

LNG Shipping News

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17 March 2022

Ukraine - A distraction from larger trends in seaborne LNG market

The Ukraine crisis has sent global gas prices sky rocketing, but there may be bigger forces at work in the seaborne LNG market.

While the world awaits developments on pipeline supplies, ship tracking data on seaborne LNG volumes may assuage the worst fears, VesselsValue said in a note.

The European benchmark TTF gas price has risen 135% so far this year, with a near-vertical spike since Russia commenced hostilities in eastern Ukraine on 24th February.

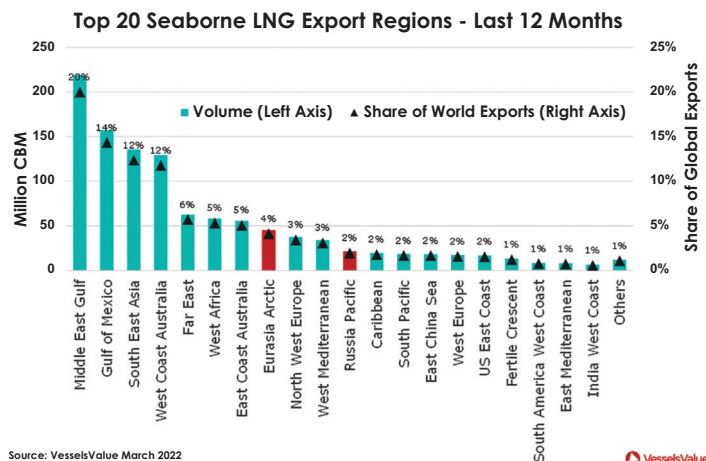
Russia is the world's largest exporter of gas and exports around 23 bill cu m of gas every day, about half of which goes to Germany, Italy, France and Belarus.

However, the vast majority of gas is piped and neither Russia nor Europe are explicitly threatening pipeline supplies thus far. Despite energy majors moving to unwind their interests in the country and a visible impact on Russia's oil exports, there is not yet a decline in LNG volumes.

Russia's share of the seaborne LNG market is certainly large enough to affect the global supply/demand balance. Of the top 20 exporting regions over the last 12 months, the country accounted for two - Eurasian Arctic contributed 4% of total volumes and the Russian Pacific another 2%.

However, there are four much larger export regions, which each account for double-digit shares: the Middle East Gulf (20%), Gulf of Mexico (14%), southeast Asia (12%) and West Coast Australia (also 12%). Smaller changes in any of these four regions could outweigh larger moves in the two Russian regions.

Neither of the two Russian areas are yet exhibiting any unusual drop in seaborne volumes as at the middle of March. Volumes of LNG on the water were trending



in line with recent historical averages and last year's levels.

Offtake agreements

Compared to oil exports, which have plummeted as traders have shown almost complete unwillingness to buy Russian cargoes, this is to be expected, as oil is primarily purchased on the spot market, whereas LNG is dominated by long term offtake agreements. As a result, LNG cargoes have, in effect, already been bought.

However, how long it takes for these exports to find buyers willing to import LNG, particularly for Yamal LNG's westbound cargoes, is another matter. But for the time being, supplies are there and, with the market so hot, they should soon clear.

The two Russian regions together contribute around 2 mill cu m per day to the seaborne LNG market. When looking at the top four export regions, the much larger concern becomes whether a loss of that amount can be offset by gains from the other exporters.

For example, volumes from the Middle East Gulf are trending 2 mill

cu m per day below the three-year averages and last year's levels.

For now, it appears a 3 mill cu m gain in Gulf of Mexico volumes is more than enough to offset this. This region is a relative newcomer to the market and still in ramp up mode. Furthermore, as a newcomer, less of it is shipped under long term offtake agreements and a higher proportion is traded on a spot basis, making it more sensitive to global price signals.

This can also be said of the 1 mill cu m gain from southeast Asia, which includes not only major oil and gas producer Indonesia but also regional storage and trading hub Singapore. West Coast Australia, meanwhile, is broadly stable.

These volumes dwarf those emanating from Russia. While the market awaits further developments on the fate of Russia's pipeline gas exports to Europe, perhaps these early indicators from the seaborne LNG market will assuage the worst fears of those in the gas and power industry and bring prices down from current astronomical levels, VesselsValue concluded.

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Ukraine - Russian oil and gas supplies uncertainty to sustain high energy prices

Moscow's decision to escalate its eight-year conflict in Ukraine has sparked a global energy crisis, GlobalData said.

The data and analytics company claimed that the impact of this conflict echoes the 1970s oil crisis that launched the Gulf's first major economic boom.

Richard Thompson, Editorial Director at GlobalData's MEED, said that the immediate impact of Russia's invasion of Ukraine was to trigger massive volatility in global capital markets and a spike in commodity prices that has added to the inflation fears already threatening the global recovery.

However, the strategic impact of the crisis exposed Europe's over dependence on Russian energy, particularly its gas.

As a result, in the coming months and years a strategic realignment of global energy and a European move away from Russian oil and gas supplies to alternative sources, such as renewables, coal, nuclear and Middle East hydrocar-

bons, will be seen.

Thompson said: "In the longer term, unless a peace settlement is reached soon, Moscow's actions in Ukraine will see Russian oil and gas exports reduced or even blocked altogether from the global energy supply chain.

"The scale and pace of the reductions will be shaped by the extent of Western embargoes on Russia's oil and gas sales, which will further expose Europe's dependence on Russia," he added.

Oil price surge

The mere prospect of oil and gas sales from the world's third largest oil producer and second biggest producer of natural gas being removed from the international market saw oil prices surge to nearly \$138 a barrel on 7th March – their highest mark since 2008, and some 45% higher than at

the start of the crisis.

Prices have come off since with Brent recording \$102 per barrel and Henry Hub at \$4.75 per MMBtu on 15th March.

High energy prices will be maintained for as long as the conflict continues and Moscow is sanctioned and for as long as Europe remains dependent on Russian energy.

Over the longer term, with rising inflation creating huge economic headwinds for the global economy, Middle East oil and gas will become increasingly vital to stabilise the energy markets.

Thompson advised: "With its LNG expansion programme underway, Qatar is well placed to become a major natural gas supplier to Europe, while Saudi Arabia, the United Arab Emirates (UAE) and the region's other oil and gas producers are well positioned to in-

crease their supplies of low-cost energy.

"Meanwhile, Libya, Iraq and Algeria will see renewed efforts to bring their hydrocarbons back on stream in a major way," he said.

The Gulf's oil producers have abundant supplies of low-cost oil and gas reserves. They have proven themselves to be reliable and stable suppliers over the past four decades and they are investing heavily to increase production capacity.

Thompson explained: "Their investment in renewable energy and future fuel technology, such as hydrogen, provides an important 'green' angle that aligns with international action against climate change, as well as the environmental, social and governance (ESG) criteria sought by multinational corporations and institutional investors."

NEWS NUDGE

Suez abolishes LNGC rebates

LNGC transit fee rebates granted by the Suez Canal Authority (SCA) have been cancelled, the authority said this week on its website.

The previously markdown of 15% is now no longer in place, the SCA said.

According to local media sources, toll rebates granted to LNGCs transiting the canal have been on a steady decline since

2014, when the rate was 35%.

It was dropped to 25% in 2015 amid rising oil prices that increased demand for natural gas in key markets, further reducing to 15% in October last year.

The canal is the preferred route for US LNG cargoes going to East Asia and thus avoiding the congested Panama Canal.

A large-scale canal expansion project is currently underway, scheduled for completion in 2023.

CoolCo's fleet reaches four

Cool Company Ltd (CoolCo) took delivery of the fourth LNGC out of eight from Golar LNG Limited on 10th March, 2022.

This fourth purchase covered all of the shares in Golar's subsidiary, Golar Hull M2027 Corp, which is the owner of the LNGC 'Golar Bear'.

The purchase price was financed by a drawing on CoolCo's

senior secured bank facility, a cash payment to Golar and the subscription by Golar of 1,562,500 new common shares of \$1 par value in CoolCo at a subscription price of \$10. The shares were issued on the same day as the vessel's delivery.

Transfers of title to the shares in the remaining four Golar vessel subsidiaries, which CoolCo has agreed to acquire, are scheduled to be completed in the short term, the company said.

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Ukraine - Europe can cut Russian gas imports in a year

The European Union (EU) could reduce its imports of Russian natural gas by more than one third within a year.

This could be achieved through a combination of measures that would be consistent with the European Green Deal and support energy security and affordability, according to International Energy Agency (IEA) analysis.

Europe's reliance on imported Russian natural gas has again been thrown into the limelight by its invasion of Ukraine.

The IEA's '10-Point Plan to Reduce the European Union's Reliance on Russian Natural Gas' includes a range of complementary actions that could be taken in the coming months, such as turning to other suppliers, drawing on other energy sources and accelerating efforts to provide the means to use clean and efficient alternatives to natural gas.

The proposed measures are fully consistent with the EU's European Green Deal and its 'Fit for 55' package, paving the way for further emissions reductions in the years to come, the IEA claimed.

Net zero

Progress towards Europe's net zero ambitions will bring down its use and imports of gas over time, but today's crisis raises the specific question about imports from Russia and what more can be done in the immediate future to reduce them.

"Nobody is under any illusions anymore. Russia's use of its natural gas resources as an economic and political weapon show Europe needs to act quickly to be ready to face considerable uncertainty over Russian gas supplies next winter," said IEA Executive Director, Fatih Birol.

"The IEA's 10-Point Plan provides practical steps to cut Europe's reliance on Russian gas imports by over a third within a year while supporting the shift to clean energy in a secure and affordable way. Europe needs to rapidly reduce the dominant role of Russia in its energy markets and ramp up the alternatives as quickly as possible," he said.

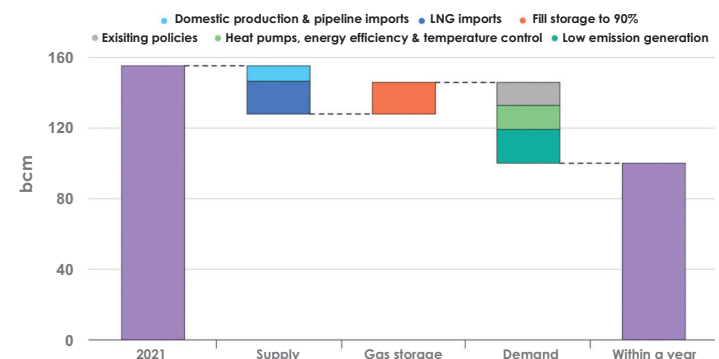
Kadri Simson, European Commissioner for Energy, said: "Reducing our dependence on Russian gas is a strategic imperative for the European Union. In recent years, we have already significantly diversified our supply, building LNG terminals and new inter-connectors. But Russia's attack on Ukraine is a watershed moment. The Commission will propose a pathway for Europe to become

independent from Russian gas as soon as possible. The IEA's analysis outlines a number of concrete steps we can take towards that goal."

The key actions recommended include not signing any new gas contracts with Russia; maximising gas supplies from other sources; accelerating the deployment of solar and wind; making the most of existing low emissions energy sources, such as nuclear and renewables; and ramping up energy efficiency measures in homes and businesses.

Taken together, these steps could reduce the EU's imports of Russian gas by more than 50 billion cu m, or over one-third, within a

EU gas imports from Russia



Source: IEA

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Taken together, these steps could reduce the EU's imports of Russian gas by more than 50 billion cu m, or over one-third, within a

year, the IEA estimated. This takes into account the need for additional refilling of European gas storage facilities in 2022.

The IEA analysis noted that other avenues are available to the EU if it wishes or needs to reduce reliance on Russian gas even more quickly - but with significant trade-offs. The major near-term option would involve switching away from gas consumption in Europe's power sector.

Reducing reliance on Russian gas will not be simple for the EU. Strengthened international collaboration with alternative pipeline and LNG exporters - and with other major gas importers and consumers - will be critical. ■

Ukraine - GTT outlines Russian involvement

French engineering group, GTT said that it was taking all necessary measures to protect its employees and stakeholders, in compliance with international sanctions regarding the situation with Russia and the Ukraine.

However, in the current situation, there is a potential risk to the continuation and proper execution of some contracts.

For example, GTT is overseeing the design of cryogenic tanks for LNGCs and gravity based structures (GBS) intended for Arctic gas liquefaction projects, located in northern Russia.

As of 31st December, 2021, about €100 mill, representing 12% of the orderbook, accounted for units under construction in Russia. The realisation of these projects is planned over a period of five years between 2022 and 2026.

Other orders underway in Asian shipyards also involve LNGCs and FSUs intended specifically for Arctic projects. These represent an additional €57 mill for GTT, spread over the 2022-2024 period.

Finally, other LNGC orders are intended for Arctic projects. However, these vessels will be able to operate in all types of conditions.

Beyond these events, this crisis highlights the importance of gas demand worldwide and more specifically the strategic importance of maritime transport of LNG, which is GTT's core business.

Meanwhile, continuing its order spree, GTT has announced orders to design containment systems for another five LNGCs.

Hyundai Heavy Industries has awarded GTT a contract for the tank design of three new 200,000 cu m LNGCs, believed ordered by Dynagas.

The tanks will be fitted with the GTT Mark III Flex+ membrane containment system and the vessels are scheduled for delivery during first, second and fourth quarters of 2025.

Hyundai Samho Heavy Industries (HSHI) also awarded GTT a

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

The tanks will be fitted with the GTT Mark III Flex membrane containment system and the vessel is scheduled to be delivered in the third quarter of 2024.

Finally, Daewoo Shipbuilding & Marine Engineering (DSME) was also awarded a contract for the tank design for a 174,000 cu m LNGC.

These tanks will be fitted with the GTT NO96 GW membrane containment system and the vessel is also scheduled for delivery in the third quarter of 2024. ■

Ukraine - UK sanctions warning

The UK Department of Transport recently announced a ban on all ships arriving in the UK with 'Russian connections'.

Nick Austin, shipping partner at law firm, Reed Smith, warned: "The Department for Transport's guidance on the banning of ships with Russian connections from UK ports is still developing, given that accurately identifying whether a vessel is 'Russian' is not easy.

"For example, under the current rules, a ship is not Russian just because it has Russian crew members or a Russian captain. For the rules to bite, there has to be a stronger link between Russia and the ownership and operation of the vessel itself.

"The restrictions in the underlying legislation run wide and deep, and are bound to have an impact. Significant numbers of Russian-linked tankers carrying crude oil and LNG call at UK ports each year, not to mention ships carrying steel and other goods.

Those ships and cargoes will now have to go elsewhere, or more likely never leave Russia at all given the co-ordinated approach between governments.

"At the moment, Russian cargoes themselves are not sanctioned but this could quickly change as discussions at the political level continue.

"An immediate problem is what newly-banned vessels currently bound for the UK are meant to do with their cargo, given they will have separate legal obligations to the UK company they are delivering it to.

"Add to that the emergence of 'bottom up' sanctions being applied informally by dockworkers unwilling to unload Russian cargoes from non-Russian vessels, and it's clear that any shipping company involved in Russian-UK trade

now faces significant challenges," he said.

Alexander Brandt, Reed Smith's sanctions lawyer, added: "As the situation in the Ukraine continues to deteriorate, the West has intensified its sanctions programmes against Russia. This has led to considerable wariness on the part of the international shipping community to conduct any Russian business; where owners and operators are struggling to keep up with the unfolding sanctions and are concerned that activities that are permitted today, will be banned tomorrow.

"Given that UK dock workers are refusing to unload lawful Russian cargo, lends further uncertainty to the viability of Russian trade and the potential reputational fall-out of such activities," he concluded. ■

'Hoegh Giant' berths at Jaigarh

On the 1st March, 2022, the 'Höegh Giant', India's first FSRU, arrived at H-Energy's Jaigarh terminal in Maharashtra.

With the berthing of the FSRU, H-Energy is now gearing up towards commissioning the unit in the coming weeks, the company said.

The FSRU has a storage capacity of 170,000 cu m and has an installed regasification capacity of 750 mill cu ft per day.

She will deliver regasified LNG to the 56 km long Jaigarh/Dabhol natural gas pipeline, connecting the LNG terminal to India's gas grid.

In addition, the unit will be capable of transshipping LNG to other LNGCs to supply more terminals, as well as reloading onto small-scale LNGCs for bunkering services.

The facility will also be capable of delivering LNG through truck loading facilities in near future for onshore retail distribution.

'Höegh Giant' is equipped with an open loop system using seawater

as heating medium and is paired with a propane closed loop intermediate regasification system, which is environmentally friendly and does not have any adverse effect on surrounding seawater.

This system has proven to be more efficient, robust and environment friendly, compared to traditional regasification systems,

H-Energy said.

Darshan Hiranandani, H-Energy CEO, said; "We welcome the FSRU with immense pride to our Jaigarh terminal. This will be India's first FSRU-based LNG terminal and it marks a new chapter in India's mission for accelerated LNG infrastructure growth. We are proud to be part of India's net-zero transition road map." ■



'Hoegh Giant' has arrived at Jaigarh

Cheniere extends SPA - agrees EPC for CC Stage III

Cheniere Energy subsidiary, Corpus Christi Liquefaction (CCL), has agreed to amend the LNG sales and purchase agreement (SPA) with Engie agreed in June, 2021.

Under the SPA, Engie has signed up to purchase about 0.9 mill tonnes per annum of LNG from CCL on a free-on-board (FOB) basis for around 20 years, which began in September, 2021.

The SPA purchase price is indexed to Henry Hub, plus a fixed liquefaction fee.

"We are pleased to build upon the long-term agreement we signed in 2021 with Engie, one of Europe's energy leaders in low carbon solutions, to increase the volume and extend the term beyond 2040," said Jack Fusco, Cheniere's President and CEO. "This SPA reflects the importance of a diverse and reliable long-term supply of natural gas for Europe and reinforces the value the LNG market places in Cheniere's commitment to climate and sustainability initiatives."

In addition, subsidiary, Cheniere Corpus Christi Liquefaction Stage III (CCL Stage III), has agreed to a lump sum, turnkey, engineering, procurement and construction (EPC) contract with Bechtel for the Corpus Christi project.

CCL Stage III has contracted Bechtel to commence early engineering, procurement and other site work under a limited notice to proceed (LNTTP).

The project is a fully permitted and will consist of up to seven midscale trains, each with a liquefaction capacity of about 1.49 mill tonnes per annum with a total production capacity of more than 10 mill tonnes per annum.

It is commercially underpinned by long-term agreements with creditworthy counterparties, Cheniere claimed. ■

Ukraine - GIIGNL calls for LNG stability

French-based International Association of LNG Importers (GIIGNL) has said that it is fully committed to work with governments and other stakeholders to ensure a stable supply of LNG.

In a statement released earlier this month, the association warned that the potential reduction or disruption of Russian natural gas supplies to Europe and the growing volatility of energy prices seen in the last few months have become major issues, which could jeopardise economic stability in Europe, with knock-on effects in other regions.

Without a supportive policy and regulatory framework to create an adequate environment for long term agreements and investments, many countries will be at risk of energy shortages and will be forced to burn increasing amounts of coal and oil, compromising the attainment of net-zero ambitions.

Since the first LNG exports came from Algeria to the UK and France in 1964 and 1965, commercial LNG trade had expanded to

involve 44 importing markets and 20 exporting countries by the end of 2021. As a result, LNG now accounts for more than half of the international natural gas trade, the GIIGNL said.

As LNG contractual conditions become more flexible and as liquidity increases, the free play of LNG market forces combined with stable political support will contribute to energy supply security and diversification.

In the future, economic growth, coal-to-gas switching - notably in Asia - and sharply declining domestic gas production in Europe and southeast Asia, will nevertheless continue to generate additional demand for natural gas imports, resulting in a near term tight global LNG market.

Investment needed

In order to preserve LNG's afford-

ability, it is therefore critical to invest in all stages of the LNG supply chain, from production to liquefaction, shipping, receiving terminals and storage.

Given the lead times required to develop new LNG projects, the combination of efforts from importers, governments, producers and financial institutions is urgent to enhance energy security around the world and support economic stability while enabling de-carbonisation.

GIIGNL is currently promoting:

- (1) The improvement of LNG import activities' safety and efficiency by encouraging the sharing of experience between operators across the LNG chain.
- (2) Dialogue to address contractual and logistical obstacles to LNG trade.
- (3) Initiatives to enhance sustain-

ability and drive transparency on greenhouse gas emissions from the LNG chain, such as the 'MRV1 and GHG Neutral Framework' for LNG cargoes.

Jean Abiteboul, GIIGNL President said: "The recent Russia/Ukraine conflict is highlighting the importance of energy supply security and diversification. The LNG market is growing quickly and the recent price hikes indicate a structural imbalance between demand and supply growth.

"On the pathway to a de-carbonised world and in the face of looming energy shortages, co-operation between importers, governments and producers is urgent in order to fast-track investments in all stages of the LNG supply chain and to implement all possible measures to guarantee reliable LNG supplies," he said. ■

Ukraine - KN bans NOVATEK cargoes

Lithuanian LNG terminal operator, Klaipėdos nafta (KN), has stopped accepting NOVATEK cargoes.

Although KN does not have contracts with NOVATEK or its related companies, the company contacted LNG terminal clients and asked to ensure compliance with sanctions in their day-to-day operations.

In the absence of information that users are complying with the sanctions in respect of LNG cargoes scheduled to be unloaded at the Klaipėda LNG terminal, KN chose to totally suspend all NOVATEK cargoes from the terminal.

KN is the operator of the LNG terminal, which accepts the cargoes ordered by its customers according to a set schedule, as well as providing regasification and reloading services. LNG cargoes are purchased and delivered by the terminal users.

The company has also ap-

proached the Lithuanian authorities to assess the agreements' compliance with national security interests and to co-ordinate the application of sanctions, asking for additional recommendations and clarification on the application of EU sanctions in the company's activities as a terminal operator when LNG cargoes are purchased and unloaded by the terminal users.

In 2021, 62% of the gas consumed in Lithuania, Latvia, Estonia and Finland was delivered through the Klaipėda LNG terminal. The biggest share was imported from the US.

Some seven companies use the LNG terminal: four from Lithuania, two from Estonia and one from Norway.

Meanwhile, Shell has also joined the growing number of



The FSRU 'Independence' will no longer accept NOVATEK cargoes

energy companies to announce its intent to withdraw from its involvement in all Russian hydrocarbons, including LNG in a phased manner, aligned with new UK Government guidance.

As an immediate first step, the company will stop all spot purchases of Russian crude oil. It will also shut its service stations, aviation fuels and lubricants operations in Russia. ■

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German LNG terminals moving ahead

Following the announcement of the fast tracking of German LNG terminals mentioned in *LNG Shipping News* 3rd March, at least two projects are now moving ahead.

First, the shareholders and management of German LNG Terminal and the German Federal Government have agreed key points to move Brunsbüttel on.

On 4th March, 2022, Gasunie and the Kreditanstalt für Wiederaufbau (KfW) (on behalf of the German Federal Government) signed a Memorandum of Understanding (MoU) to take the project onto the next phase and start the joint construction of the LNG terminal in Brunsbüttel. KfW will join the project as a shareholder.

Gasunie was deemed the best partner for the German Government to complete the terminal project quickly and successfully in

order to ensure stable energy supply with gas and enhance security of supply in Germany.

Having worked together to build up the company, Vopak LNG Holding and Oiltanking, a subsidiary of Marquard & Bahls, will leave the group by May this year.

One consequence of this shareholder structure change will be that the former joint managing director Philipp Kroepels will return to Oiltanking, while Dr Michael Kleemiß will remain as Managing Director. He has almost 25 years of experience in the natural gas business in both Germany and the Netherlands and has been working on the project for some time.

The planning approval process, which was started last year, is being moved ahead at full speed, the parties said. In addition, the general contractor (EPC) consortium, Cobra/Sener, will be commissioned to start the preparatory work immediately.

Brunsbüttel will include a jetty with two berths for vessels up to Q-Max size and facilities for the distribution of LNG by truck, railway wagons and smaller vessels.

It will also have two LNG tanks with a capacity of 165,000 cu m each and an LNG regasification plant.

Wilhelmshaven back on

Second, Uniper has announced that it is to resume planning the Wilhelmshaven LNG receiving terminal.

These activities will be closely linked to plans to make Wilhelmshaven a green energy hub, with green ammonia import and

hydrogen production to fulfil more than 10% of the German hydrogen demand in 2030, the company said.

However, talks with NOVATEK on the import of ammonia have been put on hold.

In addition, Uniper said that it expected to take a hit on the Nord Stream 2 financial claim and will recognise an impairment loss of its loans to the project of €987 mill.

On 4th January, 2022, Uniper was granted a credit facility of €2 bill by KfW bank. This facility has not yet been drawn and expires at the end of April.

As a precautionary measure in the light of continuous volatile markets, Uniper asked for an extension of the credit facility, which will continue to serve as a back-up facility in case of further extreme commodity market developments, the company explained.

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NEWS NUDGE

Niihama receiving terminal starts operations

Japanese joint venture Niihama LNG has started operating its new receiving terminal.

An LNG cargo delivery was received from Australia in January for Sumitomo Chemical for use as a feedstock and an in-house generation fuel at its Ehime power plant, the company said.

The Niihama LNG terminal, located on western Japan's Shikoku island, also plans to start distributing LNG to nearby industry sectors this month.

It will also supply LNG to the 150 MW Niihama Kita power plant, operated by Sumitomo Joint Electric Power when it opens this summer.

The joint venture involves Tokyo Gas' wholly-owned sub-

siary, Tokyo Gas Engineering Solutions with a 50.1% stake, Shikoku Electric Power with 30%, Sumitomo Chemical with 9.9% and Sumitomo Joint Electric Power and retailer Shikoku Gas with a 5% stake each.

Cameron LNG appoints new President

Whitney 'Whit' Fairbanks took up the position of Cameron LNG President on 9th March.

He spent more than 10 years at Hunt Oil at which he managed the operating company, which was responsible for Peru LNG.

Prior to joining Cameron, Fairbanks was managing director of El Bucare Consulting, a strategy and management advisory company based in Dallas, Texas.

Cameron LNG is jointly owned by affiliates of Sempra Infrac-

structure, TotalEnergies, Mitsui & Co and Japan LNG, a joint venture involving Mitsubishi Corp and NYK.

Ships - Newbuildings and deliveries

Dynagas was thought to be behind an order for three large 200,000 cu m LNGCs contracted from Hyundai Heavy Industries.

They are due for delivery in 2025 and brokers put the cost at \$235 mill per ship.

Abu Dhabi-based ADNOC has ordered two, option two 174,000 cu m LNGCs at Jiangnan, also for 2025 delivery.

Brokers put the cost per vessel at \$200 mill.

On 3rd March, the LNGC, 'Elisa Aquila', was delivered.

She is commercially managed by France LNG Shipping and

under a long-term charter contract with Edison.

'Elisa Aquila' is the second vessel to be chartered to the EDF group on a long-term basis (up to 20 years, including extension options) and will ship LNG under Gazocean shipmanagement.

Her propulsion units are WinGD-designed, dual-fuel 2-stroke diesel engines and she also features an Air Liquide Turbo-Brayton refrigeration system that can tap surplus boil-off gas (BOG).

The 174,000-cu m capacity membrane-type tank will be made of advanced insulating materials, designed by GTT, that reduces the vaporisation rate.

France LNG Shipping is a joint venture shipowner involving Geogas and NYK holding 50% of the shares each.

Shell to take more Venture Global LNG

Venture Global LNG has signed a new long-term 20-year Sales and Purchase Agreement (SPA) with Shell.

This deal calls for the supply of 2 mill tonnes per annum of LNG from the company's Plaquemines LNG export facility.

It builds on Shell's existing contract for 2 mill tonnes per annum from the Calcasieu Pass LNG export terminal, which is in operation.

"Venture Global is honoured that Shell, our first foundational customer at Calcasieu Pass, has chosen to expand its existing co-operation with our company with a second partnership at Plaquemines," said Venture Global CEO, Mike Sabel.

"Venture Global is committed to bringing low-cost US LNG on-

line quickly, helping to keep the global market well supplied, while meeting our customers' growing energy and climate goals. We look forward to working with Shell for many years to bring low-cost, clean American LNG to the markets that need it most," he added.

Venture Global claims a world record for the fastest construction of a large-scale greenfield LNG facility with Calcasieu Pass and is building Plaquemines LNG, which is expected to come online in 2024.

Global LNG demand is expected to nearly double by 2040, the company said. ■



Plaquemines is being built on the Mississippi River downstream from New Orleans

Gasunie to expand Dutch terminals

This week, Dutch Energy and Climate Minister, Rob Jetten, announced that talks were underway between the Government and Gasunie to increase short term LNG import capacity.

LNG imports can be less dependent on piped gas from Russia. Gasunie has been in discussions with the Dutch Cabinet about this for some time, the company revealed.

Various options are available. Specifically, Gasunie is currently

investigating the use of a floating LNG terminal in Eemshaven, near Delfzijl, as well as expanding the capacity of the existing Gate terminal on the Maasvlakte, just outside Rotterdam.

With a new LNG facility in Eemshaven and the expansion of

Gate, Netherlands' LNG capacity could be doubled, from 12 up to 24 bill cu m per year, it was claimed.

Gasunie hopes to be able to announce more details about these options in the near future, the company said in a statement. ■



Eemshaven could be the site of an LNG import terminal

Gastrade to develop second FSRU terminal

Gastrade has submitted an application to the Greek Regulatory Authority for Energy (RAE) for a new independent natural gas system (INGS) license.

This new project - Thrace INGS - will consist of an FSRU and will be developed in the Sea of Thrace, offshore Alexandroupolis.

The FSRU will have an LNG storage capacity of 170,000 cu m and will be able to deliver up to a maximum of 22.7 mill cu m per day of natural gas.

Thrace INGS will also include an offshore and onshore pipeline system that will connect the FSRU to the existing onshore gas transmission pipelines in the area.

Gastrade was the first Greek company to obtain an INGS license for the Alexandroupolis LNG Terminal for which the Final Investment Decision (FID) was recently taken.

It is now in its implementation phase and scheduled to be operational late next year. ■

Burckhardt services LNGC compressor

Teekay LNG (now Seapeak) recently completed a time-critical drydocking of the LNGC 'Creole Spirit' in Singapore.

This included a major service of the boil-off gas (BOG) compressor.

As part of a long-term service agreement (LTSA), Burckhardt Compression carried out extensive planning and project management to ensure the service on the patented Laby-GI compressor was accomplished within 13 days, despite the COVID pandemic.

The project involved -

- Planning as part of 13-day drydock maintenance period.
- Co-ordination of sub-contractors within the confines of the compressor machinery room (CMR).
- COVID pandemic posed additional challenges.

- Co-ordination of parts and manpower for efficient delivery.
- Completed not only the planned overhaul, but also resolved additional issues that arose during the project, all within the allotted time frame.

Burckhardt explained that its LTSA offers a tailored maintenance programme and its Singapore Centre of Excellence provides specialist support for drydock inspections.

It guarantees a complete five-year service and overhaul.

Planned maintenance improves life-cycle costs and operational efficiency, while on time delivery ensures departure from drydock as planned, the company said.



The LNGC 'Creole Spirit' in drydock

It also ensures ongoing compressor reliability with the continued reduction in sulphur and CO2 emissions.

The company has also announced the suspension of business with Russia until further notice.

Burckhardt stressed that it had no subsidiaries or does not own employees in Russia or Ukraine.

For many years, on average, about 2%-5% of Burckhardt Compression's sales were generated in Russia. ■

Plaquemines construction contracts awarded

Venture Global has awarded several contracts for the construction of its Plaquemines LNG export terminal in Louisiana.

For instance, Baker Hughes (BH) has been awarded a contract and granted a notice to proceed to provide an LNG system for the first phase of the project.

BH's liquefaction train system (LTS) is modularised, helping to lower construction and operational costs with a 'plug and play' approach that enables faster installation, it claimed.

The company manufactures, tests and transports the pre-assembled and fully integrated modular turbo-machinery units for Plaquemines at its manufacturing and assembly facilities in Italy.

As part of the contract, BH will also provide field services to assist in commissioning the equipment.

This order follows a contract awarded to BH in the fourth quarter of 2021 to provide power generation and electrical distribution equipment for the comprehensive power island system for the Plaquemines project.

BH also undertook a similar contract for a comprehensive LNG technology solution for Venture Global's Calcasieu Pass LNG terminal in 2019.

In 2021, BH completed the de-

livery of the ninth and final block for Calcasieu Pass; all shipments were finalised ahead of schedule.

All of the contracts were awarded under a master equipment supply agreement between Venture Global LNG and BH for 70 mill tonnes per annum of production capacity.

BH's equipment deliveries for Plaquemines is expected to begin in the first half of next year.

Meanwhile, Chart Industries has received full notice to proceed for the production of cold boxes and brazed aluminium heat exchangers for Plaquemines Phase 1.

Honeywell has also announced that Venture Global will use a series of technologies from Honeywell UOP to remove various contaminants from natural gas to applicable LNG specification prior to liquefaction at Plaquemines.

Honeywell UOP will provide engineering, procurement and fabrication services for the LNG pre-treatment units which, when completed, will pre-treat feed gas for the facility.

In 2019, Venture Global selected Honeywell Modular LNG pre-treatment technology for its Calcasieu Pass Export facility. ■

Monthly Large LNGC Values*

Newbuildings (174,000 cu m)	\$206.71 mill
Five years old (174,000 cu m)	\$164.59 mill
Total Fleet (541 ships)	\$66.06 bill
Orderbook (183 ships)	\$39.44 bill

*Source: VesselsValue (01/03/22)

*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	\$37,000	+\$2,000
West of Suez	\$39,000	+\$4,000
12 mos T/C	\$99,000	+\$23,000

*Since last report (03/03/22)

Source: Fearnleys (16/03/22)

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 Innvovation	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
2018	LNG London	3,000	LNG	Northwest Europe	Yes	Shell

Built	Name	CBM	Cargo Type	Trading area	Trading in LNG?	Ship Owner / Operator
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	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	Xin Ao Pu Tuo Hao	8,500	LNG	China	Yes	ENN
2021	Avenir Ascension	7,500	LNG		Yes	Avenir LNG
2021	Avenir Allegiance	20,000	LNG	China	Yes	SSES
2021	Bergen LNG	850	LNG	Norway	Yes	Bergen Tankers
2021	Dmitry Mendeleev	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	Coral Nordic	30,000	LNG	Worldwide	Yes	Anthony Veder
2022	Avenir Achievement	20,000	LNG	Worldwide	Yes	Avenir LNG
2022	Haugesund Knutsen	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
2023	PNE TBN	5,500	LNG	USG	Yes	PNE
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 ?
2024	Crowley TBN	12,000	LNG	US Coast	Yes	Crowley Maritime
2024	CNOOC TBN	12,000	LNG	China	Yes	CNOOC
2024	TBN	12,500	LNG	Worldwide	Yes	???
2026	Avenir TBN (option)	20,000	LNG	Worldwide	Yes	Avenir LNG
2026	Avenir TBN (option)	20,000	LNG	Worldwide	Yes	Avenir LNG

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