

LNG Shipping News

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20 January 2022

A winter of discontent

LNGC rates are likely to fall this year, when compared to the levels seen in 2021, Poten & Partners said in one of the company's regular webinar updates last week.

This softer tone forecast was partly due to Panama Canal issues.

Volatility and strong gas prices are set to remain through 2022. At present, northeast Asia is experiencing a mild winter in contrast to Europe, where the weather has turned colder, which could lead to shortages.

Current European market tightness is also likely to continue but demand growth from the rest of world will moderate, due to firm prices, which although dropping to below \$30 per MMBtu, are still relatively high.

Last week, European gas storage was estimated at almost 26% below average and Russia seems unlikely to increase pipeline gas supplies, due to political reasons. Poten estimated that European winter gas demand would be around 51 mill tonnes, compared to 38 mill tonnes in the winter of 2020/2021.

However, the LNG imports forecast of 6 mill tonnes was not enough to replenish the storage void.

Northeast Asian LNG imports

were forecast to drop to 111 mill tonnes, compared with last year's 117 mill tonnes. Southeast Asian imports were described as relatively flat and growth is unlikely, due to the high prices. For example, India will import around 6 mill tonnes for the next six months.

Imports in the rest of the world are forecast to be almost 50% lower than seen in 2021.

Supply constraints

There is still little leeway in the supply side of the equation, so any growth must come from the demand side, Poten said. There are few capacity additions on the horizon this year and next, while exporter operational issues could also limit growth. Overall, growth increase is estimated at 13.5 mill tonnes.

Australian supplies were also described as flat with the 'FLNG Prelude' shutdown impacting on exports. Qatar's exports were also static, although the country's economic outlook has suggested that it will be the world's largest exporter by 2026 on the back of the

huge expansion project. In contrast, US exports increased to record highs with growth estimated to hit 5 mill tonnes.

However, again there is little or no prospect of expansion, due to the current LNG exporters operating close to capacity. To even reach this target, some of the supply issues will need to be resolved, Poten said.

Turning to 2023, total LNG supply will be limited to under 10% growth, due to new export infrastructure not coming on stream until 2024/2025.

However, the US Energy Information Administration (EIA) has estimated that US LNG exports will be nearly 85% higher in 2023, compared to 2020, due to production increases in the next two years.

Export capacity increases will lead to LNG exports averaging 11.5 bill in 2022 and 12.1 bill cu ft per day in 2023, the EIA claimed.

Natural gas production will average 96 bill cu ft per day through 2022 and rising to 97.6 bill in 2023.



Qatar is aiming to be the top exporter by 2026

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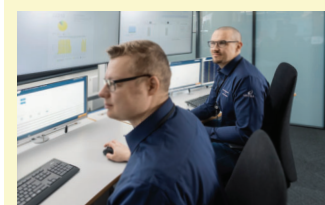
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A bumpy year ahead

As global LNG prices continue to trade at record highs, there are two key elements that will define prices this year - winter weather dynamics and the timing of Nord Stream 2's start-up, Wood Mackenzie said in a report.

Given current levels of Russian exports and considering normal weather conditions, European storage inventories will be under 15 bill cu m by the end of March - a record low, the company's analysis showed.

Prices will eventually come down as the winter draws to a close, but requirements to refill storage facilities will be high, some 20-25 bill cu m more than last year. The commissioning of Nord Stream 2 might well be the only option to refill storage and avoid a repeat of the last year's winter crisis.

WoodMac Vice President, Massimo Di Odoardo, said: "Weather dynamics in Asia will dictate whether the recent wave of US LNG imports to Europe will continue beyond January, limiting storage withdrawals and helping to rebalance the market.

"But Europe is not out of the woods yet. Cold weather in Asia could see local utilities deliveries in February and March, limiting LNG availability to Europe. A cold winter in Europe could add up to 10 bill cu m of additional gas demand, pushing storage inventories close to zero before the end

of March.

"Normal winter weather, including in Asia, and visibility on Nord Stream 2 commissioning, would push prices down, although demand for storage (and high carbon prices) will maintain prices above \$15 per MMBtu. But a cold winter in Europe and Asia, alongside continued uncertainty about commissioning of Nord Stream 2, could see prices increase further throughout 2022.

"Get ready for another bumpy year ahead," he warned.

Long-term LNG oil-linked contracts have been declining for the past 10 years, a consequence of increased availability of uncontracted supply, more recently from Qatar and reduced appetite for long-term contracts in favour of more spot exposure.

Oil-index deals

This year will be a turning point for LNG oil-indexed contracts, with the level of indexation firmly on the rise. With Asian LNG spot prices expected to average close to \$15 per MMBtu over the next five years, the current level of oil indexation (and oil prices) will re-

sult in a \$7 per MMBtu annual average discount over spot LNG. Inevitably, demand for long-term contracts will increase, pushing oil indexation levels up.

Contracting requirements will remain diverse over the next 10 years. Through 2025, limited uncontracted supply availability will fuel concerns regarding security of supply, pushing oil-indexed levels up.

However, beyond 2025, price hikes will be kept in check by increased availability of uncontracted supply from Qatar and Russia, uncertainties about long-term demand from legacy north-east Asia buyers and competitive Henry Hub plus contracts.

Oil-indexation levels will rise, potentially reaching 12% on a weighted average basis. But contracts due to commence before 2025 will attract premiums, while those starting after will be priced at a discount.

Vice President, Valery Chow, explained: "2021 saw the return of contracting activity to its highest levels over the last five years. Asia accounted for 85% of global contracts signed, with China lead-



Get ready for a bumpy year warns WoodMac's Massimo De Odoardo

ing the pack.

"We expect LNG contracting activity to remain strong in 2022. Chinese buyers are again expected to lead the way and account for most of new long-term contracts signed. On the other hand, we expect more muted activity from Japanese buyers.

"Despite high spot prices, long-term contracting for Japan is anticipated to continue softening in the face of energy transition uncertainties and greater confidence in the trading capabilities of the major buyers," she said.

WoodMac also forecast that 79 mill tonnes per annum of LNG planned production will take final investment decision (FID) over the next two years, including 33 mill tonnes in North America, 16 mill in Qatar and 20 mill tonnes in Russia. ■

LNG Alliance looks at Montenegro

Elektroprivreda Crne Gore AD Nikšić (EPCG), the Montenegrin national energy company, signed a Memorandum of Understanding (MoU) with LNG Alliance on 8th December, 2021.

The MoU will lead to a detailed feasibility study to con-

sider the construction of gas-fired power plants in Bar and Podgorica.

Once an adequate and feasible techno-commercial model is established, LNG Alliance will ensure the necessary conditions for investments in their development

and the LNG import infrastructure needed.

Provided that the conditions for the project are met, the gas for both plants would be imported through a dedicated LNG terminal at Bar. LNG Alliance will be responsible for its construction.

"We invest into new sustainable projects and develop partnership for a greener future. We are aspiring to create clean, affordable and reliable energy security in Montenegro," said EPCG and LNG Alliance in a joint statement. ■

LNG Shipping News

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China to be top importer this year

China will cement its position as the world's largest LNG importer this year.

As much as 21.5 mill tonnes of receiving capacity could be added, more than the 14 mill tonnes added in 2021 and 7.85 mill tonnes per year in 2020.

According to S&P Global Platts, eight new LNG terminal projects and two expansion projects will take China's total LNG receiving capacity to over 127 mill tonnes per year in 2022, if all the projects are on schedule, up from 105.8 mill tonnes at end of 2021.

One of the largest projects expected to come onstream in the second half of this year is Phase 1 of Suntien Green Energy's Caofeidian LNG terminal in northern Hebei province, which has a total planned capacity of 5 mill tonnes per year.

In December, the utility signed a deal with Qatargas for 1 mill tonnes per year of LNG for 15 years.

Hong Kong and Shanghai-listed Suntien is a Hebei provincial government controlled natural gas distributor and wind power producer. Its new terminal underlines

the growing trend of second-tier energy companies driving China's future LNG imports.

However, similar to its natural gas demand, Chinese LNG import growth may slow this year.

With sustained growth in domestic production and the ongoing ramp-up in pipeline imports from Russia via the Power of Siberia, room for LNG import growth in 2022 is diluted.

China's annual LNG imports are expected to increase by around 8 bill cu m in 2022, lower than the 16 bill cu m expected for 2021 and the five-year average annual increase of 14 bill cu m, according to Platts Analytics.

High prices

Higher global gas prices are likely to continue to weigh on Chinese downstream demand, at least through 1Q22, and could continue to hinder Chinese spot procurement throughout the year.

However, with contractual supply

increasing by an estimated 8.14 mill tonnes per year in 2022, excluding the Venture global deals, and 21 mill tonnes of new regasification capacity expected to come online, there remains momentum behind LNG import growth, even if spot exposure is falling.

"Watch for continued interest from Chinese buyers in signing mid to long term SPAs/tenders indexed to oil or Henry Hub given that spot JKM prices are expected to remain elevated above oil indexed levels through 2022.

"As such, developments in Europe will be critical in setting the spot price of LNG in Asia, highlighting the integrated nature of today's global gas markets," the analyst said.

A fundamental support for Chinese gas demand this year will be industrial users in many provinces, who will switch from coal to gas and suppliers like Cheniere receiving more LNG cargo inquiries from power generation companies and

NEWS NUDGE

Excelerate instigates IPO

Excelerate Energy has filed a registration statement on Form S-1 with the US Securities and Exchange Commission (SEC) for a proposed initial public offering (IPO) of its Class A common stock.

The company intends to list this stock on the New York Stock Exchange (NYSE) under the ticker symbol 'EE'.

The number of shares to be offered and the price range are subject to market conditions and have not yet been determined.

Barclays, JP Morgan, and Morgan Stanley are serving as joint lead book-running managers for the proposed offering. ■

even chemical companies, in addition to city gas and industrial users.

Pipeline gas imports into China from Russia are also expected to increase. ■

India to develop another import terminal

LNG Alliance, in co-operation with Indian local Government of Karnataka and New Mangalore Port Trust (NMPT), has unveiled plans to develop a major LNG import terminal.

This will have an initial capacity of 4 mill tonnes per annum with the potential to expand up to 8 mill tonnes in line with the estimated demand increase over the next 20 years.

In addition, this import and regasification terminal will also have an ISO LNG container and LNG truck loading facility to serve the industrial and transportation sector.

This terminal could also become India's first dedicated LNG bunkering facility for ships visiting New Mangalore and bunkering operations for the Indian West Coast.

LNG Alliance is a fully integrated turnkey project developer of LNG terminals and is building a global integrated LNG and Hydrogen infrastructure portfolio under its investment and asset operations joint venture arm, Aslan

Energy Capital, Singapore.

Investment

Over the next three years, LNG Alliance said that it intended to invest around \$290 mill to develop, construct, and operate an FSRU and manage the LNG supply at New Mangalore.

"We see this as an important step to meet India's cleaner energy goals of phasing down coal fired power plants and transitioning to an emission free economy using LNG as a bridging fuel.

"As part of this agreement, LNG Alliance will develop a tolling fee based floating LNG import terminal, within the maritime concession area of the NMPT. This terminal will also be open for third party access and will provide the most competitive tolling rates in India, based on the

LNG sourced from our supply partners," explained Dr Muthu Chezian, LNG Alliance, Singapore CEO.

"As part of the Invest Karnataka Conclave, chaired by the Chief Minister of Karnataka, a MoU was signed between LNG Alliance and the State of Karnataka in June, 2021, which formed the foundation of the current co-operation agreement signed between LNG Alliance and NMPT in December, 2021.

"The proposed LNG terminal at NMPT will accelerate industrial growth, create job opportunities across the city gas distribution (CGD) networks, and will provide reliable energy security to Karnataka," added Karnataka's Commissioner of Industries, Ms Gunjan Krishna.

"The LNG Terminal at NMPT will bring many benefits to the house-



LNG Alliance's Muthu Chezian

holds and industrial customers in Karnataka, most importantly affordable natural gas supply. Local industries will gain from the advantages of the new supply chains that are created through the establishment of satellite LNG/CNG fuel stations and LNG distribution through virtual pipelines, to reach the hinterlands of Karnataka and the growing CGD networks," commented Ms Cheryl Goh, Executive Director LNG Alliance. ■

Ceiba Energy wins Brazilian contract

Houston-based Ceiba Energy has won the contract to build, own and operate Brazil's Portocem 1.6 GW power plant project, which will include an FSRU.

Portocem LNG-to-power project will be located in the Pecém industrial and port complex, in the state of Ceará in northeast Brazil. It will include four, gas-fired, simple cycle units with capacity of 1.6 GW, fuelled by an FSRU.

The FSRU will also open up the possibility of bringing gas to the region to support industrial growth and energy transition, the company said.

Capacity will be sold to the Brazilian market as a reserve contract, minimising the risk of system wide blackouts in low hydrology years. Portocem's very competitive capacity price will back up the further expansion of cheap, renewable energy in Brazil, further contributing to long-term reductions in the cost of electricity in Brazil, Ceiba Energy claimed.

A total investment of BRL4.2 bill (about \$750 mill) will be financed by Ceiba's parent Denham Capital's equity funds and debt to be raised from local sources, such as regional and national development banks, as well as capital markets, among others.

Emilio Vicens, Ceiba Energy CEO, commented: "We are very pleased to announce the success of the Portocem project at auction, which when operational will supply 1.6 GW of reliable capacity to the national grid operator. Our entire Houston and Brazil based teams worked diligently for a few years to be in this privileged position with an asset of this scale and a capacity PPA of this quality in a market like Brazil.

"This asset complements and transforms our expanding portfolio of infrastructure projects in Brazil as we look to capitalise on the sig-

nificant growth potential in the LatAm region.

"This fully integrated LNG-to-power Portocem project has the strong support of world-class industry players and local Brazilian institutions, that are striving to deliver a reliable and cost-competitive power capacity solution in Northeast Brazil," he said.

Saurabh Anand, Denham's Sustainable Infrastructure Equity team Managing Director, added: "Brazil is a key market for Denham Capital where our investments help drive economic growth. Our significant investment in the Portocem project reaffirms our place at the forefront of financing the country's energy sector and complements our investment in Rio Energy platform that currently owns 1.1 GW of operating and under or near construction renewable energy projects.



Ceiba Energy's Emilio Vicens is overseeing a new Brazilian project

"As Ceiba rapidly continues its ambitious growth in the LatAm region, we look forward to continuing our partnership to develop projects which fuel sustainable economic growth and advance the energy transition," he said. ■

NOVATEK signs SPAs with Chinese importers

NOVATEK Gas & Power Asia and ENN LNG (Singapore), a subsidiary of ENN Natural Gas, have signed a long-term sale and purchase agreement (SPA) for LNG to be produced from the Arctic LNG 2 project.

The SPA stipulates the supply of around 0.6 mill tonnes per annum from Arctic LNG 2 for 11 years. It will be delivered on a DES basis to ENN's Zhoushan LNG receiving terminal.

A second SPA has been agreed with Zhejiang Energy Gas Group, a subsidiary of the Zhejiang Provincial Energy Group also for Arctic LNG 2 LNG.

This follows a Heads of Agree-

ment (HoA) signed by both parties on 2nd June, 2021 during the St. Petersburg International Economic Forum.

The SPA stipulates the supply of up to 1 mill tonnes of LNG per annum from Arctic LNG 2 for 15 years. The LNG will also be delivered on a DES basis to Zhejiang Energy's Chinese LNG terminals.

Arctic LNG 2 involves the constructing three LNG liquefaction

trains of 6.6 mill tonnes per annum each giving a total capacity of 19.8 mill tonnes, as well as cumulative gas condensate production capacity of 1.6 mill tonnes per annum.

The project's participants include - NOVATEK (60%), TotalEnergies (10%), CNPC (10%), CNOOC (10%) and Japan Arctic LNG, a consortium involving Mitsui & Co Ltd and JOGMEC (10%). ■

JAPEX moves into Vietnam

Japan Petroleum Exploration Co (JAPEX) is to participate in a project to build an LNG terminal in the northern part of Vietnam.

On 28th December, JAPEX signed a share purchase agreement with ITECO Joint Stock Co to promote the project and will now proceed with share acquisition procedures.

This project involves the construction of an LNG terminal in Nam Dinh Vu Industrial Park in Haiphong City and also the LNG's procurement, storage and supply.

The initial development will see the construction of a 50,000 cu m LNG storage tank and the associated jetty facilities, capable of handling up to 650,000 tonnes of LNG annually. Another 30,000 tonne tank is planned for the latter half of this decade as the development expands.

A final investment decision (FID) is expected in the second half of this year and operations are due to commence in 2025.

ITECO is currently in discussions about LNG procurement, as well as offtake and distribution. ■

NEWS NUDGE

GTT wins more tank designs

At the end of December, GTT received an order from Hyundai Samho Heavy Industries for the

tank design of a new 174,000 cu m LNGC.

The LNGC tanks will be fitted with the GTT Mark III Flex membrane containment system.

Delivery of the vessel is scheduled for the third quarter of 2024.

During the same month, GTT

received another order from an undisclosed shipyard for a smaller capacity LNGC, which will be fitted with GTT's NO96 L03+ membrane containment system.

This vessel is scheduled for delivery in the third quarter of 2023. ■

European demand hits Panama LNGC transits

LNGC Panama Canal transits fell by 30% in December.

Pacific-bound cargoes were diverted to the Atlantic to feed the strong demand and capture better earnings in Europe, data provided by the Canal Authority last week to S&P Global Platts showed.

This shift in trade flows reversed the consistently upward trend in recent years of LNG shipments via the shortest transit from the Gulf Coast to the East Asian import markets, amid sharp growth in US exports.

So far in January, the end-user markets dynamics have been following a similar pattern from a

supply and demand standpoint. Most recently, however, cargoes have begun to look east again, as European slots for February fill up.

"This time last year, the world's global economic recovery combined with a record cold winter in Asia, led to historic demand for LNG and a sudden surge in vessels arriving at the Panama Canal in hopes of transiting on the way to Asia," the Panama Canal Authority (PCA) said in a statement responding to Platts' questions. "Now, a year later, low temperatures and

energy shortages in Europe are driving demand for LNG flows in the opposite direction, with US exports re-routing to Europe."

The canal operator also said it wants to look beyond the next peak by speaking with customers and exploring more long term proactive and dynamic solutions.

There were 35 LNGC canal transits in December, down from 50 during the same month in 2021, according to the Panama Canal Authority.

All but one of the transits passed through with a reservation or an auction slot. Booked vessels transit promptly, while unreserved transits wait in a queue that last Autumn grew to as long as three weeks.

For the fourth quarter of last year, LNG transits fell by 17%, to 114, versus 138 during the same period in 2020, PCA's data showed.

European cargoes

In December, US FOB cargoes focus turned to Europe, as end-user prices surged to record highs. During most of the second half of the month, the spread between the Platts JKM, the benchmark for

spot-traded LNG delivered to northeast Asia, and the Dutch TTF European gas hub was negative, signalling better economics in delivering US cargoes to Europe.

This spread is often used as a sign of arbitrage potential between the Atlantic and Pacific basins. The inter-basin spread has remained negative thus far this month.

Meanwhile, shipping rates have plunged. The Atlantic day rate fell about 75% from its high in December to \$65,000 per day at the end of the month, while the Pacific day rate dropped about 70% from its peak during the month to \$90,000 per day on 31st December. Rates fell still further during the first 12 days of January - see page 9 for the latest rates.

"While LNG transits at the canal remained below forecasts and last year's numbers between October and December, 2021, allowing our teams to accommodate customers and minimise congestion, this latest situation reinforces the segment's volatility and how challenging it is to schedule these transits while serving all other segments," the PCA explained. ■



The Panama Canal has seen in a downturn in LNGC transits

Woodside to negotiate Commonwealth SPA

Woodside Energy Trading Singapore has signed a heads of agreement (HOA) with Commonwealth LNG to negotiate a sale and purchase agreement (SPA) for the supply of LNG.

The LNG will be supplied from Commonwealth's proposed development at Cameron, Louisiana.

Under the HOA, Woodside will negotiate for 2 mill tonnes per annum of LNG for 20 years, scheduled to begin in 2Q26.

However, Woodside's offtake obligation can be reduced or even eliminated if Commonwealth achieves increasing offtake commitments from other buyers. Woodside will also have an option to purchase an additional 500,000 tonnes of LNG.

Woodside CEO, Meg O'Neill, said: "This HOA with Common-

wealth secures access to competitive LNG in the Atlantic Basin and provides Woodside with the ability to build market scale through acquiring low cost supply."

Commonwealth LNG founder and CEO, Paul Varello, added. "Woodside is known throughout the industry for its keen technical oversight and commercial agility. This HOA is testament that Commonwealth's approach to lowering the cost of LNG produced in the US is gaining prominent support."

The HOA is non-binding and also conditional upon the negotiation and execution of a fully

termed LNG SPA, all necessary approvals being obtained and a final investment decision (FID) on the proposed development.

In addition, Woodside has completed the sale of a 49% non-operating participating interest in the Pluto Train 2 joint venture to Global Infrastructure Partners (GIP).

On 22nd November, 2021 the joint venture announced its FID, contemporaneously with the FID taken for the Scarborough development.

Pluto Train 2 is a key component of the Scarborough development and includes a new LNG

train and domestic gas facilities to be constructed at the existing Pluto LNG onshore facility.

The estimated capital expenditure for the Pluto Train 2 development on 1st October, 2021 was \$5.6 bill (100% project).

Under the joint venture arrangements, GIP is required to fund its 49% share of capital expenditure and an additional amount of construction capital expenditure of about \$822 mill. Woodside's capital expenditure will be reduced accordingly.

The project's first LNG cargo is targeted for 2026. ■

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For Teekay LNG read Seapeak

Teekay Corp has finalised the merger of Teekay LNG Partners with investment vehicles managed by Stonepeak.

As part of the merger, Teekay Corp sold all of its ownership interest in Teekay LNG, including around 36 mill Teekay LNG common units and Teekay GP, Teekay LNG's general partner.

This was equivalent to about 1.6 mill Teekay LNG common units. The price was \$17 per common unit or common unit equivalent in cash.

Teekay also transferred various management service companies to Teekay LNG that provide operations for the LNG subsidiary and certain of its joint ventures under existing management services contracts.

In return, Teekay Corp received total gross cash proceeds of around \$641 mill.

In mid-December, 2021, Teekay elected to redeem all of its outstanding 9.25% senior secured notes, due in November, 2022 under the related indenture at 102.313% of the principal amount.

As of 12th January, 2022, Teekay had \$243.4 mill total aggregate principal amount of the 2022 notes outstanding. The redemption was due to be com-



Stonepeak has finalised the takeover of Teekay LNG

pleted on 14th January, 2022.

In addition, on 10th January, 2022, Teekay announced a cash tender offer for any and all of its outstanding 5% convertible senior notes, due in January, 2023 at 102% of the principal amount.

As of January 12, 2022, Teekay had \$112.2 mill total aggregate principal amount of the 2023 notes outstanding. This cash tender is expected to be completed next month.

"Teekay's operating franchise and industry-leading capabilities

have been developed over our nearly 50-year history as a leader in the constantly evolving energy and transportation sectors.

"With the acquisition complete, Teekay LNG will be re-branded as Seapeak. The Partnership intends to convert to a limited liability company during the first quarter of 2022, at which time it will change its name to Seapeak.

"As Seapeak, the Partnership will launch a new organisational vision and identity, reflecting intentions to renew and grow its

Morocco seeks LNG import infrastructure

Morocco has invited bids to complete a study on the setting up of LNG infrastructure, including an FSRU, at Mohammedia.

The bid's deadline was reported to be 25th January.

In December, Moroccan Energy Minister, Leila Benali, told MPs that her Ministry was seeking to develop LNG infrastructure together with an FSRU that would supply the country with all of its gas needs.

Morocco relied on Algeria for most of its gas requirements until the the country stopped the gas flow through a pipeline last October, local media said.

Minister Benali also said that Morocco's gas consumption would increase from 1 bill cu m in 2021 to 3 bill by 2040.

Morocco has revised its renewable energy targets higher to 70% of the energy mix by 2040 and 80% by 2080 in a bid to meet its low-carbon goals. ■

primary business of owning and operating LNGCs and to explore potential opportunities," the company said. ■

NYK LNGC joins Wärtsilä's maintenance platform

Wärtsilä has signed a long-term optimised maintenance agreement with Singapore based NYK Shipmanagement.

The 13-year contract is designed to ensure maximum uptime and equipment reliability, with assured maintenance costs, for an LNGC fitted with three Wärtsilä 50DF dual-fuel engines.

This agreement covers maintenance and planning support. It includes Expert Insight, which enables dynamic, data-driven maintenance planning, optimising maintenance needs and monitoring equipment and systems in real-time through the use of artificial intelligence (AI) and advanced diagnostics.

Real-time monitoring allows Wärtsilä Expertise Centres experts

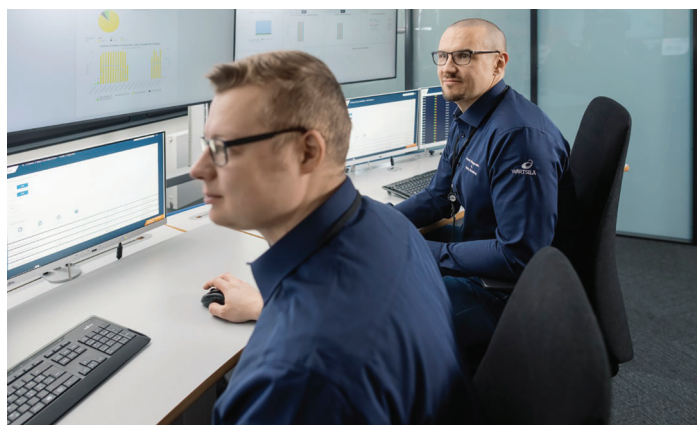
to provide customers with proactive support. By providing advice and suggestions for resolving potential operational disruption, this greatly reduces the need for unplanned servicing.

As a result, the vessel's uptime and availability are notably increased, Wärtsilä claimed.

"Our lifecycle customer support approach, as emphasised by these agreements, is a value-adding benefit that works to lower operating costs, reduce fuel consumption and support the customers in their de-carbonisation journey. We have enjoyed a long and close relationship with

NYK group and this agreement further strengthens the co-operation between our companies,"

said Henrik Wilhelms, Director, Agreement Sales, Wärtsilä Marine Power. ■



Another LNGC has joined Wärtsilä's maintenance initiative

ABS helps Nakilat to de-carbonise

Nakilat has partnered with ABS to develop a de-carbonisation strategy.

During the past few months, Nakilat's project team has worked closely with ABS' sustainability specialists to map out de-carbonisation pathways for the company's fleet of 69 LNGCs and four very large LPG gas carriers (VLGCs).

These efforts are part of Nakilat's drive to become a global maritime sustainability leader, the company said.

Ultimately, this project will see Nakilat's vessels receive the ABS Sustain notation, which demonstrates alignment with the United Nation's Sustainable Development Goals (SDGs) and establishes a pathway for sustainability certification and reporting.

Nakilat CEO, Eng Abdullah Al Sulaiti, said: "Nakilat has rapidly grown over the years to be a leader in the global energy transportation sector. We recognise the important role we play in reducing our carbon footprint and are com-

mitted to carry out our operations in a sustainable manner.

"In addition to this partnership with ABS, we are also leading a working group with our joint venture partners to ensure our global fleet operations meet with IMO's de-carbonisation targets. Our focus is on sustainable development of Nakilat's fleet beyond 2030, which contributes towards the realisation of Qatar National Vision 2030 and our own vision to be a global leader and provider of choice for energy transportation and maritime services," he said.

The notations were introduced with the ABS Guide for Sustainability Notations to help marine and offshore operators meet the Environmental, Social and Governance (ESG) requirements outlined in the SDGs.

This guide focuses on sustainability aspects of vessel design, outfitting and layout that can be



Qatargas' Global Energy' is one LNGC that will benefit from Nakilat's de-carbonisation initiative

controlled, measured, and assessed. These include, pollution and waste; coastal and marine ecosystems; energy efficiency and performance monitoring; low-carbon fuels; human-centred design; and asset recycling.

"It is a privilege to be able to support Nakilat in achieving their goal of becoming a leader in maritime sustainability. ABS is proud to work with forward looking operators that are not only committed to

finding a sustainable footing for the industry but to demonstrating how we can make significant strides towards realising that dream today.

"ABS is a pioneer in this space and is developing tools and strategies that help shipowners de-carbonise their operations, while simply and clearly demonstrating their progress towards zero carbon operations," said Georgios Plevrakakis, ABS Director, Global Sustainability. ■

ABS in two FLNG project awards

ABS has granted two Approval In Principles (AiP) for FLNG projects.

One was awarded to Wison Offshore and Marine's (WOM) extended FEED on its standardised 3.5 mill tonnes per annum FLNG design.

WOM claimed that the stan-

dardised design reduces CO2 emissions and results in a shortened engineering schedule by about 40%.

Jiang Hao, WOM General Manager, FLNG Division, said: "Thanks

for ABS's support in this project. WOM continues to optimise and standardise FLNG design, which would significantly improve the production efficiency and effectively reduce the carbon emissions in the production process.

"In the field of floating liquefied natural gas, WOM has been continuously accumulating technical experience, integrating internal and external resources.

"We are committed to providing low-cost FLNG solutions that can be delivered in a short period of time. In the future, we will continue working with our partners in innovating technologies and creating more value to our clients," he said.

The other award involved Samsung Heavy Industries' (SHI) design for an FLNG one-side spread mooring system.

Developed by SHI, this system allows an FLNG to be safely spread

moored on one side, enabling LNGCs to berth and load on the opposite side free from any obstructions.

"With more than 150 floating oil and gas facilities in the ABS-classed fleet, ABS is the market leader in classification of offshore production units, which includes FLNG assets. This means we are well placed to understand the unique requirements of these units, with a focus on safety. I'm proud to be able to support SHI with this innovation," said Matt Tremblay, ABS Vice President Global Offshore.

"The one-side spread mooring system is a patented technology that can replace complex turrets in a mild offshore environment," said Wang Lee, Vice President of SHI's Offshore Business Division. "It will be the optimised solution for shipping companies looking for economical FLNG models." ■

NEWS NUDGE

Malaysian carbon neutral cargo delivered

PETRONAS subsidiary, Malaysia LNG, has delivered a carbon neutral LNG cargo (CNLNG) to Hiroshima Gas.

PETRONAS Vice President of LNG Marketing & Trading, Sham-sairi Ibrahim, said, "We are proud to grow our 16-year relationship by being Hiroshima Gas' chosen partner for their first CNLNG cargo.

"Providing cleaner energy solutions through carbon offsets

will not only positively impact the LNG industry but will also create sustainable value for businesses, societies and the world at large," he said.

Hiroshima Gas Senior Executive Officer, Kazunori Tamura, added, "Our business as a city gas supplier is seeing an increasing need to offer carbon neutral city gas to our end-buyers. PETRONAS' ability to provide such solution is certainly essential to ensure we are on track in our sustainability goals. We are pleased to have collaborated with PETRONAS for our first CNLNG cargo." ■

NEWS NUDGE

Wogan announces retirement date

GasLog Ltd's CEO Paul Wogan is to retire on 9th March, 2022.

He will remain in an advisory role until 30th June, 2022 to ensure a smooth transition to his successor.

The Board has appointed the current COO and CEO of GasLog Partners, Paolo Enoizi, as CEO effective 10th March, 2022.

Peter Livanos, GasLog Chairman, said, "Under Paul's outstanding leadership over the last 10 years, GasLog has grown and developed to become one of the world's leading LNG shipping companies. I would like to express our sincere thanks to Paul for all his hard work and dedication to GasLog and wish him all the best in his retirement.

"I am very pleased that Paolo has agreed to take over the CEO role from Paul. Paolo has been GasLog's COO since April, 2019 and has been CEO of GasLog Partners since August, 2021," he said.

Sinopec receives first Qatari cargo

China's Sinopec Corp has received its first LNG cargo under a term supply deal signed last year with Qatar Petroleum.

The LNGC 'Al Sahla', carrying 94,000 tonnes of Qatari gas, arrived at Sinopec's Tianjin terminal earlier this week, the Chinese state-run Tianjin Daily reported.

Sinopec signed a long term contract with Qatar Petroleum

last March to supply 2 mill tonnes of LNG per annum for 10 years.

Ships - Newbuildings

A spate of newbuilding contracts have been reported in the past few weeks.

The pick of the bunch is -Mitsui OSK Lines (MOL) 7th January signing, through a subsidiary, of a long-term charter contract for six newbuilding LNGCs with CNOOC Gas & Power Singapore Trading & Marketing.

They will be built at Hudong-Zhonghua Shipbuilding in China and are due for delivery from 2024 through 2026.

The main assignment of the 174,000 cu m LNGCs will be to transport LNG to China under a long-term purchasing contract with CNOOC.

This project was realised through a partnership between MOL and COSCO Shipping LNG Investment (Shanghai) (CSLNG). MOL and CSLNG already jointly own and operate 17 LNGCs for an ExxonMobil project, an LNG transport project for Sinopec and the Yamal Project.

Also benefiting Hudong-Zhonghua was a Letter of Intent (LoI) signed for one, option one, 174,000 LNGC by China Shipping Energy Transportation (CSET) for 2025 delivery.

Remaining in China, the CSSC Leasing order reported at Jiangnan in the last LNG Shipping News was an LoI for one, option one 174,000 cu m vessel for

around \$194.3 mill for 2025 delivery, brokers reported.

Meanwhile, Maran Gas has turned two more options into firm orders at Daewoo for 174,000 cu m LNGCs.

It was also reported that MOL had ordered a seventh 174,000 cu m vessel but details were not revealed.

However, a DSME stock exchange filing earlier this week confirmed that the yard had won another order for a 174,000 cu m LNGC from Oceanian based interests for around \$208 mill.

Hyundai Samho has picked up an order from SK Shipping for a 174,000 cu m LNGC for 2024 delivery.

The cost was put at \$207.9 mill.

NYK affiliate, France LNG Shipping, has signed a long-term charter contract involving a newbuilding LNGC with EDF LNG Shipping.

The new 174,000 cu m vessel is scheduled for delivery in 2025 from Hyundai Samho Heavy Industries.

She will be fitted by WinGD-designed, dual-fuel slow-speed X-DF diesel engines and will also feature an Air Liquide Turbo-Brayton refrigeration system to tap surplus boil-off gas, plus a GTT membrane-type tank system.

Elsewhere, it has been widely reported that Taiwan is seeking to build a domestic fleet of up to 16 LNGCs.

Taiwan is known to be looking

to phase out nuclear power by 2025 and reduce the use of coal.

Taiwan's Maritime and Port Bureau (MPB) reportedly said that the country needs to develop its national fleet of LNGCs, as imports arrive on chartered vessels.

MTB will probably include the imported LNG shipments into the national ship's implementation project to encourage domestic shipping companies to build LNGCs, local media reports said, citing the bureau.

An announcement is expected later this year.

As for LNGCs entering service, TEN Ltd recently took delivery of the 174,000 cu m LNGC 'Ten-ergy' in South Korea.

She immediately commenced a charter to a major end-user.

The charter, for a minimum of five years at an accretive floor rate with market-related upside, is expected to generate minimum gross revenues of about \$100 mill.

"We are excited to continue expanding our presence in the ever-developing LNG space with the delivery and charter of this latest technology and environmentally friendly vessel," George Saroglou, TEN's COO commented. "TEN's growth prospects and cash flow visibility, with a minimum revenue backlog of over \$1 bill, with additional upside potential, enables management to pursue its growth strategy and diversify further TEN's footprint in the greater energy sector."

Monthly Large LNGC Values*

Newbuildings (174,000 cu m)	\$205.22 mill
Five years old (174,000 cu m)	\$164.86 mill
Total Fleet (540 ships)	\$67.01 bill
Orderbook (171 ships)	\$36.33 bill

*Source: VesselsValue (17/01/22)

*The above is updated each month courtesy of VesselsValue

LNG rate assessments

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

Region	This week	Change*
East of Suez	\$30,000	-\$30,000
West of Suez	\$30,000	-\$25,000
12 mos T/C	\$91,000	-\$3,000

*Since last report (06/01/22)

Source: Fearnleys (19/01/22)

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	Coral Furcata	10,000	LNG/LPG/Ethylene	Worldwide	No	Anthony Veder
2011	Coral Fungia	10,000	LNG/LPG/Ethylene	Worldwide	No	Anthony Veder
2011	Akebono Maru	3,556	LNG	Japan	Yes	Chuo Kaiun
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	Coral Anthelia	6,500	LNG/Ethylene			Anthony Veder
2013	JX Energy TBN	2,500	LNG	Japan	Yes	JX Energy
2013	Kakuyu Maru	2,500	LNG	Japan	Yes	Tsurumi Sunmarine
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	LNG Barge TBN	3,000	LNG	US Coast	Yes	LNG America
2015	PetroChina TBN	30,000	LNG	China		PetroChina
2016	Hai Yang Shi You 301	30,000	LNG	Bali FSU	Yes	CETS (CNOOC)
2016	Clean Jacksonville	2,200	LNG	US Coast	Yes	CME
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	LNG Prime	2,250	LNG	Northwest Europe	Yes	Veka Deen LNG
2017	Coralius	5,800	LNG	Northwest Europe/Baltics	Yes, for Skangas	Anthony Veder
2017	Coral EnergiCE	18,000	LNG	Northwest Europe/Baltics	Yes	Anthony Veder
2017	Coral Encanto	30,000	LNG	China	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	Oizmendi	600	LNG	Spain	Yes	Itsas Gas
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	Green Zeebrugge	5,000	LNG	Northwest Europe	Yes	NYK
2017	New Frontier 1	6,500	LNG	Northwest Europe	Yes	Shell
2018	Kairos	7,500	LNG	Baltic	Yes	Bernhard Schulte

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 = 1st September 2021

Built	Name	CBM	Cargo Type	Trading area	Trading in LNG?	Ship Owner / Operator
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	Bunker Breeze	1,200	LNG	Barcelona	Yes	Suardiaz Energy Shipping
2018	HUA XIANG 8	13,720	LNG	China	Yes	Zhejiang Huaxiang
2019	SM Jeju LNG1	7,500	LNG	Korea	Yes	Korea Line
2019	Gas Agility	18,600	LNG	NWE	Yes	MOL
2019	Flexfueller 001	1,480	LNG	Amsterdam	Yes	Titan LNG
2020	Avenir Advantage	7,500	LNG	Mediterranean	Yes	Avenir LNG
2020	Avenir Accolade	7,500	LNG	Mediterranean	Yes	Avenir LNG
2020	Avenir Aspiration	7,500	LNG		Yes	Avenir LNG
2020	Kaguya	3,500	LNG	Japan	Yes	CLS
2020	CNTIC VPOWER Global	28,000	LNG	Myanmar	Yes	Dalian Inteh Group
2020	Ecobunker Tokyo Bay	2,500	LMG	Japan	Yes	Ecobunkers
2020	Optimus	6,000	LNG	NWE	Yes	Elenger
2020	ENN TBN	8,500	LNG	China	Yes	ENN
2020	FueLNG Bellina	7,500	LNG	Singapore	Yes	FueLNG
2020	SM Jeju LNG2	7,500	LNG	Korea	Yes	Korea Line
2020	Q-LNG 4000	4,000	LNG	US Coast	Yes	Q-LNG Transport/Harvey Gulf
2020	Flexfueller 002	1,480	LNG	Antwerp	Yes	Titan LNG
2021	Avenir Ascension	7,500	LNG		Yes	Avenir LNG
2021	Avenir Allegiance	20,000	LNG	Worldwide	Yes	Avenir LNG
2021	Bergen LNG	850	LNG	Norway	Yes	Bergen Tankers
2021	Dmitry Mendelev	5,800	LNG	Russia	Yes	Gazprom Neft
2021	JMU TBN	2,500	LNG	Japan	Yes	JMU
2021	Ravenna Knutsen	30,000	LNG	Mediterranean	Yes	Knutsen OAS
2021	PE TBN	12,000	LNG	Singapore	Yes	MOL
2021	Gas Vitality	18,600	LNG	Mediterranean	Yes	MOL
2021	TG TBN	500	LNG	Korea	Yes	Trans Gas
2021	Titan Hyperion	8,000	LNG	Benelux	Yes	Titan LNG
2022	Veder TBN	30,000	LNG	Worldwide	Yes	Anthony Veder
2022	Avenir Achievement	20,000	LNG	Worldwide	Yes	Avenir LNG
2022	Knutsen TBN	5,000	LNG	Spain	Yes	Knutsen OAS
2022	Clean Cañaveral	5,400	LNG	USG	Yes	PNE
2023	Cryopeak TBA	4,000	LNG	West Canada	Yes	Cryopeak
2023	Knutsen TBN	12,500	LNG	Spain	Yes	Knutsen OAS
2023	SM Jeju LNG3	7,500	LNG	Korea	Yes	Korea Line
2023	Pan Ocean TBN	18,000	LNG	USG	Yes	Pan Ocean Co
2023	Krios	4,200	LNG	Benelux	Yes	Titan LNG
2023	Fratelli Cosulich TBN	8,000	LNG	Mediterranean	Yes	Fratelli Cosulich
2023	Kanfer TBN	6,000	LNG	Worldwide	Yes	Kanfer Shipping
2023	Kanfer TBN	6,000	LNG	Worldwide	Yes	Kanfer Shipping
2023	K Line TBN	18,000	LNG	Korea	Yes	K Line
2024	Avenir TBN (option)	20,000	LNG	Worldwide	Yes	Avenir LNG
2024	Avenir TBN (option)	20,000	LNG	Worldwide	Yes	Avenir LNG
2024	TBN	30,000	LNG	Australia	Yes	Anthony Veder ?
2026	Avenir TBN (option)	20,000	LNG	Worldwide	Yes	Avenir LNG
2026	Avenir TBN (option)	20,000	LNG	Worldwide	Yes	Avenir LNG

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*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 = 1st September 2021

WORLD LNG CARRIER ORDERBOOK

Name	Containment system	Propulsion	Yard	Delivery date	Capacity	Primary Owner
Clean Cajun	Unknown	XDF	Hyundai Heavy	Q1, 2022	200000	Dynagas
Elisa Aquila	Gtt Mkiii Flex	XDF	Hyundai Samho	Q1, 2022	174000	NYK
Global Sealine	Gtt96 Gw	XDF	DSME	Q1, 2022	173400	Nakilat
Maran Gas Kythira	Gtt96 Gw	XDF	DSME	Q1, 2022	174000	Maran Gas Maritime
Orion Sea	Gtt Mkiii Flex	XDF	Samsung	Q1, 2022	174000	JP Morgan
Orion Star	Gtt Mkiii Flex	XDF	Samsung	Q1, 2022	174000	JP Morgan
Alexey Kosygin	Gtt Mkiii	TFDE - Azipod	Zvezda SSK	Q1, 2023	172600	Smart LNG
Asterix I	Gtt Mkiii Flex	XDF	Hyundai Heavy	Q1, 2023	174000	Capital Gas
Hudong-zhonghua H1837a	Gtt96 L03+	XDF	Hudong-Zhonghua	Q1, 2023	79960	Shenzhen Gas
Hyundai Ulsan 3243	Unknown	XDF	Hyundai Heavy	Q1, 2023	174000	Knutzen
Samsung 2364	Gtt Mkiii Flex+	XDF	Samsung	Q1, 2023	174000	MISC
Samsung 2365	Gtt Mkiii Flex+	XDF	Samsung	Q1, 2023	174000	MISC
United Glory	Unknown	XDF	Hudong-Zhonghua	Q1, 2023	174000	ULT
DSME 1/4	Unknown	ME-GA	DSME	Q1, 2024	174000	MOL
Hudong-zhonghua H1829a	Gtt96 L03+	XDF	Hudong-Zhonghua	Q1, 2024	170520	CSSC
Hyundai Samho 8148	Unknown	XDF	Hyundai Heavy	Q1, 2024	174000	Knutzen
Hyundai Samho 8149	Unknown	ME-GA	Hyundai Samho	Q1, 2024	174000	Knutzen
Hyundai Ulsan 3244	Unknown	XDF	Hyundai Heavy	Q1, 2024	174000	Knutzen
Hyundai Ulsan 3292	Unknown	ME-GA	Hyundai Heavy	Q1, 2024	200000	Dynagas
Hyundai Ulsan 3293	Unknown	ME-GA	Hyundai Heavy	Q1, 2024	200000	Dynagas
Hyundai Ulsan 3294	Unknown	XDF	Hyundai Heavy	Q1, 2024	174000	Hyundai LNG Shipping
Hyundai Ulsan 3297	Unknown	XDF	Hyundai Heavy	Q1, 2024	174000	Hyundai LNG Shipping
Samsung 2461	Gtt Mkiii Flex	ME-GA	Samsung	Q1, 2024	180000	Celsius Shipping
Samsung Sovcomflot 4/4	Gtt Mkiii Flex	XDF	Samsung	Q1, 2024	174000	NYK
SHI Oct 1/4		Other/unknown	Samsung	Q1, 2024	174000	JP Morgan
ULT #5	Gtt96 L03+	XDF	Hudong-Zhonghua	Q1, 2024	174000	ULT
ULT #6	Gtt96 L03+	XDF	Hudong-Zhonghua	Q1, 2024	174000	ULT
BW DSME 1/2		ME-GA	DSME	Q1, 2025	174000	BWGas
Hudong-Zhonghua QP #3	Unknown	Other/unknown	Hudong-Zhonghua	Q1, 2025	175000	Qatar Petroleum
Qatar DSME 1/4	Unknown	MEGI	DSME	Q1, 2025	174000	Qatar Petroleum
Qatar HHI 1		Other/unknown	Hyundai Heavy	Q1, 2025	174000	Qatar Petroleum
Qatar HHI 2		Other/unknown	Hyundai Heavy	Q1, 2025	174000	Qatar Petroleum
Qatar SHI 1/2		ME-GA	Samsung	Q1, 2025	174000	Qatar Petroleum
Qatar SHI 2/2		ME-GA	Samsung	Q1, 2025	174000	Qatar Petroleum
Clean Copano	Unknown	XDF	Hyundai Heavy	Q2, 2022	200000	Dynagas
Grace Freesia	Gtt Mkiii Flex	XDF	Hyundai Samho	Q2, 2022	173000	NYK
Hudong-zhonghua H1788a	Gtt96	XDF	Hudong-Zhonghua	Q2, 2022	79960	K-Line
Lagenda Serenity	Gtt96 L03+	XDF	Hudong-Zhonghua	Q2, 2022	79960	K-Line
Samsung 2337	Gtt Mkiii Flex	XDF	Samsung	Q2, 2022	174000	JP Morgan
Vivit Arabia Lng	Gtt Mkiii Flex	XDF	Hyundai Samho	Q2, 2022	174000	H-Line
Daewoo 2515	Unknown	TFDE - Azipod	DSME	Q2, 2023	172500	Sovcomflot
El Ferrol Knutsen	Unknown	XDF	Hyundai Heavy	Q2, 2023	174000	Knutzen
Extremadura Knutsen	Unknown	XDF	Hyundai Heavy	Q2, 2023	174000	Knutzen
Hudong-zhonghua H1833a	Unknown	XDF	Hudong-Zhonghua	Q2, 2023	174000	ULT
Samsung 2426	Unknown	XDF	Samsung	Q2, 2023	174000	Pan Ocean
Daewoo 2522	Unknown	MEGI	DSME	Q2, 2024	174000	Hyundai LNG Shipping
DSME 2/4	Unknown	ME-GA	DSME	Q2, 2024	174000	MOL
Hudong-zhonghua H1830a	Gtt96 L03+	XDF	Hudong-Zhonghua	Q2, 2024	170520	CSSC

Name	Containment system	Propulsion	Yard	Delivery date	Capacity	Primary Owner
Hyundai Ulsan 3295	Unknown	XDF	Hyundai Heavy	Q2, 2024	174000	Hyundai LNG Shipping
Samsung 2579	Gtt Mkiii Flex	ME-GA	Samsung	Q2, 2024	180000	Celsius Shipping
SHI Oct 2/4		Other/unknown	Samsung	Q2, 2024	174000	JP Morgan
BW DSME 2/2		ME-GA	DSME	Q2, 2025	174000	BWGas
Hudong-Zhonghua QP #4	Unknown	Other/unknown	Hudong-Zhonghua	Q2, 2025	175000	Qatar Petroleum
Hyundai Ulsan 3320	Unknown	ME-GA	Hyundai Heavy	Q2, 2025	174000	JP Morgan
Qatar DSME 3/4		MEGI	DSME	Q2, 2025	174000	Qatar Petroleum
Qatar HHI 3		Other/unknown	Hyundai Heavy	Q2, 2025	174000	Qatar Petroleum
Samho Capital 1/3	Mark III Flex	ME-GA	Hyundai Samho	Q2, 2025	174000	Capital Gas
Samho Capital 2/3	Mark III Flex	ME-GA	Hyundai Samho	Q2, 2025	174000	Capital Gas
Bw Cassia	Gtt96 Gw	MEGI	DSME	Q3, 2022	174000	BWGas
Bw Iris	Gtt96 Gw	MEGI	DSME	Q3, 2022	174000	BWGas
Prism Diversity	Unknown	XDF	Hyundai Heavy	Q3, 2022	180000	SK Shipping
Santander Knutsen	Unknown	XDF	Hyundai Heavy	Q3, 2022	174000	Knutsen
Sm Albatross		XDF	Hyundai Heavy	Q3, 2022	174000	Korea Line
Sm Bluebird		XDF	Hyundai Heavy	Q3, 2022	174000	Korea Line
Daewoo 2516	Unknown	TFDE - Azipod	DSME	Q3, 2023	172500	Sovcomflot
Daewoo 2517	Unknown	TFDE - Azipod	DSME	Q3, 2023	172500	MOL
H-line #3	Gtt Mkiii Flex	XDF	Hyundai Samho	Q3, 2023	174000	H-Line
Hudong-zhonghua H1838a		XDF	Hudong-Zhonghua	Q3, 2023	79960	K-Line
Hyundai Samho 8105	Gtt Mkiii Flex	XDF	Hyundai Samho	Q3, 2023	174000	Sovcomflot
Hyundai Ulsan 3290	Unknown	ME-GA	Hyundai Heavy	Q3, 2023	200000	Dynagas
Lng Harmony	Unknown	XDF	Hyundai Heavy	Q3, 2023	174000	JP Morgan
Orion Sage	Unknown	XDF	Hyundai Heavy	Q3, 2023	174000	JP Morgan
Samsung 2425	Unknown	XDF	Samsung	Q3, 2023	174000	Maran Gas Maritime
Samsung 2459	Gtt Mkiii Flex	ME-GA	Samsung	Q3, 2023	180000	Celsius Shipping
Samsung Sovcomflot 1/4	Gtt Mkiii Flex	XDF	Samsung	Q3, 2023	174000	NYK
Sm Golden Eagle	Unknown	XDF	Hyundai Heavy	Q3, 2023	174000	Korea Line
Zvezda 042	Gtt Mkiii	TFDE - Azipod	Zvezda SSK	Q3, 2023	172600	Smart LNG
DSME 3/4	Unknown	ME-GA	DSME	Q3, 2024	174000	MOL
DSME 4/4	Unknown	ME-GA	DSME	Q3, 2024	174000	MOL
DSME MOL	Unknown	ME-GA	DSME	Q3, 2024	174000	MOL
Hyundai Ulsan 3221	Unknown	XDF	Hyundai Heavy	Q3, 2024	174000	Pan Ocean
Hyundai Ulsan 3224	Unknown	ME-GA	Hyundai Heavy	Q3, 2024	174000	Pan Ocean
Hyundai Ulsan 3296	Unknown	XDF	Hyundai Heavy	Q3, 2024	174000	Hyundai LNG Shipping
Hyundai Ulsan 3298	Unknown	XDF	Hyundai Heavy	Q3, 2024	174000	Hyundai LNG Shipping
Maran DSME	Gtt96 Gw	MEGI	DSME	Q3, 2024	174000	Maran Gas Maritime
Samsung 2473	Unknown	XDF	Samsung	Q3, 2024	174000	Maran Gas Maritime
Samsung 2474	GTT Mark III Flex	XDF	Samsung	Q3, 2024	174000	Maran Gas Maritime
Samsung 2584	Gtt Mkiii Flex	ME-GA	Samsung	Q3, 2024	180000	Celsius Shipping
Samsung 2585	Gtt Mkiii Flex	ME-GA	Samsung	Q3, 2024	180000	Celsius Shipping
SHI Oct 3/4		Other/unknown	Samsung	Q3, 2024	174000	JP Morgan
Sovcomflot #1	Gtt Mkiii Flex	XDF	Hyundai Samho	Q3, 2024	170520	Sovcomflot
Sovcomflot #2	Gtt Mkiii Flex	XDF	Hyundai Samho	Q3, 2024	170520	Sovcomflot
Zvezda 046	Unknown	TFDE - Azipod	Zvezda SSK	Q3, 2024	172600	Smart LNG
Zvezda 047	Unknown	TFDE - Azipod	Zvezda SSK	Q3, 2024	172600	Smart LNG
Hyundai Samho 8102	Unknown	ME-GA	Hyundai Heavy	Q3, 2025	174000	Knutsen
Hyundai Ulsan 3321	Unknown	ME-GA	Hyundai Heavy	Q3, 2025	174000	JP Morgan
Qatar DSME 2/4		MEGI	DSME	Q3, 2025	174000	Qatar Petroleum
Qatar HHI 4		Other/unknown	Hyundai Heavy	Q3, 2025	174000	Qatar Petroleum

Name	Containment system	Propulsion	Yard	Delivery date	Capacity	Primary Owner
Samho Capital 3/3	Mark III Flex	ME-GA	Hyundai Samho	Q3, 2025	174000	Capital Gas
Zvezda 051	Unknown	TFDE - Azipod	Zvezda SSK	Q3, 2025	172600	Smart LNG
Zvezda 052	Unknown	TFDE - Azipod	Zvezda SSK	Q3, 2025	172600	Smart LNG
Tenergy	Gtt Mkiii Flex	XDF	Hyundai Heavy	Q4, 2021	174000	Tsakos Energy Navigation
Vivirt City Lng	Gtt Mkiii Flex	XDF	Hyundai Samho	Q4, 2021	174000	H-Line
Alicante Knutsen	Unknown	XDF	Hyundai Heavy	Q4, 2022	174000	Knutsen
Daewoo 2514	Unknown	TFDE - Azipod	DSME	Q4, 2022	172500	Sovcomflot
Hudong-zhonghua H1831a	Not Applicable	XDF	Hudong-Zhonghua	Q4, 2022	174000	ULT
Huelva Knutsen	Unknown	XDF	Hyundai Heavy	Q4, 2022	174000	Knutsen
Lng Prosperity		XDF	Hyundai Heavy	Q4, 2022	174000	JP Morgan
Malaga Knutsen	Unknown	XDF	Hyundai Heavy	Q4, 2022	174000	Knutsen
Minerva Amorgos	Gtt Mkiii Flex+	XDF	Samsung	Q4, 2022	174000	Minerva Marine
Orion Song		XDF	Hyundai Heavy	Q4, 2022	174000	JP Morgan
Amore Mio I	Gtt Mkiii Flex	ME-GA	Hyundai Heavy	Q4, 2023	174000	Capital Gas
Axios II	Gtt Mkiii Flex	ME-GA	Hyundai Heavy	Q4, 2023	174000	Capital Gas
Daewoo 2518	Unknown	TFDE - Azipod	DSME	Q4, 2023	172500	MOL
Daewoo 2519	Unknown	TFDE - Azipod	DSME	Q4, 2023	172500	MOL
Daewoo 2520	Unknown	MEGI	DSME	Q4, 2023	174000	MOL
Daewoo 2521	Unknown	MEGI	DSME	Q4, 2023	174000	Hyundai LNG Shipping
Hyundai Samho 8101	Unknown	XDF	Hyundai Heavy	Q4, 2023	174000	Knutsen
Hyundai Samho 8139	Unknown	XDF	Hyundai Samho	Q4, 2023	174000	Knutsen
Hyundai Ulsan 3291	Unknown	ME-GA	Hyundai Heavy	Q4, 2023	200000	Dynagas
Jiangnan H2637	Gtt Mkiii Flex	XDF	Jiangnan	Q4, 2023	79800	Jovo Energy
Samsung 2460	Gtt Mkiii	ME-GA	Samsung	Q4, 2023	180000	Celsius Shipping
Samsung Sovcomflot 2/4	Gtt Mkiii Flex	XDF	Samsung	Q4, 2023	174000	NYK
Samsung Sovcomflot 3/4	Gtt Mkiii Flex	XDF	Samsung	Q4, 2023	174000	NYK
Sm Kestrel	Unknown	XDF	Hyundai Heavy	Q4, 2023	174000	Korea Line
ULT #4	Gtt96 L03+	XDF	Hudong-Zhonghua	Q4, 2023	174000	ULT
Zvezda 043	Gtt Mkiii	TFDE - Azipod	Zvezda SSK	Q4, 2023	172600	Smart LNG
Zvezda 044	Gtt Mkiii	TFDE - Azipod	Zvezda SSK	Q4, 2023	172600	Smart LNG
Zvezda 045	Unknown	TFDE - Azipod	Zvezda SSK	Q4, 2023	172600	Smart LNG
DSME Gaslog 1/4		MEGI	DSME	Q4, 2024	174000	GasLog
DSME Gaslog 2/4		MEGI	DSME	Q4, 2024	174000	GasLog
Hudong-Zhonghua QP #1	Unknown	Other/unknown	Hudong-Zhonghua	Q4, 2024	175000	Qatar Petroleum
Hudong-Zhonghua QP #2	Unknown	Other/unknown	Hudong-Zhonghua	Q4, 2024	175000	Qatar Petroleum
Hyundai Samho 8100	Unknown	XDF	Hyundai Heavy	Q4, 2024	174000	Knutsen
Hyundai Ulsan 3222	Unknown	XDF	Hyundai Heavy	Q4, 2024	174000	Pan Ocean
Hyundai Ulsan 3225	Unknown	ME-GA	Hyundai Heavy	Q4, 2024	174000	Pan Ocean
Hyundai Ulsan 3299	Unknown	XDF	Hyundai Heavy	Q4, 2024	174000	Hyundai LNG Shipping
Maran DSME 2	Gtt96 Gw	MEGI	DSME	Q4, 2024	174000	Maran Gas Maritime
Orion Sky	Unknown	XDF	Hyundai Heavy	Q4, 2024	174000	JP Morgan
SHI Oct 4/4		Other/unknown	Samsung	Q4, 2024	174000	JP Morgan
Zvezda 048	Unknown	TFDE - Azipod	Zvezda SSK	Q4, 2024	172600	Smart LNG
Zvezda 049	Unknown	TFDE - Azipod	Zvezda SSK	Q4, 2024	172600	Smart LNG
Zvezda 050	Unknown	TFDE - Azipod	Zvezda SSK	Q4, 2024	172600	Smart LNG
DSME Gaslog 3/4		MEGI	DSME	Q4, 2025	174000	GasLog
DSME Gaslog 4/4		MEGI	DSME	Q4, 2025	174000	GasLog
Qatar DSME 4/4		MEGI	DSME	Q4, 2025	174000	Qatar Petroleum
Zvezda 053	Unknown	TFDE - Azipod	Zvezda SSK	Q4, 2025	172600	Smart LNG
Zvezda 054	Unknown	TFDE - Azipod	Zvezda SSK	Q4, 2025	172600	Smart LNG
Zvezda 055	Unknown	TFDE - Azipod	Zvezda SSK	Q4, 2025	172600	Smart LNG

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 = 9th December 2021