/02/2021	Celcius Shipping

DFDE = dual fuel diesel engines, STRH = steam turbine reheat / ultra steam turbine, MEGI = marine electric gas injection, DRL = slow speed diesel, FSRU = vessel with regas capacity, FLNG = floating LNG production unit
Data last updated = 1st April 2020

Name	Containment system	Yard	Propulsion	Capacity	Delivery date	Primary Owner
Bw Lesmes	GT NO 96	DSME	MEGI	174000	01/02/2021	BWGas
Daewoo 2499	GT NO 96	DSME	MEGI	180000	01/02/2021	MOL
Cobia Lng	GTT Mark III Flex	Hyundai	XDF	174000	15/02/2021	Cardiff Marine
DSME Minerva #2	GT NO 96	DSME	MEGI	173400	15/02/2021	Minerva Marine
Marvel Swan	GTT Mark III Flex	Samsung	XDF	173400	01/03/2021	Navigare
Bw Helios	GT NO 96	DSME	MEGI	174000	01/03/2021	BWGas
Hyundai Samho 8039	GTT Mark III Flex	Hyundai	XDF	174000	01/03/2021	Latsco Shipping
Hyundai Ulsan 3039	GTT Mark III Flex	Hyundai	XDF	174000	01/03/2021	Cardiff Marine
Flex Vigilant	GTT Mark III Flex	Hyundai	XDF	174000	01/03/2021	Flex LNG
SHI #18	GTT Mark III Flex	Samsung	XDF	174000	15/03/2021	Cardiff Marine
Aristarchos	GTT Mark III Flex	Hyundai	XDF	174000	15/03/2021	Capital Gas
Samsung 2302	GTT Mark III Flex	Samsung	XDF	174000	01/04/2021	NYK
Celcius #4	GTT Mark III Flex	Samsung	XDF	180000	15/04/2021	Celcius Shipping
DSME 2485	GT NO 96	DSME	MEGI	173400	15/04/2021	Alpha Gas
Hyundai Samho S971	GTT Mark III Flex	Hyundai	XDF	174000	01/05/2021	NYK
Diamond Gas Crystal	GTT Mark III Flex	Hyundai	XDF	174000	01/05/2021	NYK
Daewoo 2501	GTT Mark III Flex	DSME	MEGI	174000	01/06/2021	Maran Gas Maritime
Hudong-zhonghua H1827a	GT NO 96	Hudong-Zhonghua	XDF	174000	01/06/2021	CSSC
Daewoo 2495	GT NO 96	DSME	XDF	174000	01/06/2021	Maran Gas Maritime
Daewoo 2500	GT NO 96	DSME	MEGI	174000	01/06/2021	Alpha Gas
SHI Gaslog CE #1	GTT Mark III Flex	Samsung	XDF	180000	15/06/2021	GasLog
Attalos	GTT Mark III Flex	Hyundai	XDF	174000	15/06/2021	Capital Gas
Adamastos	GTT Mark III Flex	Hyundai	XDF	174000	01/07/2021	Capital Gas
DSME MOL #3	GT NO 96	DSME	MEGI	173400	15/07/2021	MOL
Asterix 1	GTT Mark III Flex	Hyundai	XDF	174000	01/08/2021	Capital Gas
SHI Gaslog CE #2	GTT Mark III Flex	Samsung	XDF	180000	15/08/2021	GasLog
Hyundai Ulsan 2939	GTT Mark III Flex	Hyundai	XDF	180000	01/09/2021	SK Shipping
Daewoo 2504	GT NO 96	DSME	XDF	174000	01/09/2021	Maran Gas Maritime
Daewoo 2502	GTT Mark III Flex	DSME	XDF	173400	01/09/2021	Nakilat
Samsung 2305	GTT Mark III Flex	Samsung	XDF	174000	01/09/2021	Minerva Marine
Diamond Gas Victoria	GTT Mark III Flex	Hyundai	XDF	174000	01/09/2021	NYK
Hyundai Samho 8040	GTT Mark III Flex	Hyundai	XDF	174000	01/09/2021	Latsco Shipping
Samsung 2355	GTT Mark III Flex	Samsung	XDF	174000	01/10/2021	NYK
Daewoo 2507	GT NO 96	DSME	XDF	174000	01/10/2021	Maran Gas Maritime
Hyundai Ulsan 3111	GTT Mark III Flex	Hyundai	XDF	174000	01/10/2021	Capital Gas
Samsung 2306	GTT Mark III Flex	Samsung	XDF	174000	01/10/2021	NYK
Hyundai Ulsan 3157	GTT Mark III Flex	Hyundai	XDF	174000	01/11/2021	Tsakos Energy Navigation
Samsung 2315		Samsung	XDF	174000	01/12/2021	
Hyundai Samho 8025	GTT Mark III Flex	Hyundai	XDF	174000	01/12/2021	Hanjin Shipping
Daewoo 2503	GTT Mark III Flex	DSME	XDF	173400	01/12/2021	Nakilat
Samsung 2307	GTT Mark III Flex	Samsung	XDF	174000	01/12/2021	NYK
Daewoo 2508	GT NO 96	DSME	XDF	174000	01/01/2022	Maran Gas Maritime
Hyundai Samho 8032	GTT Mark III Flex	Hyundai	XDF	174000	01/01/2022	NYK

Name	Containment system	Yard	Propulsion	Capacity	Delivery date	Primary Owner
Samsung 2336	GTT Mark III Flex	Samsung	XDF	174000	01/01/2022	JP Morgan
Hyundai Ulsan 3137	GTT Mark III Flex	Hyundai	XDF	200000	01/01/2022	Dynagas
Hudong-zhonghua H1828a	GT NO 96	Hudong-Zhonghua	XDF	174000	01/01/2022	CSSC
Samsung 2332	GTT Mark III Flex	Samsung	XDF	174000	01/01/2022	Minerva Marine
Hyundai Samho 8026	GTT Mark III Flex	Hyundai	XDF	174000	01/02/2022	Hanjin Shipping
Hyundai Samho 8033		Hyundai	XDF	173000	01/03/2022	NYK
Samsung 2316		Samsung	XDF	174000	01/03/2022	
Samsung 2319	GTT Mark III Flex	Samsung	XDF	174000	01/03/2022	Nisshin Shipping
Hudong-zhonghua #1	GT NO 96	Hudong-Zhonghua	XDF	80000	01/04/2022	K-Line
Hyundai Ulsan 3138	GTT Mark III Flex	Hyundai	XDF	200000	01/04/2022	Dynagas
DSME May19	GT NO 96	DSME	MEGI	174000	15/05/2022	Maran Gas Maritime
Hudong-zhonghua #2	GT NO 96	Hudong-Zhonghua	XDF	80000	01/06/2022	K-Line
Samsung 2317		Samsung	XDF	174000	01/06/2022	
Hyundai Ulsan 3145	GTT Mark III Flex	Hyundai	XDF	180000	01/07/2022	SK Shipping
Samsung 2337	GTT Mark III Flex	Samsung	XDF	174000	01/07/2022	JP Morgan
Hyundai Samho 8091	GTT Mark III Flex	Hyundai	XDF	174000	01/08/2022	Knutsen
Hyundai Ulsan 3185	GTT Mark III Flex	Hyundai	XDF	174000	01/08/2022	Korea Line
Daewoo 2509	GT NO 96	DSME	MEGI	174000	01/08/2022	BWGas
Samsung 2318		Samsung	XDF	174000	01/09/2022	
Daewoo 2510	GT NO 96	DSME	MEGI	174000	01/09/2022	BWGas
Hyundai Ulsan 3187	GTT Mark III Flex	Hyundai	XDF	174000	01/10/2022	JP Morgan
Hyundai Samho 8092	GTT Mark III Flex	Hyundai	XDF	174000	01/10/2022	Knutsen
Hyundai Ulsan 3186	GTT Mark III Flex	Hyundai	XDF	174000	01/10/2022	Korea Line
Hyundai Ulsan 3188	GTT Mark III Flex	Hyundai	XDF	174000	01/11/2022	JP Morgan
Hyundai Samho 8093	GTT Mark III Flex	Hyundai	XDF	174000	01/11/2022	Knutsen
Hyundai Samho 8094	GTT Mark III Flex	Hyundai	XDF	174000	01/12/2022	Knutsen
Samsung 2364	GTT Mark III Flex	Samsung	XDF	174000	01/01/2023	MISC
Samsung 2365	GTT Mark III Flex	Samsung	XDF	174000	01/02/2023	MISC

DFDE = dual fuel diesel engines, STRH = steam turbine reheat / ultra steam turbine, MEGI = marine electric gas injection, DRL = slow speed diesel, FSRU = vessel with regas capacity, FLNG = floating LNG production unit
Data last updated = Data last updated = 1st April 2020



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