

LNG Shipping News

AN LNG JOURNAL TITLE ON LNG CARRIERS

22 December 2022

Extreme market volatility forecast

Next year, extreme volatility in the global LNG market will continue to drive US LNG export terminals to operate at high levels.

However, US Henry Hub prices will fall as liquefaction capacity additions flatline, according to S&P Global Commodity Insights' latest 2023 energy outlook.

A lack of new liquefaction facilities coming online globally could constrain natural gas supply growth, despite persistently high prices.

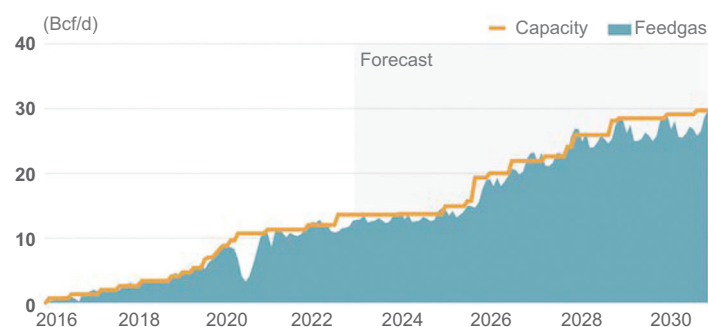
As a result, global gas markets will be forced to balance on demand destruction and existing stocks instead of LNG supply growth, a dynamic that will be particularly apparent in Europe, where gas and power markets may be even tighter in 2023, as the region faces its first year without significant volumes of Russian pipeline gas, the report said.

"There is no slack in the system," Michael Stoppard, global gas strategy lead and special adviser at S&P Global, said during a briefing. "So we can expect a continuation and a re-invigoration of extreme market volatility that we have seen in both gas and power prices.

"Disruptions on the supply side and any clear deterioration of economic output will be met by markets with a volatile price response," he said.

Constraints at existing European regasification terminals this year have led to a dislocation between the northwestern European delivered LNG price and the continental TTF price. Platts DES Northwest Europe reached a record discount of more than \$29 per MMBtu to TTF in early October

North America LNG export capacity rises post 2024



before tracking back to around \$10 per MMBtu at present.

Import infrastructure

S&P Global expects to see a large increase in European import infrastructure that could ease the bottlenecks, with some 10 new LNG import terminals proposed or under construction that could be online by the end of 2023.

Loosened regasification constraints are expected to tighten the spread between delivered LNG at European terminals and continental gas prices, said Ross Wyeno, S&P Global's lead analyst for LNG Americas.

"Our belief is that the net impact of that will be to draw global LNG prices upwards this winter so that Asian buyers are forced to directly compete with the gas buyers within Europe," Wyeno said. "Then potentially we could see prices trailing off a bit more next summer."

The report predicts China's total energy demand will increase

by 3.3 mill barrels of oil equivalent per day in 2023 from virtually no growth in 2022, representing 47% of next year's global energy demand growth.

Elsewhere, apart from the planned Freeport LNG restart, S&P Global described a "distinct lack of growth" in North American LNG capacity until late 2024, which is when the developer of the 18.1 mill tonnes per year Golden Pass facility under construction in Texas expects to start production.

The lack of new US LNG export capacity and domestic production will contribute to the prospect of softer Henry Hub prices in 2023.

S&P Global forecasts HH prices will average \$5.47 per MMBtu across 2023, peaking near \$7 per MMBtu through first quarter before dipping below \$5 per MMBtu across the second and third quarters of the year amid tight gas balances and economic headwinds in the US and abroad.

***Volatility was the main theme for LNGCs this year, following the invasion of Ukraine, said Trafigura in a recent results presentation.

The commodities giant expected LNGC rates to remain elevated in 2023, as a result of strong demand in Europe for natural gas because of lower flows from Russia. ■

SHIPPING NEWS AGENDA

MARKETING

EU gas shortage **2**



German FSRUs **3**

BUSINESS

CNOOC in the market **4**

Dutch ramp up **4**

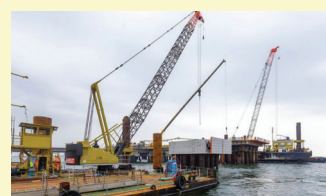
Sempra adds SPA **5**

FINANCE

Dockings hit Dynagas **7**

TECHNOLOGY

Terminal comms **8**



German fender system **9**

LNG ORDERBOOK

LNG carrier orderbook **11**

LNG small scale fleet **17**

“Disruptions on the supply side and any clear deterioration of economic output will be met by markets with a volatile price response”

- Michael Stoppard, global gas strategy lead & special adviser, S&P Global

EU faces gas shortage

The European Union (EU) faces a potential shortfall of almost 30 bill cu m of natural gas in 2023, according to a recent report from the International Energy Agency (IEA).

However, this gap can be closed and the risk of shortages avoided through stronger efforts to improve energy efficiency, deploy renewables, install heat pumps, promote energy savings and increase gas supplies, the IEA said.

The report - 'How to Avoid Gas Shortages in the European Union in 2023' - highlights practical actions that Europe can take to build on the progress that has already been made in 2022 in reducing reliance on Russian gas supplies and filling gas storage ahead of the winter.

The IEA warned that next year maybe an even sterner test for Europe because Russian supplies could fall further, while global supplies of liquified natural gas (LNG) will be tight - especially if Chinese demand for LNG rebounds - and the unseasonably mild temperatures seen at the start of the European winter are not guaranteed to last.

As a result of measures taken by European governments and businesses throughout 2022 in response to the energy crisis, as well as the demand destruction caused by huge price spikes, the amount of gas in EU storage sites was well above the five-year average at the start of December, providing an important buffer going into winter.

Despite this, the EU's potential gas supply/demand gap could reach 27 bill cu m in 2023 in a scenario in which gas deliveries from Russia drop to zero and China's LNG imports rebound to 2021 levels, the report said.

On the supply side, the IEA said that while Europe's options to import more natural gas are limited, there are a handful of countries with spare export capacity who could increase exports by capturing gas that is currently being flared. The report also detailed

opportunities to scale up the production of low-emission biogases.

Together, these measures offer a pathway to avoiding price spikes, factory closures, increased use of coal for power generation and fierce international competition for LNG cargoes - in ways that are consistent with the EU's climate goals, the report claimed.

Enough LNG

Poten & Partners claimed in a webinar that Europe should have enough LNG this winter, due to the slowdown in purchases from price sensitive Asian countries, such as Bangladesh, India and Pakistan.

However, not making long term decisions could prove expensive, as Europe is expected to turn to spot and short term deals to make up for the shortfall in long term contracts.

Asia/Pacific is not likely to stay out of the equation next year, as

inventories will have been tapped this winter and will need replenishing, Poten said.

The region will still drive the market long term as Southeast Asian imports were likely to triple by 2032 and South Asia's imports will more than double. China will also grow but at a slower pace.

There is a lot of uncertainty in the forecasts, Poten warned, due to possible nuclear rampups, renewables and price sensitivity taking over the market.

In China alone, question marks hang over the winter weather, possibility of supply disruptions and the lifting of COVID restrictions.

There has been a slowdown of new contract announcements noted recently and at least three US projects are at their limited notice to proceed but are not expected to take FID until the first quarter of next year, Poten said. ■

UK to import more US LNG

The US is set to export at least 9-10 bill cu m of LNG next year to UK terminals.

This is more than double the volume handled in 2021 and will capitalise on the UK's import infrastructure.

Following a meeting between US President, Joe Biden and UK Prime Minister, Rishi Sunak, at G20 earlier this month, a new 'UK-US Energy Security and Affordability Partnership' was formed.

This will drive solutions to reduce global dependence on Russian energy exports, stabilise energy markets and step up col-

laboration on energy efficiency, nuclear and renewables, the two Governments said.

It will be steered by a new UK/US Joint Action Group, led by senior officials from the UK and the White House.

UK officials said that this will be good for both for the country and its European partners, as it seeks to replenish gas storage next year. To fulfil this shared objective, both governments will work to pro-actively identify and resolve

any issues faced by exporters and importers.

It was not clear where the LNG would be sourced from.

Both parties said that they will also work to reduce global reliance on Russian energy by driving efforts to increase energy efficiency and supporting the transition to clean energy, expediting the development of clean hydrogen globally and promoting civil nuclear as a secure use of energy.

Prime Minister Sunak said: "To-

gether the UK and US will ensure the global price of energy and the security of our national supply can never again be manipulated by the whims of a failing regime.

"We have the natural resources, industry and innovative thinking we need to create a better, freer system and accelerate the clean energy transition. This partnership will bring down prices for British consumers and help end Europe's dependence on Russian energy once and for all," he claimed. ■

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German FSRUs on target for winter startup

Earlier this month, Poten & Partners' publication 'LNG in World Markets', outlined the latest state of play with the planned German import terminals.

Two German Government-backed projects at Brunsbüttel and Wilhelmshaven and a private-backed project in Lubmin are due to come online in the next few months, while energy company, RWE is set to receive an ADNOC cargo this month at Brunsbüttel.

The cost of constructing the FSRU terminals was said to be €3 bill over budget by the beginning of this month.

To cater for the projects, RWE chartered two FSRUs from Höegh LNG ('Hoegh Esperanza' and 'Hoegh Galleon') on behalf of the German Government earlier this year, while Uniper chartered two Dynagas' vessels ('Transgas Force' and 'Transgas Power').

Excelerate will also provide the 'Excelsior' at Wilhelmshaven next year, while other FSRUs will be employed for the Stade project.

It has been reported that utilities RWE, EnBW and Uniper will bring in contracted volumes owing to the strict terms stipulating that they must use the terminal and not leave slots vacant.

The German Government was believed to be forming an entity to manage the terminals for the three companies. At the beginning of December, questions remained over whether the Government will hold an open season for capacity



The first FSRU, 'Hoegh Esperanza', has arrived at Wilhelmshaven

at the terminals or if they would be solely used by the three energy companies, Poten said.

Uniper and RWE will each take 35% of the Government's terminals' regasification capacity while German energy firm EnBW will take the remaining 30%.

Sixth FSRU

Germany's sixth and privately backed FSRU, 'Neptune', was provided by TotalEnergies for the Lubmin project. TotalEnergies has the unit on charter until 2029.

At Lubmin, LNG will have to be shuttled to the port utilising three smaller vessels from an FSU moored in the Baltic to the 'Neptune', due to draft restrictions. The FSU is believed to be the 'Seapeak Hispania'.

This location was chosen, as it is the landing site for Nord Stream 1.

In late November, long-term cargoes were secured for Lubmin from ConocoPhillips and QatarEnergy, which signed two SPAs for 2 mill tonnes per year over 15 years starting in 2026.

ConocoPhillips, RWE and INEOS were also awarded long-term volumes at the Brunsbüttel LNG terminal, whose capacity will be initially 8 bill cu m per year with the possibility to expand to 10 bill cu m.

During the middle of December, Höegh LNG confirmed that it had signed a firm 10-year timecharter contract with the German Government for the 'Hoegh Esperanza'.

On 15th December, the FSRU arrived at Wilhelmshaven and two days later, German Chancellor Olaf Scholz, Niedersachsen's Prime Minister Stephan Weil, German Minister for Economic Affairs

Robert Habeck, and the Federal Minister of Finance, Christian Lindner, attended the official opening ceremony.

Earlier, 'Hoegh Esperanza' had loaded about 165,000 cu m of LNG at Enagas' facility in Sagunto to commission the terminal.

In addition, the FSRU 'Neptune' arrived at Lubmin last week. Final tests will commence shortly, operator Deutsche ReGas said.

She had to be lightened down to a 5.2 m draft for the final passage to the terminal. In preparation, the voyage was simulated at the Leer Shiphandling Simulator and Training Centre.

With the German units already secured and Italian energy companies possibly seeking up to four FSRUs, there could be a shortage of available units in the short term, sources said. ■

Petronet firms FSRU terminal at Gopalpur

India's largest LNG importer, Petronet has signed an agreement with Gopalpur Ports for to moor an FSRU in the port.

The FSRU will have a capacity of around 4 mill tonnes per annum, it said on social media.

"We are pleased to inform that @PetronetLNGLtd is heading forward in establishing its presence on the east coast of India by signing a term sheet with Gopalpur Ports Limited on 14th December, 2022 for establishing and operating LNG terminal at Gopalpur port

in Odisha," the note said.

Last month, Petronet's board had approved the investment needed to develop the terminal at Gopalpur and charter in an FSRU.

Petronet's project, to be located in the Ganjam district in Odisha, which is expected to be operational before the end of 2025, will be financed by a combination of debt and equity.

Gopalpur will be the third LNG terminal on the east coast - Indian Oil Corp (IOC) operates a 5 mill tonnes a year facility at Ennore in Tamil Nadu, while the Adani Group in partnership with TotalEnergies of France is building a facility at Dhamra port.

Petronet currently, operates the 17.5 mill tonnes per annum Dahej terminal in Gujarat and a

5 mill tonnes facility at Kochi in Kerala.

Dahej, the world's largest import terminal, is undergoing an expansion project to bring it up to a capacity of 22.5 mill tonnes by constructing a new jetty that will also able to handle propane and ethane shipments, plus extra LNG storage tanks and bays for truck loading. ■

CNOOC issues buy tender

State-owned China National Offshore Oil Corp (CNOOC) has issued a limited participation tender to buy LNG cargoes for delivery between February/December 2023, sources told S&P Global Commodity Insights.

CNOOC is the largest LNG importer in China. This is the first LNG buy tender that a Chinese buyer has issued since Russia invaded Ukraine, and is an important landmark, as it indicates a revival of Chinese buying interest after demand stayed subdued for most of this year, reflecting heightened pandemic-related curbs.

However, the cargoes sought could also be resold overseas, depending on local demand.

"We have chatted with our counterparties to see if they have any interest. There is no fixed number of cargoes we are looking for currently," a company source said, noting that the tender was issued on 9th December and closed on 14th December.

CNOOC plans to buy some 2023 delivery LNG cargoes to optimise its resource pool, a second com-

pany source said.

The tender price will be linked with the Platts JKM, the source added.

"We will bring the LNG cargoes back to China if there is any demand in the domestic market, otherwise, we will sell it outside of China," the second company source said.

Having a market exercise through the tender would be helpful for CNOOC to gauge prices, a Singapore-based trader said.

Other industry sources concurred, noting that the tender might only be awarded if offers are reasonable, possibly at a discount to the Platts JKM.

"CNOOC could come out with more tenders if they expect downstream demand to improve following the easing of COVID-19 restrictions," a Chinese end-user

said.

Market sources also said CNOOC may buy Northeast Asia LNG cargoes on a DES basis to China while selling its FOB US LNG cargoes to Europe - a move that was adopted by Sinopec this year.

As a result of earlier agreements, CNOOC's LNG contract volumes are estimated to be nearly 25.5 mill tonnes for 2023, up around 6.9% from its contract volume of around 23.8 mill tonnes this year, S&P Global calculations based on data and information collected from the market showed.

China is estimated to have around nine new LNG term contracts scheduled to start delivering in 2023, six of which are from second-tier or privately owned importers, according to S&P Global calculations. ■

Asyad expands into Singapore

Asyad Shipping has opened the company's first international office in Singapore as part of its plans to expand its business in the Asian market.

The new office will act as a platform for the company to serve the increasing demand from current and potential customers in that region.

Asyad Shipping operates a diversified fleet of more than 70 vessels, including LNGCs.

An established presence in Asia will afford the company with a wider reach to prospective global clients, particularly to shipping interests based in Japan, China and South Korea, plus a greater value added service to its shipmanagement and chartering activities.

"Establishing our presence in Asia will play a crucial role in driving future growth. We see plenty of expansion opportunities in this region and now is the right time to enter the market with greater force. Our Singapore office represents our commitment to bringing the very best of Asyad Shipping to our clients, Asian shipyards and other liner companies," explained Dr Ibrahim Al-Nadhairi, Asyad Shipping & Asyad Drydock CEO. ■

Gasunie and VTTI to increase Dutch imports

Dutch energy company, Gasunie is seeking options for a further temporary expansion of its LNG import capacity in the Netherlands.

A study is underway following consultation with the Dutch Ministry of Economic Affairs and Climate, which fits in with the plans Minister Rob Jetten for Climate and Energy sent to the Lower House on 9th December, the company said.

Both existing and new sites are being investigated. For example, there are plans to further expand the existing LNG facilities in Eemshaven (EemsEnergyTerminal)

and in Rotterdam (GATE) through technical optimisation.

In addition, one or more new FLNG terminals will have to ensure a sufficient supply of gas next year. Terneuzen is being considered as one of the locations.

The pressure on the current high prices can be eased by saving energy, expanding the Dutch LNG import capacity and accelerating the energy transition, the

company said.

Gasunie is also looking at a temporary further expansion of import capacity until winter 2025/2026. These are measures that can be deployed as early as next winter (2023/2024) and preferably before the gas storage filling season starts (April, 2023).

The intention is to use as much of the temporary installations as possible for hydrogen shipments after a few years.

VTTI interest

Another Dutch terminal operator, VTTI, is also exploring the installation of an FSRU in the Netherlands.

The FSRU will be connected to one of the largest industrial clusters in the Netherlands and to the Dutch and European gas grids.

It will have an annual throughput capacity of around 5 bill cu m, which corresponds to around 15% of the current total gas consump-

tion in the Netherlands.

In time, VTTI plans to use the infrastructure for the import of green energy, such as hydrogen. It aims to bring the facility into operation at the beginning of 2024.

Guy Moeyens, VTTI CEO, said: "As part of our diversification strategy, VTTI's ambition is to develop a worldwide LNG portfolio at strategic locations, offering transitional solutions for green energy carriers, such as hydrogen.

"The Netherlands needs additional LNG import capacity in the short term to enhance energy supply security. We are pleased to contribute to this based on our many years of experience in the field of energy infrastructure and storage," he said. ■



Gasunie is looking to increase throughput at GATE

Sempra signs third Port Arthur LNG SPA

Sempra Infrastructure has signed another long-term sale and purchase agreement (SPA) for the supply of LNG from Phase 1 of its planned Port Arthur LNG project.

Under the latest SPA, French energy company, ENGIE has agreed to purchase around 0.875 mill tonnes per annum of LNG for 15 years, delivered on a free-on-board (FOB) basis, and sourced from natural gas producers whose gas has been certified by an independent third party in accordance with environmental, social and governance (ESG) performance criteria.

The agreement also provides a framework to explore ways to lower the carbon intensity of LNG produced from the project

through GHG emission reduction, mitigation strategies and a continuous improvement approach.

“ENGIE is a leader in Europe’s energy transition and a great addition to our Port Arthur LNG customer portfolio,” said Justin Bird, Sempra Infrastructure CEO. “We are excited to work with ENGIE to deliver reliable energy resources like LNG and contribute to the security of natural gas supply to their clients while supporting both companies’ ESG commitments.”

Sempra recently announced it

had finalised an engineering, procurement and construction (EPC) contract with Bechtel Energy for Port Arthur LNG Phase 1 and that it has entered into long-term agreements with ConocoPhillips and INEOS for SPAs of about 5 mill and 1.4 mill tonnes of LNG, respectively.

The company said that it is focused on completing the remaining steps necessary to achieve its goal of making a final investment decision (FID) for Phase 1 in the first quarter of 2023.

It is already permitted and ex-

pected to include two natural gas liquefaction trains and LNG storage tanks and associated facilities, capable of producing, under optimal conditions, up to about 13.5 mill tonnes of LNG per year.

A similar size Phase 2 project is also planned and under active marketing and development.

Development of the two projects is contingent upon completing the required commercial agreements, securing all necessary permits, obtaining financing, and reaching FID, among other factors, Sempra said. ■

EnBW expands LNG partnership

Venture Global LNG and EnBW have increased their existing LNG partnership to 2 mill tonnes per annum.

Pursuant to the 20-year Sales and Purchase Agreements (SPAs) signed in June, 2022, EnBW has now increased the quantity of its LNG offtake from Venture Global by another 0.5 mill tonnes from Plaquemines and CP2 LNG.

“Venture Global is delighted to be a growing strategic partner to Germany and EnBW, a foundation customer at both Plaquemines and CP2,” said Venture Global CEO, Mike Sabel. “The German government has taken swift action to address the energy crisis and we are honoured to support their efforts by providing security of US LNG supply.

“Our company has pioneered the next generation of LNG plants, with a safe and low-cost model, enabling us to bring much needed supply to the global market years faster than ever done before. Our Gulf Coast facilities incorporate critical, world class European equipment, including liquefaction modules, gearboxes, steam turbines and more, supporting countless jobs across the continent,” he said.

“To become less dependent on Russian natural gas and to

strengthen diversification and security of supply, EnBW is supporting the German government by increasing further access to LNG supplies. For this reason, we have stepped up our procurement volumes from Venture Global,” added Georg Stamatelopoulos, EnBW’s COO Generation & Trading. “With the help of LNG, we can secure Germany’s gas supply to enable the energy transition, while not losing sight of our climate neutrality targets.”

Stade imports

EnBW has also confirmed that it will import 3 bill cu m of LNG per year via the Hanseatic Energy Hub (HEH) in Stade on the River Elbe once commissioned.

The capacities were booked bindingly recently as part of a sales process.

In addition, EnBW will have the option to turn to ammonia as a hydrogen-based energy source at a later date. This possibility is open to all HEH customers with a long-term contract of more than 10 years.

HEH is a future-flexible modular system for the green energy

transition that utilises the diverse opportunities of the Stade energy region.

The terminal, port, industrial park and connecting infrastructure are designed so that a conversion can take place using a modular method. Main tanks, pipelines and other immovable parts will be commissioned ammonia-ready.

In addition, the foundations are already structurally designed to support a higher load. Extra space has also been reserved in the industrial park for separate ammonia tanks to support the market ramp-up from the outset.

“EnBW has been demonstrating for a long time how a smart conversion of the energy supply works. We are pleased that the Hanseatic Energy Hub will become a central energy import hub for EnBW in the future,” said Johann Killinger, HEH’s Managing Director and co-shareholder. “Our modular system and commercial portfolio give us the necessary flexibility in Stade to make a significant contribution to security of supply and, in parallel, to accompany the hydrogen ramp-up in Germany.” ■



Venture Global head Mike Sabel

NEWS NUDGE

Fluxys offers additional Zeebrugge slots

In an effort to enable increased LNG supply into Europe, Fluxys LNG will be offering additional primary slots to unload, store and regasify 13 LNG cargoes at the Zeebrugge LNG Terminal next year.

Two slots will be available in March, one in July, three in August, two in September, three in October, and the final two in December, 2023.

The first two March slots will be auctioned in early January with the remaining slots being auctioned later in the year on a month plus three basis (indicative timing), Fluxys said. ■

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Drydockings hit Dynagas' results

Dynagas LNG Partners net income for the three months ended 30th September, 2022 was \$7.4 mill, compared to \$11.3 mill for the corresponding period of 2021, a drop of \$3.9 mill, or 35%.

This decrease was mainly due to a fall in voyage revenues and the increase in the vessels drydocking and special survey costs, attributable to the scheduled dockings of 'Amur River' and 'Ob River', which were completed on 29th July, 2022 and 27th August, 2022, respectively, as well as to the increase in interest and

finance costs.

Adjusted net income for 3Q22 was \$4.5 mill, compared to \$11.6 mill in 3Q21, a net decrease of \$7.1 mill or 61%. Voyage revenues for the period were \$29.9 mill, compared to \$34.7 mill for 3Q21, a net fall of \$4.8 mill or 13.8%.

Dynagas also reported average daily hire gross of commissions of

around \$61,560 per day per vessel in 3Q22, compared to about \$62,800 per day per vessel for the corresponding period of 2021.

Vessel OPEX

Vessel operating expenses were \$7 mill in both three-month periods, which corresponds to a daily rate per vessel of \$12,743 in 3Q22, compared to \$12,641 in 3Q21.

Third quarter adjusted EBITDA was \$20 mill, compared to \$24.8 mill for 3Q21.

As of 30th September, 2022, the Partnership reported total cash of \$97.7 mill (including \$50 mill of restricted cash), while the outstanding debt under the \$675 mill credit facility amounted to \$531 mill, gross of unamortised deferred loan fees and including \$48 mill, which was repayable within one year.

CEO, Tony Lauritzen, said; "All six LNG carriers in our fleet are operating under their respective long-term charters with interna-

tional gas producers with an average remaining contract term of 6.2 years. As of 12th December, 2022, our estimated contracted revenue backlog was \$0.91 bill.

"The earliest contracted re-delivery date for any of our six LNG carriers is in the third quarter of 2023 (for the 'Arctic Aurora'), with the second earliest contracted re-delivery date in the first quarter of 2026 (for the 'Clean Energy'), both subject to the terms of the applicable charter.

"While future results may vary, we are pleased to report 100% utilisation for our fleet for the 10th quarter in a row. We are optimistic for the outlook of LNG shipping in the long term. Sellers and buyers of LNG have on the back of a surging demand for natural gas, reverted to a large extent to long term sale and purchase agreements, which also underlines the long term demand for LNG shipping," he said. ■



The drydocking of the 'Amur River' hit Dynagas' results

FERC issues new demands to Freeport LNG

Last week, the US Federal Energy Regulatory Commission (FERC) asked Freeport

LNG export terminal to respond to a long list of requirements, before it is allowed to restart.

Freeport LNG closed its 15 mill tonne per year Quintana, Texas, plant on 8th June after an explosion and fire that was blamed on inadequate operating and testing

procedures, human error and fatigue.

The operator was sent a detailed list seeking additional information or documents for 64 items, following a 30th November visit to the facility by FERC, the US Coast Guard (USCG) and Pipeline Haz-

ardous Materials Safety Administration (PHMSA).

FERC said that any restart authorisation "will only be granted following the review of filed responses ... and documentation that acceptable measures have been put into place to safely return the facil-

ities to operation," in a letter dated 12th December, seen by newswires.

Although not responding to the latest news, Freeport LNG said last month that it expected to be processing about 2 bill cu ft per day of gas into LNG in January, and reach full production in March, 2023. ■

LNG rate assessments

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

Region	This week	Change*
East of Suez	\$155,000	- \$5,000
West of Suez	\$150,000	- \$50,000
12 mos T/C	\$173,000	- \$11,000

*Since last report (08/12/22)

Source: Fearnleys (21/12/22)

Monthly Large LNGC Values*

Newbuildings (174,000 cu m)	\$260.75 mill
Five years old (174,000 cu m)	\$207.47 mill
Total Fleet (558 ships)	\$84.78 bill
Orderbook (295 ships)	\$76.75 bill

*Source: VesselsValue (06/12/22)

*The above is updated each month courtesy of VesselsValue

ORLEN to take delivery of two Knutsen newbuildings

Early next year, the Polish ORLEN Group will take delivery of two custom-built LNGCs under long term charters from Knutsen OAS Shipping.

By the end of 2025, the number of LNGCs operated by the Group will increase to eight, the company said, which will allow it to be able to efficiently manage shipments to Poland and strengthen its position on the global LNG market.

A naming ceremony was recently held at Hyundai Heavy Industries' Ulsan shipyard for the two LNGCs, which were ordered by Orlen subsidiary, PGNiG Supply & Trading, in co-operation with Knutsen.

The first ship was named 'Lech

Kaczyński', and the second 'Grażyna Gęsicka'.

"For energy security of Poland, it is crucial to diversify the supply of oil and natural gas - the latter we already import 100% from outside Russia. This is the result of a consistently implemented LNG imports strategy. The shipments of liquefied natural gas already cover almost 30% of our country's demand.

"LNG supplies are secured not only by means of contracts, but also by developing our own fleet.

Custom-built vessels for our exclusive use guarantee the stability of transport and strengthen the company's position on the global LNG market," explained Daniel Obajtek, PKN ORLEN CEO.

The Polish company will operate the ships under a longterm charter from Knutsen. Under the terms of the contract, the shipowner will be responsible for manning the chartered vessels and maintaining them in good technical condition, while PGNiG Supply & Trading will have full commercial control over their operation.

"Knutsen OAS Shipping is very pleased to have established a long term relationship with PGNiG Supply and Trading. These safe, reliable and state of the art environmentally friendly LNG carriers will help them to succeed in their LNG business," said Trygve Seglem, Knutsen Group head.

Long term charters

Both LNGCs will be chartered for 10 years with an extension option.

Each vessel will be able to carry about 70,000 tonnes of LNG, equivalent to about 100 mill cu m of regasified natural gas.

One of their technical features is a very low rate boil-off gas (BOG) loss rate. The BOG can be switched to a liquid state thanks to on board reliquefaction systems fitted.

The vessels' engines can run on both diesel oil and natural gas, which will ensure their compliance with environmental standards for maritime transport well into the future, the company claimed.

'Lech Kaczyński' has already undergone sea trials and will enter service under the ORLEN banner early next year, while 'Grażyna Gęsicka' will deliver her first LNG cargo in the second half of 2023.

Both vessels will be used to deliver LNG purchased under both long-term and spot contracts on a free-on-board (FOB) basis, where the buyer assumes responsibility for collecting and shipping the goods. ■



Orlen is soon to take delivery of two Knutsen LNGCs

Digital terminal communications launched

essDOCS, a part of Intercontinental Exchange, has launched ICE Digital Trade Documents (DTD) for energy terminals & refineries, including those handling gas ships.

This is claimed to be a first-of-its kind, highly configurable solution digitising post-trade and shipping processes.

For essDOCS terminal and refinery customers, every minute in the pre and post-loading process is valuable. "ICE DTD digitises complex, fragmented, paper-based processes, with the potential to save hours per shipment," said Alexander Goulondris, Co-Head, essDOCS. "DTD's no code-low code approach also means the solution can be easily configured and adopted, providing quick time to value."

This solution offers energy terminal and refinery operators a

significant digital advancement, allowing them to digitise the full scope of communications and documentation transmitted between stakeholders at the point of delivery.

It enables operators to manage and visualise all ship-to-shore communications, loading and discharge instructions, and the generation and management of cargo and export documentation.

Transparency and collaboration across all participants in the ecosystem helps shippers and operators avoid costly errors and delays, achieve substantial time-savings per shipment, and maxi-

mize throughput at the terminal, the company claimed.

ICE DTD also allows terminals to quickly automate workflows tailored to their specific requirements. Self-administration and configuration, combined with open APIs, enable operators to define, implement, and adjust their workflows without the reliance on software developers or third-party implementation specialists.

Operators are therefore able to significantly reduce their total cost of ownership and accelerate their ROI by quickly realising tangible benefits from the solution, the company said. ■

NEWS NUDGE

Gasgrid offers slot allocations at Inkoo

Finnish energy company Gasgrid has announced that the capacity allocation process for the Inkoo FSRU terminal, to be shared with Estonia, was due to start on 15th December.

This allocation will cover the period April to September, 2023 and the process will remain open until 9th January, next year.

A total of 14 terminal slots of 1,000 GWh each will be offered during the period.

Gasgrid has formed Floating LNG Terminal Finland Oy (FLTF) to operate the Inkoo terminal. Excelerate's FSRU 'Exemplar' is due to arrive in Finland this month with a commissioning cargo. ■

Wilhelmshaven equipped with ShibataFenderTeam fender systems

Germany's first LNG terminal was due to come online at Wilhelmshaven by the end of this month (see page 3).

This terminal was fitted with Hamburg-based ShibataFenderTeam (SFT) mooring equipment.

SFT's local office, in partnership with contractor, Depenbrock, designed and delivered to developer Uniper and owner Niedersachsen Ports three sets of customised fender systems.

Each consisted of four SPC Cone Fender Systems (SPC1150, G1.7) and two steel panels (5,000 x 3,300 mm each) together with UHMW-PE low friction pads.

Each fender system is installed at a mooring dolphin, to provide a permanent berth for the chartered FSRU 'Hoegh Esperanza'.

SFT's in-house engineering team was involved in the project. Special attention was paid to the steel panels - designed to offer low hull pressure (<150 kN/sq m) - and to the UHMW-PE pads (25 mm thicker than average).

These customised details will

allow the fender system to cope with changing tidal ranges and also be in constant contact with the FSRU - a very challenging but common situation for a permanent mooring.

To address the demanding three-month time frame for the project, SFT worked closely with the contractor to co-ordinate the fender system design, while part of the site was still in the planning stage and later, with the production team in the manufacturing facility in Rechlin, as the delivery schedule could only be met by supplying the steel components from its own factory in Germany.

SFT said that this three-way co-operation served as another example of its holistic approach to fender system design influencing the safety at marine terminals; it considers all of these aspects and values them equally, ie manufacturing process, fender system



Fenders were installed at Wilhelmshaven's first LNG terminal ready for the opening

components, and project conditions, the company claimed.

Seen in the context of the latest German energy policy, this project will be a milestone in the efforts to diversify the national energy sector. At least four more projects are in the pipeline, SFT

said.

Construction started in early May, 2022 and when completed, LNGCs of all sizes will be able to moor alongside the chartered FSRU at Wilhelmshaven, regardless of tides and in line with highest safety standards. ■

NEWS NUDGE

GTT receives first Yangzijiang order

GTT has received its first order from the Chinese shipyard Yangzijiang for the tank design of two LNGCs.

They were ordered by a European shipowner.

GTT will design the tanks of the 175,000 cu m vessels, which will be fitted with the Mark III Flex membrane containment system.

The delivery of the vessels is scheduled for between the fourth quarter of 2025 and the second quarter of 2026.

Ships - Newbuildings

More LNGC contracts are expected at Hyundai Samho Heavy Industries and Samsung Heavy Industries on the back of the Mozambique project.

The contracts will call for the two South Korean shipbuilders to

deliver nine and eight LNGCs by 2027 and 2028, respectively, at an average price per ship of \$260 mill, according to a *Business Korea* report.

Letters of Intent (LoI) were signed between the two shipbuilders and the French energy company TotalEnergies two years ago, but the final contracts were delayed, due to the civil war in Mozambique.

Some 40 LNGCs carriers are scheduled to be built for the project.

Elsewhere, mainly due to South Korean shipyards being fully booked for the next few years, China is making rapid inroads into the LNGC newbuilding market.

Three Chinese shipyards - only one of which has experience in building large LNGCs - won nearly 30% of this year's record orders for 163 new LNGCs, Reuters said in a report.

With South Korean shipbuilders swamped with vessel contracts to service Qatar's huge North Field

expansion, Chinese yards attracted more orders from overseas interests, including the first contracts for some yards, which were only recently certified to build membrane-type LNGCs.

Thus far, Chinese shipyards have won 45 LNGC orders worth an estimated \$9.8 bill, about five times last year's values, according to Clarksons Research.

By late November, Chinese yards' orderbook stood at 66, compared to 21 last year, some 21% of global orders worth around \$60 bill.

Shanghai-based Hudong-Zhonghua Shipbuilding is the only established Chinese large LNGC builder. This year, the yard has booked 75% of China's new orders receiving 26 orders from Chinese domestic owners - compared to nine in the last two years.

China State Shipbuilding Corp (CSSC) units, Dalian Shipbuilding Industry (DSIC) and Jiangnan Shipyard (Group), also joined the fray, according to Clarksons and

industry officials.

Two other yards - China Merchants Heavy Industry (CMHI) and Yangzijiang Shipbuilding - were certified to build large LNGCs this year and have attracted interest from both local and foreign shipowners.

China's demand for LNGCs is being propelled by a need to ship 20 mill tonnes a year from the US, which will help swell the global LNGC fleet by a third over the next five years, said Robert Songer, analyst at commodity consultancy ICIS.

Sinopec, a minority stakeholder of CMES, is also in talks to secure newbuilds at Jiangnan and Dalian, industry officials told Reuters, while COSCO Shipping Energy is "ready to work hand-in-hand with shipowners and yards," Vice President Qin Jiong, told an industry seminar last month.

Chinese yards' relationship with membrane tank containment designer GTT also helped, ICIS' Songer added. ■

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WORLD LNG CARRIER ORDERBOOK

Name	Owners	Yard	Capacity	Propulsion	Delivered	Delivery
Asterix I	Capital Gas	Hyundai Heavy	174000	XDF	01/11/2022	Q4, 2022
Hudong-zhonghua H1829a	CSSC	Hudong-Zhonghua	174000	XDF	01/01/2024	Q1, 2024
Hudong-zhonghua H1830a	CSSC	Hudong-Zhonghua	174000	XDF	01/04/2024	Q2, 2024
Alexey Kosygin	Smart LNG	Zvezda SSK	172600	TFDE - Azipod	01/03/2023	Q1, 2023
Pyotr Stolypin	Smart LNG	Zvezda SSK	172600	TFDE - Azipod	01/09/2023	Q3, 2023
Sergei Witte	Smart LNG	Zvezda SSK	172600	TFDE - Azipod	01/10/2023	Q4, 2023
Zvezda 044	Smart LNG	Zvezda SSK	172600	TFDE - Azipod	01/11/2023	Q4, 2023
Zvezda 045	Smart LNG	Zvezda SSK	172600	TFDE - Azipod	01/12/2023	Q4, 2023
Seri Damai	MISC	Samsung	174000	XDF	01/01/2023	Q1, 2023
Seri Daya	MISC	Samsung	174000	XDF	01/03/2023	Q1, 2023
Samsung 2315	SinoKor	Samsung	173400	ME-GA	01/12/2023	Q4, 2023
Samsung 2316	SinoKor	Samsung	173400	ME-GA	01/11/2022	Q4, 2022
Samsung 2317	SinoKor	Samsung	173400	ME-GA	01/12/2022	Q4, 2022
Samsung 2318	SinoKor	Samsung	173400	ME-GA	01/03/2023	Q1, 2023
Lng Prosperity	JP Morgan	Hyundai Heavy	174000	XDF	01/12/2022	Q4, 2022
Kun Lun	ULT	Hudong-Zhonghua	174000	XDF	01/04/2023	Q2, 2023
Wu Dang	ULT	Hudong-Zhonghua	174000	XDF	01/01/2023	Q1, 2023
Lng Harmony	JP Morgan	Hyundai Heavy	174000	XDF	01/08/2023	Q3, 2023
Orion Jessica	JP Morgan	Hyundai Heavy	174000	XDF	01/07/2023	Q3, 2023
Ei Ferrol Knutsen	Knutsen	Hyundai Samho	174000	XDF	01/05/2023	Q2, 2023
Extremadura Knutsen	Knutsen	Hyundai Samho	174000	XDF	01/06/2023	Q2, 2023
Daewoo 2517	MOL, COSCO	DSME	172500	TFDE - Azipod	01/09/2023	Q3, 2023
Daewoo 2518	MOL, COSCO	DSME	172500	TFDE - Azipod	01/10/2023	Q4, 2023
Daewoo 2519	MOL, COSCO	DSME	172500	TFDE - Azipod	01/12/2023	Q4, 2023
Zvezda 046	Smart LNG	Zvezda SSK	172600	TFDE - Azipod	01/08/2024	Q3, 2024
Zvezda 047	Smart LNG	Zvezda SSK	172600	TFDE - Azipod	01/09/2024	Q3, 2024
Zvezda 048	Smart LNG	Zvezda SSK	172600	TFDE - Azipod	01/10/2024	Q4, 2024
Zvezda 049	Smart LNG	Zvezda SSK	172600	TFDE - Azipod	01/11/2024	Q4, 2024
Zvezda 050	Smart LNG	Zvezda SSK	172600	TFDE - Azipod	01/12/2024	Q4, 2024
Zvezda 051	Smart LNG	Zvezda SSK	172600	TFDE - Azipod	01/08/2025	Q3, 2025
Zvezda 052	Smart LNG	Zvezda SSK	172600	TFDE - Azipod	01/09/2025	Q3, 2025
Zvezda 053	Smart LNG	Zvezda SSK	172600	TFDE - Azipod	01/10/2025	Q4, 2025
Zvezda 054	Smart LNG	Zvezda SSK	172600	TFDE - Azipod	01/11/2025	Q4, 2025
Zvezda 055	Smart LNG	Zvezda SSK	172600	TFDE - Azipod	01/12/2025	Q4, 2025
Sm Golden Eagle	Korea Line	Hyundai Heavy	174000	XDF	01/09/2025	Q3, 2025
Sm Kestrel	Korea Line	Hyundai Heavy	174000	XDF	01/10/2023	Q4, 2023
Grazyna Gesicka	Knutsen	Hyundai Heavy	174000	XDF	01/06/2023	Q2, 2023
Lech Kaczynski	Knutsen	Hyundai Heavy	174000	XDF	01/12/2022	Q4, 2022
Samsung 2425	Maran Gas Maritime	Samsung	174000	XDF	01/07/2023	Q3, 2023
Hyundai Samho 8100	Knutsen	Hyundai Samho	174000	ME-GA	01/11/2024	Q4, 2024
Orion Sky	JP Morgan	Hyundai Heavy	174000	XDF	01/11/2024	Q4, 2024
New Brave	Pan Ocean	Hyundai Heavy	174000	XDF	01/09/2024	Q3, 2024
New Nature	Pan Ocean	Hyundai Heavy	174000	XDF	01/10/2024	Q4, 2024
New Apex	Pan Ocean	Samsung	174000	XDF	01/04/2023	Q2, 2023
Energy Fidelity	Alpha Gas	Hyundai Samho	174000	XDF	01/08/2023	Q3, 2023
Dapeng Princess	Shenzhen Gas	Hudong-Zhonghua	79960	XDF	01/01/2023	Q1, 2023
Hyundai Ulsan 3294	Hyundai LNG Shipping	Hyundai Heavy	174000	XDF	01/02/2024	Q1, 2024
Hyundai Ulsan 3295	Hyundai LNG Shipping	Hyundai Heavy	174000	XDF	01/06/2024	Q2, 2024
Hyundai Ulsan 3296	Hyundai LNG Shipping	Hyundai Heavy	174000	XDF	01/07/2024	Q3, 2024

Name	Owners	Yard	Capacity	Propulsion	Delivered	Delivery
Hyundai Samho 8139	Knutsen	Hyundai Samho	174000	XDF	01/10/2023	Q4, 2023
Jiangnan H2637	Jovo Energy	Jiangnan	79800	XDF	01/12/2023	Q4, 2023
Samsung 2473	Maran Gas Maritime	Samsung	174000	XDF	01/09/2024	Q3, 2024
Samsung 2474	Maran Gas Maritime	Samsung	174000	XDF	01/09/2024	Q3, 2024
Daewoo 2521	Hyundai LNG Shipping	DSME	174000	MEGI	01/09/2023	Q3, 2023
Clean Destiny	Dynagas	Hyundai Heavy	200000	ME-GA	01/11/2023	Q4, 2023
Clean Future	Dynagas	Hyundai Heavy	200000	ME-GA	01/03/2024	Q1, 2024
Clean Resolution	Dynagas	Hyundai Heavy	200000	ME-GA	01/09/2023	Q3, 2023
Clean Vitality	Dynagas	Hyundai Heavy	200000	ME-GA	01/02/2024	Q1, 2024
MOL Coral	MOL	DSME	174000	ME-GA	01/10/2023	Q4, 2023
Amore Mio I	Capital Gas	Hyundai Heavy	174000	ME-GA	01/10/2023	Q4, 2023
Axios II	Capital Gas	Hyundai Heavy	174000	ME-GA	01/12/2023	Q4, 2023
Hyundai Samho 8106	Alpha Gas	Hyundai Samho	170520	XDF	01/04/2024	Q2, 2024
Hyundai Samho 8107	Alpha Gas	Hyundai Samho	170520	XDF	01/06/2024	Q2, 2024
Hyundai Samho 8147	H-Line	Hyundai Samho	174000	XDF	01/11/2023	Q4, 2023
Samsung 2459	Celsius Shipping	Samsung	180000	ME-GA	01/06/2023	Q2, 2023
Samsung 2460	Celsius Shipping	Samsung	180000	ME-GA	01/09/2023	Q3, 2023
Samsung 2461	Celsius Shipping	Samsung	180000	ME-GA	01/12/2023	Q4, 2023
Hyundai Samho 8101	Knutsen	Hyundai Samho	174000	ME-GA	01/10/2023	Q4, 2023
Hyundai Samho 8102	Knutsen	Hyundai Samho	174000	ME-GA	01/09/2025	Q3, 2025
Hyundai Ulsan 3320	JP Morgan	Hyundai Heavy	174000	ME-GA	01/07/2025	Q3, 2025
Hyundai Ulsan 3321	JP Morgan	Hyundai Heavy	174000	ME-GA	01/09/2025	Q3, 2025
New Green	Pan Ocean	Hyundai Heavy	174000	ME-GA	01/10/2024	Q4, 2024
New Oasis	Pan Ocean	Hyundai Heavy	174000	ME-GA	01/12/2024	Q4, 2024
Daewoo 2522	Hyundai LNG Shipping	DSME	174000	MEGI	01/05/2024	Q2, 2024
Hyundai Samho 8148	Knutsen	Hyundai Samho	174000	XDF	01/02/2024	Q1, 2024
Hyundai Samho 8149	Knutsen	Hyundai Samho	174000	ME-GA	01/03/2024	Q1, 2024
Hyundai Ulsan 3297	Hyundai LNG Shipping	Hyundai Heavy	174000	XDF	01/05/2024	Q2, 2024
Hyundai Ulsan 3298	Hyundai LNG Shipping	Hyundai Heavy	174000	XDF	01/11/2024	Q4, 2024
Hyundai Ulsan 3299	Hyundai LNG Shipping	Hyundai Heavy	174000	XDF	01/01/2025	Q1, 2025
Samsung 2579	Celsius Shipping	Samsung	180000	ME-GA	01/03/2024	Q1, 2024
Samsung 2584	Celsius Shipping	Samsung	180000	ME-GA	01/07/2024	Q3, 2024
Samsung 2585	Celsius Shipping	Samsung	180000	ME-GA	01/09/2024	Q3, 2024
Hudong-zhonghua H1838a	K-Line	Hudong-Zhonghua	79960	XDF	01/09/2023	Q3, 2023
Hyundai Samho 8140	Capital Gas	Hyundai Samho	174000	ME-GA	01/07/2024	Q3, 2024
Daewoo 2523	MOL	DSME	174000	ME-GA	01/02/2024	Q1, 2024
Daewoo 2524	MOL	DSME	174000	ME-GA	01/04/2024	Q2, 2024
Daewoo 2525	MOL	DSME	174000	ME-GA	01/08/2024	Q3, 2024
Daewoo 2526	MOL	DSME	174000	ME-GA	01/10/2024	Q4, 2024
Daewoo 2527	MOL	DSME	174000	ME-GA	01/07/2024	Q3, 2024
Hudong-zhonghua H1790a	MOL	Hudong-Zhonghua	175000	XDF	01/09/2024	Q3, 2024
Hudong-zhonghua H1791a	MOL	Hudong-Zhonghua	175000	XDF	01/12/2024	Q4, 2024
Hudong-zhonghua H1792a	MOL	Hudong-Zhonghua	175000	XDF	01/03/2025	Q1, 2025
Hudong-zhonghua H1793a	MOL	Hudong-Zhonghua	175000	XDF	01/05/2025	Q2, 2025
Samsung 2580	NYK	Samsung	174000	XDF	01/09/2023	Q3, 2023
Samsung 2581	NYK	Samsung	174000	XDF	01/11/2023	Q4, 2023
Samsung 2582	NYK	Samsung	174000	XDF	01/12/2023	Q4, 2023
Samsung 2583	NYK	Samsung	174000	XDF	01/02/2024	Q1, 2024
Samsung 2592	JP Morgan	Samsung	174000		01/04/2024	Q2, 2024
Samsung 2593	JP Morgan	Samsung	174000		01/07/2024	Q3, 2024
Samsung 2594	JP Morgan	Samsung	174000		01/10/2024	Q4, 2024

Name	Owners	Yard	Capacity	Propulsion	Delivered	Delivery
Samsung 2595	JP Morgan	Samsung	174000		01/01/2025	Q1, 2025
Samsung 2596	JP Morgan	Samsung	174000	ME-GA	01/11/2024	Q4, 2024
Samsung 2597	JP Morgan	Samsung	174000	ME-GA	01/12/2024	Q4, 2024
Apostolos	Capital Gas	Hyundai Heavy	174000	ME-GA	01/06/2024	Q2, 2024
Assos	Capital Gas	Hyundai Heavy	174000	ME-GA	01/05/2024	Q2, 2024
Daewoo 2528	Maran Gas Maritime	DSME	174000	MEGI	01/08/2024	Q3, 2024
Daewoo 2529	Maran Gas Maritime	DSME	174000	MEGI	01/11/2024	Q4, 2024
Daewoo 2530	BWGas	DSME	174000	MEGI	01/03/2025	Q1, 2025
Daewoo 2531	BWGas	DSME	174000	MEGI	01/05/2025	Q2, 2025
Samsung 2600	JP Morgan	Samsung	174000		01/07/2024	Q3, 2024
Samsung 2601	JP Morgan	Samsung	174000		01/01/2025	Q1, 2025
Samsung 2598	Celsius Shipping	Samsung	180000	ME-GA	01/01/2025	Q1, 2025
Samsung 2599	Celsius Shipping	Samsung	180000	ME-GA	01/05/2025	Q2, 2025
Hudong-zhonghua H1834a	ULT	Hudong-Zhonghua	174000	XDF	01/09/2024	Q3, 2024
Hudong-zhonghua H1835a	ULT	Hudong-Zhonghua	174000	XDF	01/12/2024	Q4, 2024
Hudong-zhonghua H1836a	ULT	Hudong-Zhonghua	174000	XDF	01/03/2025	Q1, 2025
Samsung 2604	NYK	Samsung	174000	XDF	01/12/2024	Q4, 2024
Daewoo 2532	GasLog	DSME	174000	MEGI	01/05/2024	Q2, 2024
Daewoo 2533	GasLog	DSME	174000	MEGI	01/08/2024	Q3, 2024
Daewoo 2534	GasLog	DSME	174000	MEGI	01/06/2025	Q2, 2025
Daewoo 2535	GasLog	DSME	174000	MEGI	01/08/2025	Q3, 2025
Samsung 2602	Celsius Shipping	Samsung	174000	ME-GA	01/12/2024	Q4, 2024
Samsung 2603	Celsius Shipping	Samsung	174000	ME-GA	01/12/2024	Q4, 2024
Hyundai Samho 8173	SK Shipping	Hyundai Samho	174000	ME-GA	01/09/2024	Q3, 2024
Daewoo 2537	Maran Gas Maritime	DSME	174000	MEGI	01/09/2025	Q3, 2025
Daewoo 2538	Maran Gas Maritime	DSME	174000	MEGI	01/11/2025	Q4, 2025
Hudong-zhonghua H1880a	MOL	Hudong-Zhonghua	174000	XDF	01/10/2024	Q4, 2024
Hudong-zhonghua H1881a	MOL	Hudong-Zhonghua	174000	XDF	01/08/2025	Q3, 2025
Hudong-zhonghua H1882a	MOL	Hudong-Zhonghua	174000	XDF	01/10/2025	Q4, 2025
Hudong-zhonghua H1883a	MOL	Hudong-Zhonghua	174000	XDF	01/03/2026	Q1, 2026
Hudong-zhonghua H1884a	MOL	Hudong-Zhonghua	174000	XDF	01/06/2026	Q2, 2026
Hudong-zhonghua H1885a	MOL	Hudong-Zhonghua	174000	XDF	01/09/2026	Q3, 2026
Daewoo 2536	MOL	DSME	174000	ME-GA	01/09/2024	Q3, 2024
Hyundai Samho 8175	H-Line	Hyundai Samho	174000	XDF	01/04/2025	Q2, 2025
Samsung 2607	H-Line	Samsung	174000	ME-GA	01/03/2025	Q1, 2025
Samsung 2608	H-Line	Samsung	174000	ME-GA	01/05/2025	Q2, 2025
Samsung 2609	H-Line	Samsung	174000	ME-GA	01/06/2025	Q2, 2025
Samsung 2610	H-Line	Samsung	174000	ME-GA	01/09/2025	Q3, 2025
Daewoo 2539	Maran Gas Maritime	DSME	174000	MEGI	01/11/2025	Q4, 2025
Daewoo 2540	Maran Gas Maritime	DSME	174000	MEGI	01/12/2025	Q4, 2025
Hyundai Samho 8170	Hyundai Glovis	Hyundai Samho	174000	ME-GA	01/08/2024	Q3, 2024
Daewoo 2541	Venture Global LNG	DSME	200000	ME-GA	01/07/2025	Q3, 2025
Daewoo 2542	Venture Global LNG	DSME	200000	ME-GA	01/10/2025	Q4, 2025
Daewoo 2543	Venture Global LNG	DSME	200000	ME-GA	01/12/2025	Q4, 2025
Jiangnan H2700	ADNOC	Jiangnan	175000	XDF	01/01/2025	Q1, 2025
Jiangnan H2701	ADNOC	Jiangnan	175000	XDF	01/05/2025	Q2, 2025
Samsung 2619	Celsius Shipping	Samsung	180000	ME-GA	01/10/2025	Q4, 2025
Hyundai Ulsan 3356	Dynagas	Hyundai Heavy	200000	ME-GA	01/03/2025	Q1, 2025
Hyundai Ulsan 3357	Dynagas	Hyundai Heavy	200000	ME-GA	01/04/2025	Q2, 2025
Hyundai Ulsan 3358	Dynagas	Hyundai Heavy	200000	ME-GA	01/12/2025	Q4, 2025
Hyundai Samho 8179	Knutson	Hyundai Samho	174000	ME-GA	01/03/2025	Q1, 2025

Name	Owners	Yard	Capacity	Propulsion	Delivered	Delivery
Hyundai Samho 8180	Knutsen	Hyundai Samho	174000	ME-GA	01/06/2025	Q2, 2025
Daewoo 2544	BWGas	DSME	174000	MEGI	01/11/2025	Q4, 2025
Daewoo 2545	BWGas	DSME	174000	MEGI	01/12/2025	Q4, 2025
Samsung 2635	TMS Cardiff Gas	Samsung	174000	ME-GA	01/09/2024	Q3, 2024
Samsung 2636	TMS Cardiff Gas	Samsung	174000	ME-GA	01/03/2026	Q1, 2026
Daewoo 2550	MOL	DSME	174000	ME-GA	01/09/2025	Q3, 2025
Daewoo 2551	MOL	DSME	174000	ME-GA	01/09/2026	Q3, 2026
Dalian No 1 G175k-1	China Merchant	Dalian Shipbuilding	175000	XDF	01/09/2025	Q3, 2025
Dalian No 1 G175k-2	China Merchant	Dalian Shipbuilding	175000	XDF	01/12/2025	Q4, 2025
Hyundai Samho 8181	Knutsen	Hyundai Samho	174000	ME-GA	01/12/2025	Q4, 2025
NYK CNOOC 1	NYK	Hudong-Zhonghua	174000		01/04/2027	Q2, 2027
NYK CNOOC 2	NYK	Hudong-Zhonghua	174000		01/03/2027	Q1, 2027
NYK CNOOC 3	NYK	Hudong-Zhonghua	174000		01/01/2027	Q1, 2027
NYK CNOOC 4	NYK	Hudong-Zhonghua	174000		01/05/2026	Q2, 2026
NYK CNOOC 5	NYK	Hudong-Zhonghua	174000		01/08/2026	Q3, 2026
NYK CNOOC 6	NYK	Hudong-Zhonghua	174000		01/11/2026	Q4, 2026
Jiangnan H2702	ADNOC	Jiangnan	175000	XDF	01/09/2025	Q3, 2025
Jiangnan H2703	ADNOC	Jiangnan	175000	XDF	01/01/2026	Q1, 2026
Jiangnan H2704	ADNOC	Jiangnan	175000	XDF	01/06/2026	Q2, 2026
Jiangnan H2705	ADNOC	Jiangnan	175000	XDF	01/09/2026	Q3, 2026
Samsung 2631	H-Line	Samsung	174000	ME-GA	01/07/2025	Q3, 2025
Samsung 2632	H-Line	Samsung	174000	ME-GA	01/12/2025	Q4, 2025
Samsung 2633	H-Line	Samsung	174000	ME-GA	01/01/2026	Q1, 2026
Hyundai Samho 8188	SK Shipping	Hyundai Samho	174000	ME-GA	01/07/2025	Q3, 2025
Hyundai Samho 8189	SK Shipping	Hyundai Samho	174000	ME-GA	01/08/2025	Q3, 2025
Hyundai Ulsan 3370	SK Shipping	Hyundai Heavy	174000	ME-GA	01/02/2025	Q1, 2025
Hyundai Ulsan 3371	SK Shipping	Hyundai Heavy	174000	ME-GA	01/03/2025	Q1, 2025
Petronas K-line 1	K-Line	Hudong-Zhonghua	174000	XDF	01/10/2025	Q4, 2025
Petronas K-line 2	K-Line	Hudong-Zhonghua	174000	XDF	01/12/2025	Q4, 2025
Petronas K-line 3	K-Line	Hudong-Zhonghua	174000	XDF	01/07/2026	Q3, 2026
Petronas K-line 4	K-Line	Hudong-Zhonghua	174000	XDF	01/10/2026	Q4, 2026
Daewoo 2559	SK Shipping, Pan Ocean, H-Line	DSME	174000	ME-GA	01/05/2024	Q2, 2024
Daewoo 2560	H-Line, Pan Ocean, SK Shipping	DSME	174000	ME-GA	01/04/2025	Q2, 2025
Daewoo 2561	Pan Ocean, SK Shipping, H-Line	DSME	174000	ME-GA	01/05/2025	Q2, 2025
Daewoo 2562	SK Shipping, Pan Ocean, H-Line	DSME	174000	ME-GA	01/06/2025	Q2, 2025
Daewoo 2563	H-Line, Pan Ocean, SK Shipping	DSME	174000	ME-GA	01/11/2025	Q4, 2025
Daewoo 2564	Pan Ocean, SK Shipping, H-Line	DSME	174000	ME-GA	01/11/2025	Q4, 2025
Daewoo 2565	Pan Ocean, SK Shipping, H-Line	DSME	174000	ME-GA	01/02/2026	Q1, 2026
Hyundai Samho 8196	EPS	Hyundai Samho	174000	ME-GA	01/02/2025	Q1, 2025
Hyundai Samho 8197	EPS	Hyundai Samho	174000	ME-GA	01/01/2025	Q1, 2025
Hyundai Ulsan 3380	Knutsen	Hyundai Heavy	174000	XDF	01/05/2025	Q2, 2025
Hyundai Ulsan 3381	Knutsen	Hyundai Heavy	174000	XDF	01/06/2025	Q2, 2025
Daewoo 2546	H-Line, Pan Ocean, SK Shipping	DSME	174000	ME-GA	01/12/2024	Q4, 2024
Daewoo 2547	H-Line, Pan Ocean, SK Shipping	DSME	174000	ME-GA	01/12/2024	Q4, 2024

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 = 8 December 2022

Name	Owners	Yard	Capacity	Propulsion	Delivered	Delivery
Daewoo 2548	H-Line, Pan Ocean, SK Shipping	DSME	174000	ME-GA	01/01/2025	Q1, 2025
Daewoo 2549	H-Line, Pan Ocean, SK Shipping	DSME	174000	ME-GA	01/02/2025	Q1, 2025
Daewoo 2552	Maran Gas Maritime	DSME	174000	MEGI	01/05/2026	Q2, 2026
Daewoo 2553	Maran Gas Maritime	DSME	174000	MEGI	01/06/2026	Q2, 2026
Hyundai Samho 8198	Capital Gas	Hyundai Samho	174000	ME-GA	01/01/2026	Q1, 2026
Hyundai Samho 8199	Capital Gas	Hyundai Samho	174000	ME-GA	01/03/2026	Q1, 2026
Samsung 2634	JP Morgan	Samsung	174000	ME-GA	01/05/2025	Q2, 2025
Samsung 2637	JP Morgan	Samsung	174000	ME-GA	01/07/2025	Q3, 2025
Samsung 2638	JP Morgan	Samsung	174000	ME-GA	01/08/2025	Q3, 2025
Samsung 2641	JP Morgan	Samsung	174000	ME-GA	01/11/2025	Q4, 2025
Samsung 2642	JP Morgan	Samsung	174000	ME-GA	01/01/2026	Q1, 2026
Samsung 2643	JP Morgan	Samsung	174000	ME-GA	01/02/2026	Q1, 2026
Samsung 2644	JP Morgan	Samsung	174000	ME-GA	01/05/2026	Q2, 2026
Samsung 2645	JP Morgan	Samsung	174000	ME-GA	01/06/2026	Q2, 2026
Samsung 2646	JP Morgan	Samsung	174000	ME-GA	01/07/2026	Q3, 2026
Samsung 2647	JP Morgan	Samsung	174000	ME-GA	01/08/2026	Q3, 2026
Hudong-Zhonghua H1892A	COSCO	Hudong-Zhonghua	174000	XDF	01/10/2025	Q4, 2025
Hudong-Zhonghua H1893A	COSCO	Hudong-Zhonghua	174000	XDF	01/03/2026	Q1, 2026
Hyundai Ulsan 3382	Knutsen	Hyundai Heavy	174000	XDF	01/06/2025	Q2, 2025
Hyundai Ulsan 3383	Knutsen	Hyundai Heavy	174000	XDF	01/09/2025	Q3, 2025
Hyundai Ulsan 3384	Knutsen	Hyundai Heavy	174000	XDF	01/12/2025	Q4, 2025
Hyundai Ulsan 3385	Knutsen	Hyundai Heavy	174000	XDF	01/01/2026	Q1, 2026
Hyundai Ulsan 3386	Knutsen	Hyundai Heavy	174000	XDF	01/03/2026	Q1, 2026
Hyundai Ulsan 3387	Knutsen	Hyundai Heavy	174000	XDF	01/04/2026	Q2, 2026
Hyundai Ulsan 3393	Knutsen	Hyundai Heavy	174000	XDF	01/07/2026	Q3, 2026
Hyundai Ulsan 3394	Knutsen	Hyundai Heavy	174000	XDF	01/07/2026	Q3, 2026
Hyundai Samho 8049	NYK	Hyundai Samho	174000	XDF	01/03/2025	Q1, 2025
Hyundai Samho 8174	NYK	Hyundai Samho	174000	XDF	01/10/2025	Q4, 2025
Hyundai Ulsan 3395	NYK, MISC, K-Line, China LNG Shipping Holdings	Hyundai Heavy	174000	XDF	01/07/2025	Q3, 2025
Hyundai Ulsan 3396	NYK, MISC, K-Line, China LNG Shipping Holdings	Hyundai Heavy	174000	XDF	01/10/2025	Q4, 2025
Hyundai Ulsan 3397	NYK, MISC, K-Line, China LNG Shipping Holdings	Hyundai Heavy	174000	XDF	01/11/2025	Q4, 2025
Hyundai Ulsan 3398	NYK, MISC, K-Line, China LNG Shipping Holdings	Hyundai Heavy	174000	XDF	01/03/2026	Q1, 2026
Hyundai Ulsan 3399	NYK, MISC, K-Line, China LNG Shipping Holdings	Hyundai Heavy	174000	XDF	01/06/2026	Q2, 2026
Hyundai Ulsan 3400	NYK, MISC, K-Line, China LNG Shipping Holdings	Hyundai Heavy	174000	XDF	01/08/2026	Q3, 2026
Hyundai Ulsan 3401	NYK, MISC, K-Line, China LNG Shipping Holdings	Hyundai Heavy	174000	XDF	01/10/2026	Q4, 2026
Daewoo 2558	MOL	DSME	174000	ME-GA	01/09/2026	Q3, 2026
Hudong-Zhonghua H1794A	MOL	Hudong-Zhonghua	174000	XDF	01/02/2027	Q1, 2027
Hudong-Zhonghua H1795A	MOL	Hudong-Zhonghua	174000	XDF	01/07/2027	Q3, 2027
Hudong-Zhonghua H1796A	MOL	Hudong-Zhonghua	174000	XDF	01/12/2027	Q4, 2027
Hudong-zhonghua H1797a	NYK, MISC, K-Line, China LNG Shipping Holdings	Hudong-Zhonghua	174000	XDF	01/09/2025	Q3, 2025
Hudong-zhonghua H1798a	NYK, MISC, K-Line, China LNG Shipping Holdings	Hudong-Zhonghua	174000	XDF	01/11/2025	Q4, 2025

Name	Owners	Yard	Capacity	Propulsion	Delivered	Delivery
Hudong-zhonghua H1799a	NYK, MISC, K-Line, China LNG Shipping Holdings	Hudong-Zhonghua	174000	XDF	01/02/2026	Q1, 2026
Hudong-zhonghua H1800a	NYK, MISC, K-Line, China LNG Shipping Holdings	Hudong-Zhonghua	174000	XDF	01/05/2026	Q2, 2026
Hudong-zhonghua H1801a	NYK, MISC, K-Line, China LNG Shipping Holdings	Hudong-Zhonghua	174000	XDF	01/07/2026	Q3, 2026
Samsung 2611	H-Line, Pan Ocean, SK Shipping	Samsung	174000	ME-GA	01/01/2025	Q1, 2025
Samsung 2612	H-Line, Pan Ocean, SK Shipping	Samsung	174000	ME-GA	01/03/2025	Q1, 2025
Samsung 2639	JP Morgan	Samsung	174000	ME-GA	01/09/2025	Q3, 2025
Samsung 2640	JP Morgan	Samsung	174000	ME-GA	01/09/2025	Q3, 2025
MOL ENN 1	MOL	Hudong-Zhonghua	174000		01/06/2027	Q2, 2027
MOL ENN 2	MOL	Hudong-Zhonghua	174000		01/10/2027	Q4, 2027
MOL ENN 3	MOL	Hudong-Zhonghua	174000		01/12/2027	Q4, 2027
Cardiff 3	TMS Cardiff Gas	Hyundai Samho	174000	XDF	01/08/2026	Q3, 2026
Qatar Cardiff 1	TMS Cardiff Gas	DSME	174000	ME-GA	01/06/2026	Q2, 2026
Qatar Cardiff 2	TMS Cardiff Gas	DSME	174000	ME-GA	01/08/2026	Q3, 2026
Dalian n3	China Merchant	Dalian Shipbuilding	175000	XDF	01/07/2026	Q3, 2026
Dalian n4	China Merchant	Dalian Shipbuilding	175000	XDF	01/10/2026	Q4, 2026
Dalian n5	China Merchant	Dalian Shipbuilding	175000	XDF	01/04/2026	Q2, 2026
Dalian n6	China Merchant	Dalian Shipbuilding	175000	XDF	01/02/2025	Q1, 2025
Meiji 1	Meiji Shipping	DSME	174000	ME-GA	01/09/2025	Q3, 2025
Meiji 2	Meiji Shipping	DSME	174000	ME-GA	01/01/2026	Q1, 2026
Meiji 3	Meiji Shipping	DSME	174000	ME-GA	01/05/2026	Q2, 2026
Meiji 4	Meiji Shipping	DSME	174000	ME-GA	01/10/2026	Q4, 2026
MISC EM 1	MISC	Samsung	174000	XDF	01/06/2026	Q2, 2026
MISC EM 2	MISC	Samsung	174000	XDF	01/08/2026	Q3, 2026
K3 SHI 1	H-Line, Pan Ocean, SK Shipping	Samsung	174000	ME-GA	01/04/2026	Q2, 2026
K3 SHI 2	H-Line, Pan Ocean, SK Shipping	Samsung	174000	ME-GA	01/08/2026	Q3, 2026
Samho Cardiff	TMS Cardiff Gas	Hyundai Samho	174000	XDF	01/10/2026	Q4, 2026
Samho Cardiff 2	TMS Cardiff Gas	Hyundai Samho	174000	XDF	01/11/2026	Q4, 2026
VG 1	Venture Global LNG	DSME	200000	ME-GA	01/10/2026	Q4, 2026
VG 2	Venture Global LNG	DSME	200000	ME-GA	01/12/2026	Q4, 2026
Yangzijiang 1	Hammonia Reederei	Yangzijiang	175000		01/09/2025	Q3, 2025
Yangzijiang 2	Hammonia Reederei	Yangzijiang	175000		01/06/2026	Q2, 2026
Wideshine 2	CSSC	Hudong-Zhonghua	174000	XDF	01/03/2028	Q1, 2028
Wideshine 3	CSSC	Hudong-Zhonghua	174000	XDF	01/06/2028	Q2, 2028
Wideshine 4	CSSC	Hudong-Zhonghua	174000	XDF	01/09/2028	Q3, 2028
Maran Nov	Maran Gas Maritime	DSME	174000	MEGI	01/12/2026	Q4, 2026
Minerva 1	Minerva Marine	Samsung	174000	ME-GA	01/02/2026	Q1, 2026
Minerva 2	Minerva Marine	Samsung	174000	ME-GA	01/03/2026	Q1, 2026
Seapeak 1	Seapeak	Samsung	174000	ME-GA	01/01/2027	Q1, 2027
Seapeak 2	Seapeak	Samsung	174000	ME-GA	01/03/2027	Q1, 2027
Seapeak 3	Seapeak	Samsung	174000	ME-GA	01/05/2027	Q2, 2027
Seapeak 4	Seapeak	Samsung	174000	ME-GA	01/07/2027	Q3, 2027
Seapeak 5	Seapeak	Samsung	174000	ME-GA	01/12/2027	Q4, 2027

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
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

Built	Name	CBM	Cargo Type	Trading area	Trading in LNG?	Ship Owner / Operator
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	Hai Gang Wei Lai	20,000	LNG	China	Yes	SSES
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	Brassavola	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
2022	K.Lotus	18,000	LNG	Korea	Yes	K Line
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	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	???
2024	Keys TBN	3,500	LNG	Japan	Yes	Keys Bunkering West Japan Co
2024	Seaspan TBN 1	7,600	LNG	Canada	Yes	Seaspan ULC
2024	Fratelli Cosulich TBN	8,000	LNG	Mediterranean	Yes	Fratelli Cosulich
2025	Seaspan TBN 2	7,600	LNG	Canada	Yes	Seaspan ULC
2026	Avenir TBN (option)	20,000	LNG	Worldwide	Yes	Avenir LNG
2026	Avenir TBN (option)	20,000	LNG	Worldwide	Yes	Avenir LNG