

LNG Shipping News

AN LNG JOURNAL TITLE ON LNG CARRIERS

8 December 2022

LNGC rates and prices skyrocket

Ahead of the impending Russian oil sanctions, which have sent the tanker charter market into orbit, VesselsValue (VV) has taken a look at the LNGC sector.

By last week, newbuilding prices for large LNGCs of 174,000 cu m had climbed about 22% year-on-year from \$205.65 mill to \$251.33 mill.

The number of newbuilding contracts placed was also up by about 84% from last year at 156 orders (see World Orderbook on page 12), VV reported in a note.

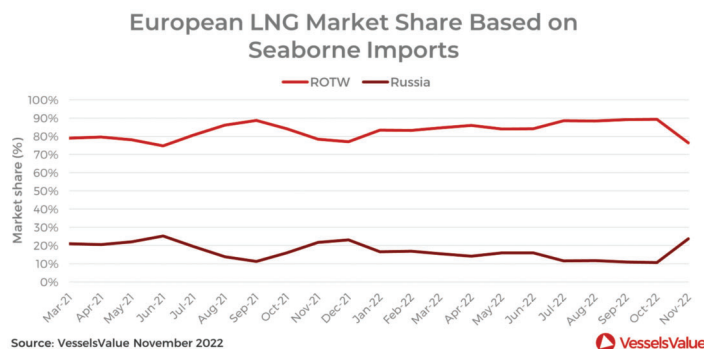
Some of the main market participants investing in new tonnage were MOL, NYK Line, Global Meridian and Knutsen OAS, ordering up to 20 vessels each thus far this year.

Notable recent newbuilding orders included a 174,000 cu m LNGC for Maran Gas Maritime, to be built at Daewoo and delivered in 2026. This LNGC was contracted at the Won equivalent of a high \$252 mill.

The spike in values came as LNG earnings reached an all time high, surpassing last year's record breaking peak. For example, rates on the Baltic Exchange's BLNG1g assessment were at \$466,524 per day last week, up 52% y-o-y. They have since retreated.

As well as booming charter rates, high steel costs and low yard availability also led to the LNGC newbuilding price increases.

In the European LNG market,



based on seaborne trade only (last year about 90% of Russian gas came through pipelines), 21% of imports came from Russia, with 79% from the rest of the world (ROTW) in March, 2021.

By October 2022, European imports of Russian LNG by sea had dropped to 11%, while imports from the ROTW had grown to 89%.

LNGC driven

In another report, VV looked at the top 10 country total fleet value for all ship types and found a couple of instances where the total was driven by LNGCs.

For example, Japan moved back up to first place after falling to second last year, owning \$196.6 bill in assets of all ship types, which is an increase of about \$9 bill y-o-y. This was largely due to

the current boom in the LNG sector, VV said.

Out of the top 10 shipowning countries, Japan owned the highest value LNGC fleets at \$30.3 bill.

Remaining in the LNG space, South Korea moved up to sixth this year, overtaking Germany. The value of this fleet of all vessel types now stands at \$65.9 bill, an increase of almost \$8 bill y-o-y.

South Korea's investment in the LNG sector continued to pay off, with values for such vessels increasing by as much as about 19% since January.

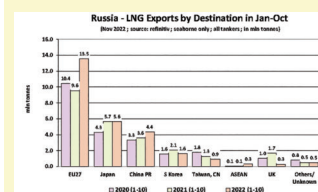
Over the first 10 months of this year, 28 newbuilding orders were placed by South Korean companies, including K3 Consortium, H-Line Shipping and SK Shipping.

All of the orders were for large LNGCs of 174,000 cu m.

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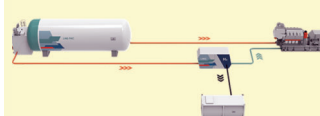
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Woodside cargo arrives in Rotterdam

Woodside Energy has shipped an LNG cargo to Europe from Australia's North West Shelf project for the first time.

The buyer, Uniper said would help make up for supply lost from Russia.

The 75,000 tonne cargo, equivalent to 100 mill cu m, was delivered on 27th November to Uniper Global Commodi-

ties at the Gate Terminal at Maasvlakte, Rotterdam.

Most of the Australian LNG is shipped to Asia, with rare shipments also going to South America.

In August, amid Europe's hunt for gas to replace Russian supply, an Australian cargo was transferred in Malaysian waters to go to the UK.

"We continue to work on securing the much needed gas supply into Europe from reliable sources like Australia and thus helping to strengthen security of supply during the ongoing crisis triggered by the Russian war," Uniper's Director LNG, Andreas Gemballa, said in a joint statement with Woodside.

Europe's regas capacity to rapidly expand

LNG import capacity in the European Union (EU) and the UK will expand by 34%, or 6.8 bill cu ft per day, by 2024, compared with 2021.

This was the conclusion that the US Energy Information Administration (EIA) came to after analysing data from the International Group of Liquefied Natural Gas Importers (GIIGNL) and other sources.

Import or regasification expansion capacity will total 5.3 bill cu ft per day by the end of next year and grow further by an additional 1.5 bill by the end of 2024.

LNG regasification capacity in the EU27 and the UK remained relatively stable and had expanded modestly in the last 10 years, by 2.8 bill cu ft per day (16%), from 17.5 bill in 2012 to 20.2 bill by the end of 2021, according to GIIGNL data.

Since Russia's invasion of Ukraine in February, 2022 and the reduction in natural gas pipeline imports from Russia that followed, European countries have reactivated development of previously dormant regasification projects and have started to develop new ones.

Many of the new European regasification projects can be developed relatively quickly by chartering FSRUs and by building pipelines to transport regasified

natural gas to connecting pipelines onshore.

Other regasification projects will expand capacity at their existing onshore terminals and implement upgrades to increase the existing terminals' throughput.

Thus far this year, about 1.7 bill cu ft per day of the new and expanded LNG regasification capacity has been added in the Netherlands, Poland, Finland, Italy, and Germany. The new Eemshaven terminal in the Netherlands (0.8 bill cu ft capacity) consists of two FSRUs and received its first import cargo in September, 2022.

A new FSRU terminal at Wilhelmshaven in Germany (0.7 bill cu ft capacity) was completed last month.

The EIA outlined the regasification terminals currently under construction in seven EU countries, which could add an additional 3.5 bill cu ft per day of new capacity by the end of 2023 -

- Germany is developing three

FSRU terminal sites, which will in total add 1.4 bill cu ft of regasification capacity at Lubmin, Brunsbüttel, and Wilhelmshaven. Two terminals (at Lubmin and Brunsbüttel) are expected to start operations this winter, and the second terminal at Wilhelmshaven is expected online in 2023.

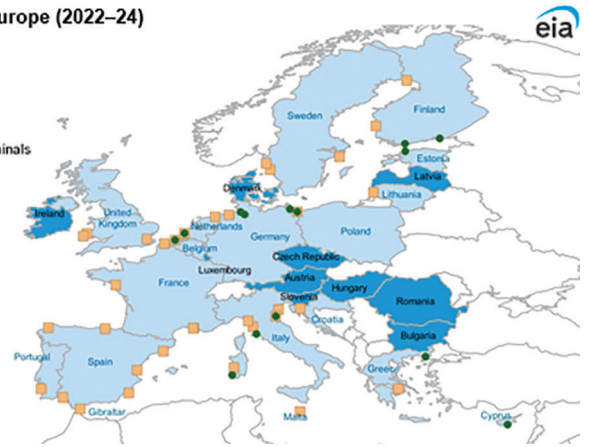
- Poland will expand capacity its existing LNG regasification terminal at Świnoujście by 0.2 bill cu ft per day to reach a total capacity of 0.8 bill by December, 2023.
- France will add 0.4 bill cu ft of regasification capacity using the FSRU 'Cape Anne' at Le

Havre, which is expected to come online in the Autumn of 2023.

- Finland and Estonia are jointly developing an FSRU terminal at the Finnish port of Inkoo, which will add 0.5 bill cu ft per day capacity and is expected to come online this winter.
- Italy is developing an FSRU terminal near Piombino, which will add 0.5 bill cu ft capacity and will likely come online in spring 2023.
- Greece will also bring online an FSRU at Alexandroupolis by the end of 2023, with 0.5 bill cu ft per day of regasification capacity.

LNG import capacity into Europe (2022-24)

Regasification plants
 existing
 existing/expansion
 under construction
 Countries
 EU-27 and UK with LNG import terminals
 Other EU-27 and UK



Italy must boost LNG import capacity- Eni

Italy will need to significantly increase its LNG import capacity, Eni's CEO said last week.

Four new terminals will be required to add to the three current terminals, which have a capacity of around 17 bill cu m of gas and are nearly full.

The Italian government had planned to install another two

FSRUs to increase the capacity to 27 bill cu m, but a larger effort is needed to help replace Russian supplies with gas coming from African suppliers via ship.

Difficulties in adding capacity were illustrated by the Italian city of Piombino, which has launched a legal challenge against a government-backed

project for a new LNG terminal to be installed.

Russian gas flows have fallen from around 38% of Italy's total consumption to around 10% in recent months. The Eni CEO said that next year he expected a drop in Russian gas flows to around 6-7%.

He also said that the change

in the gas supply will compel Italy to strengthen its energy infrastructure in the south, eliminate bottlenecks in the gas grid and enlarge its storage system.

Italian gas grid operator Snam recently announced plans to invest more than €3 bill to boost the gas network and to add new storage sites.

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LNG exports - Russia surprisingly hits record

Global seaborne LNG trade has continued to surge this year, helped by the disruption to Russian pipelines and increased stockpiling in Western Europe.

In the first 10 months of 2022, global LNG loadings increased by 5.8% year-on-year to 334.7 mill tonnes, reported Banchero Costa (Bancosta), based on Refinitiv vessel tracking data.

The US claimed the largest exports rise, a massive 12% y-o-y increase in shipments to the end of October, to 66.3 mill tonnes.

However, perhaps surprisingly, almost equal figures were recorded from Russia, with exports up by 11.3% y-o-y to an all-time record 27.2 mill tonnes.

Australia remained the world's largest seaborne exporter of LNG, accounting for 20.1% of global volumes so far this year, ahead of Qatar and the US (both on 19.8%).

Shipments from Australia increased by 1% y-o-y during January to October, 2022 to 67.3 mill tonnes, while Qatari volumes increased by 1.4% y-o-y to 66.3 mill tonnes.

Looking at destinations, Western Europe led the way, as the region tried to diversify away from Russian pipeline gas. The European Union (27) was the world's largest seaborne importer, with a 24.6% share in the first 10 months of 2022 importing 81.8 mill tonnes of LNG, which represented a 68.4% y-o-y increase from the 48.6 mill

tonnes recorded for in the same period of 2021 - by far, an all time record.

Russia was the fourth largest LNG seaborne exporter, after Australia, Qatar, and the US, with a 8.1% share of the market thus far this year. In calendar 2021 Russia exported 30.3 mill tonnes of LNG by sea, according to Refinitiv vessel tracking data, an increase of 5.4% y-o-y.

Shipments from Russia actually increased further this year, by an impressive 11.3% y-o-y to 27.2 mill tonnes during the 10-month period. This year, Russia has recorded the highest growth in volumes of any exporter, second only to the US.

The majority of LNG exports from Russia were sourced from the Yamal LNG project and loaded at Sabetta. During the period, Yamal

LNG exports reached 17.3 mill tonnes - 64% of Russia's total LNG exports, Bancosta said.

Second Russian plant

A second LNG Plant - Arctic LNG 2 - with three LNG trains having a capacity of 6.6 mill tonnes per annum each - is currently under construction with completion planned for this year.

The second largest operational LNG export facility in Russia is at Prigorodnoye on Sakhalin Island, in the Far East - the Sakhalin-2 project - which was the first LNG export facility to come online in Russia.

LNG exports from Sakhalin reached 9.2 mill tonnes in January-October 2022, which was 34% of Russia's total. Finally, small amounts of LNG (0.6 mill tonnes) were shipped from Vysotsk in the

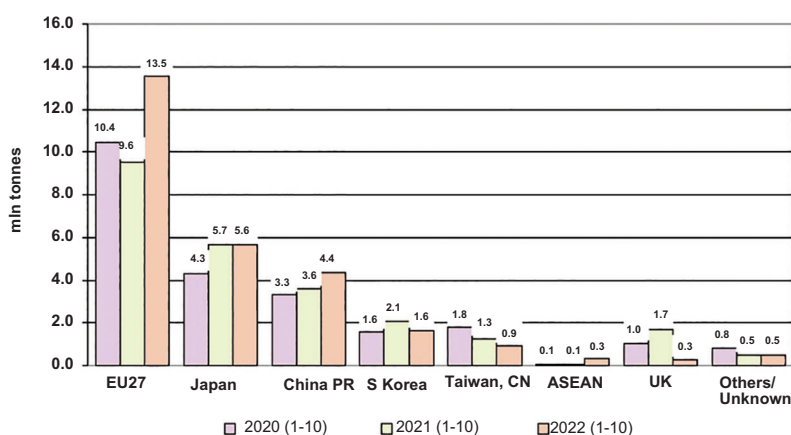
Gulf of Finland.

Russian LNG's main customer was the EU 27. During the period, LNG exports to the EU increased by 41.8% y-o-y to 13.5 mill tonnes from 9.6 mill tonnes during the same period of 2021. Conversely, volumes to the UK crashed by 82.5% y-o-y to 0.3 mill tonnes, from 1.7 mill tonnes in the same period of last year.

The second top destination after Europe was Japan, which accounted for almost 21% of Russian LNG shipments during the period. However, Japanese shipments were down by 0.5% y-o-y this year to 5.6 mill tonnes.

Exports to South Korea also declined in 2022, by 20.9% y-o-y to 1.6 mill tonnes, which held a 6% share. Shipments to Mainland China increased by 21.2% y-o-y to 4.4 mill tonnes. China was the destination for 16.1% of Russian LNG shipments thus far this year, Bancosta concluded.

Russia - LNG Exports by Destination in Jan-Oct
(Nov 2022; source: refinitiv; seaborne only; all tankers; in mln tonnes)



Source: Banchero Costa

bp secures Chinese LNG contract

China's Shenzhen Energy Group has signed a long-term agreement with oil major bp to buy LNG.

According to a Reuters report, this agreement is Shenzhen Energy's first long-term international LNG contract and its first long-term contract with BP Singapore, the Chinese company said.

No details of the deal were revealed.

To meet the demand of

Guangdong province and Shenzhen city for energy security and stability, Shenzhen Energy Group is making efforts to promote the construction of gas power, plants it said.

It is estimated that in about 2024, as the gas power plants go into operation, the group's total

demand for natural gas will significantly rise, the company added.

China's LNG importers are widely expected to avoid the spot market this winter, where prices have risen sharply, relying instead on Russian supplies and long-term contracted volumes.

EU to take Egyptian gas

Egypt is to ramp up its LNG exports this year to over 8 mill tonnes, some 14% higher than 2021.

Egyptian Oil Minister, Tarek el Molla, said last week that 90% of LNG would be exported to European Union countries.

"We have to take into account the growing needs of the Egyptian domestic market in the short term and the increase in supplies from neighbouring Eastern Mediterranean countries in the long term," the Egyptian Minister said in a statement to newswires.

el Molla added that the companies will focus on reducing emissions from research, exploration and production operations, while stepping up their activities, which will give Egypt a competitive edge.

INEOS joins LNG club

UK-based petrochemical company, INEOS has signed a 20-year contract with Semptra Infrastructure for the supply of around 1.4 mill tonnes per annum of LNG from Phase 1 of the Port Arthur LNG facility currently under development.

The company has also signed a non-binding heads of agreement (HOA) for the potential purchase of an additional 0.2 mill tonnes from the Port Arthur LNG Phase 2 project. First deliveries are expected in 2027.

In July, INEOS also signed a contract for long-term regasification capacity at the German LNG terminal in Brunsbüttel.

These agreements mark the company's entry into the global LNG market. INEOS claimed to be a first mover among European corporates, as it secures competitive sources of energy to meet its own needs and those of its customers in Europe, as part of the energy transition.

Brian Gilvary, Chairman, INEOS Energy, said, "This long-term contract with Semptra Infrastructure and the agreement of regasification capacity in Brunsbüttel, secures the key areas of the value chain for INEOS across the Atlantic corridor and represents a major step forward in the INEOS Energy journey, at a time of significant transformation in the energy industry."

Regas capacity

Brunsbüttel's German LNG has executed the engineering procure-

ment and construction contract (EPC) and has entered into agreements with foundation customers INEOS, ConocoPhillips and RWE for long-term regasification capacity at the terminal. It is now focusing on securing the final permits to fully develop the terminal.

David Bucknall, CEO INEOS Energy, added, "We are delighted to have Semptra Infrastructure and German LNG as long-term partners bringing significant expertise in construction and operation of LNG facilities.

"These agreements are an important part of our strategy as we build a network of liquefaction, shipping and regasification capacity to deliver affordable and reliable energy to our businesses and customers globally," he said.

"We are excited to finalise our commercial relationship with INEOS as a valued long-term LNG offtaker for the Port Arthur LNG Phase 1 development project," said Justin Bird, Semptra Infrastructure CEO. "We look forward to advancing this project so we can begin delivering new supplies of US LNG to our European partners, as they pursue more secure energy for their customers."

Ulco Vermeulen, member of the Executive Board of Gasunie,



INEOS Energy head Brian Gilvary

the operator of the Brunsbüttel terminal, commented. "This LNG supply contract between INEOS and Semptra Infrastructure, ensures good continuity and stability in supplying LNG volumes to Germany on a long-term basis.

"We are excited that INEOS has secured its LNG supply and look forward to start construction of the German LNG terminal in Brunsbüttel soon," he said.

INEOS also said that it was committed to achieving net zero by 2050 across its operations. The company is working to decarbonise the supply chain through carbon capture and storage and provide optionality for alternative sources of energy, such as its leadership in the production of hydrogen, as they are developed over time. ■

Germany to receive Qatar LNG

US energy major ConocoPhillips has signed two agreements with QatarEnergy to supply LNG to Germany on a long term basis.

The suppliers are joint venture companies formed to participate in the North Field East (NFE) and North Field South (NFS) projects, while the buyer is a wholly owned subsidiary of ConocoPhillips.

First delivery is expected in 2026 to the German LNG terminal at Brunsbüttel.

"QatarEnergy and ConocoPhillips are excited for the opportunity to responsibly and securely supply world markets with LNG from the Qatari expansion projects," ConocoPhillips CEO Ryan Lance said. "These agreements will provide an attractive LNG offtake solution for our new joint ventures with QatarEnergy and position the joint ventures as reliable sources of LNG supply into Europe."

"This is the culmination of efforts between two trusted partners, QatarEnergy and ConocoPhillips, over many years, to provide reliable and credible LNG supply solutions to customers across the globe, and today, to German end-consumers," said HE Saad Sherida Al-Kaabi, Qatar's Minister of State for Energy Affairs, and President and CEO of QatarEnergy "Germany is the largest gas market in Europe, with significant demand in the industrial, power, and household sectors, and we are committed to contribute to the energy security of Germany and Europe at large."

Through its joint ventures, ConocoPhillips holds a 3.125% interest in NFE and a 6.25% interest in the NFS project. The company has also agreed to provide terminal services for a 15-year period at Brunsbüttel. ■

NEWS NUDGE

India receives first Tangguh LNG cargo

India has received its first cargo from Indonesia's Tangguh LNG export plant.

The cargo arrived at the Dahej terminal on 28th November, according to a Refinitiv analyst and Refinitiv ship tracking data on board the LNGC 'BW Helios'.

'BW Helios' loaded the 132,000 cu m cargo at Tangguh

on 18th September.

She is on charter to bp, which also operates the Tangguh terminal.

A delayed third train is expected to come on stream at Tangguh in March, 2023, which will increase the plant's total production capacity to 11.4 mill tonnes per annum.

'Neptune' arrives at Ruegen

The FSRU 'Neptune' has arrived at Mukran on Ruegen island in the German Baltic.

She is the first FSRU to be

adapted for use as a German floating LNG terminal and will be moored at Lubmin.

Lubmin will be the site of Germany's first and so far only privately financed LNG terminal that is being developed by locally-based Deutsche ReGas.

For the transfer from Mukran to Lubmin, her draft of 9.6 m will be reduced to about 5.2 m. In addition, a pipe adapter will be installed on board to be able to connect the 'Neptune' to the shore-side pipeline system.

Deutsche ReGas chartered the FSRU from TotalEnergies. ■

Japan to seek spot LNG

Japan could be poised to take spot LNG next year, as more than 6 mill tonnes per year of long-term LNG supply contracts are due to expire - a trend that is likely to continue.

This comes at a time when Japan faces stiff competition for LNG from Europe.

Of the roughly 6.1 mill tonnes of long-term LNG contracts, due for expiry in 2023, Brunei LNG will account for 56% of the contracts, according to S&P Global Commodities Insights LNG database.

These contractual expiries represent about 8% of Japan's annual LNG imports of around 74 mill tonnes, which will be difficult to replace with incremental supply from other long-term term contracts or short-to-mid-term contracts amid tight LNG markets.

"Everybody is seeking term [supplies] including for strip and mid-term [contracts]," a Japanese buyer told S&P Global. "We tapped a few [suppliers] but there are no [suppliers] offering oil-indexed long-term contracts.

"So we are in a situation [where we have] to keep the door

open for spot [volumes] because sellers are not willing to offer," he said, adding that Japanese buyers cannot secure their LNG requirements in advance.

Supply uncertainty

The Russian invasion of Ukraine, which has tightened the LNG supply/demand balance and increased uncertainty over supply, including from the Sakhalin 2 project, is also impacting Japanese companies' LNG procurements in 2023, said Hiroshi Hashimoto, senior analyst and head of gas group at Japan's Institute of Energy Economics.

"Of course, [Japanese companies] must have taken steps for contractual expiries in advance but the situation has slightly changed, which has created the need to move additionally," he said, adding that this included not only pursuing more long-term

LNG supply than previously expected but also seeking spot LNG procurements.

Japanese buyers have mostly secured sufficient LNG for the upcoming winter through March, 2023 despite facing some supply issues, including from Malaysia LNG and US Freeport LNG, with some still in the middle of working out their annual delivery programmes for 2023, according to market sources.

However, the country's overall LNG procurements might fall in 2023, due to the expected restarts of two nuclear reactors during the year.

Japan's economic outlook for 2023 remains challenging and the country's overall power demand will be at a similar level to 2022, said Kaori Tachibana, S&P Global's associate director of gas, power & climate solutions.

"With the ramp up of up to 10

reactors by February, 2023, and a further two scheduled for restart next summer, the pressure on LNG is expected to be lifted.

"With tight supply expected to continue for the next few years, Japan's nuclear restart strategy will help alleviate the situation," she said. "However, nuclear restart remains highly uncertain and delays will place pressure on the tight LNG market, as well as on domestic power supply."

Japan's exposure to spot LNG trades will continue in the next few years unless it is able to secure some sort of extension to expiring long-term contracts or short-to-mid-term contracts.

The country's long-term LNG contractual volumes are forecast to fall to around 62.86 mill tonnes in 2030, compared with 85.11 mill tonnes in 2025 and 89.83 mill in 2023, according to S&P Global data. ■

NFE to develop Mexico's Lakach project

New Fortress Energy (NFE) has finalised agreements with Petróleos Mexicanos (Pemex), Mexico's state-owned oil company, to develop a project off the Veracruz coast in Southeastern Mexico.

The agreements comprise a long-term strategic partnership to complete the development of the Lakach deepwater natural gas field, one of the largest non-associated gas fields in the Gulf of Mexico.

NFE will invest in the continued development of this field over a two-year period by completing seven offshore wells. In addition, NFE will deploy its 1.4 mill tonnes per annum FLNG 'Sevan Driller', which is currently undergoing conversion in a Singapore shipyard, to liquefy the majority of the natural gas produced.

"We are pleased to finalise our strategic partnership with Pemex, which strengthens our commitment to long-term operations in Mexico and we believe demonstrates the substantial value of our integrated natural gas infrastruc-

ture business model," said Wes Edens, NFE Chairman and CEO.

"This arrangement represents the first of what we consider to be an ideal formula for the deployment of NFE's FLNG units to stranded gas plays around the world - one that combines gas for domestic use with low-cost supply for LNG export into global markets," he added.

Five FLNGs

'Sevan Driller' is one of five FLNGs NFE plans to deploy in the next two years, adding around 7 mill tonnes per annum of liquefaction capacity to the global market - more than half of the world's total expected capacity additions during the 2023/2024 period.

Under the agreements, NFE will provide upstream services to Pemex, whereby NFE produces

natural gas and condensate in exchange for a fee for every unit of production delivered to Pemex.

This fee is based on a contractual formula that resembles industry-standard gross profit-sharing agreements between the upstream service provider (NFE) and the owner of the hydrocarbons (Pemex).

NFE will produce natural gas in the field and will have the right to purchase, at a contracted rate, sufficient volumes for its FLNG unit, while Pemex will sell the remaining natural gas volumes and all of the produced condensate to its customers onshore.

"Over the last several months, we have enjoyed the opportunity to expand our relationship with Mexico's leading energy companies," Edens continued. "We appreciate President López Obrador's

continued interest in and support of our development process and look forward to delivering reliable solutions that enhance energy security for the people of Mexico and our customers around the world."

"Pemex is pleased to finalise this strategic partnership with NFE, a leading energy infrastructure company," said Octavio Romero Oropeza, Pemex CEO. "We believe this partnership will enable Pemex to efficiently leverage our domestic natural gas resources, fulfill Mexico's security of supply targets, and facilitate gas-fired power infrastructure development in the region."

The companies claimed that Lakach will yield about 10 years of production, with the possibility of significantly extending the reserve life if the nearby Kunah and Piklis fields are developed. ■

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Lower vessel utilisation hits Awilco

The Awilco LNG Group reported a net loss of \$5.1 mill and loss per share of \$0.04 for third quarter of this year, down from a net zero result in 2Q22.

Year-to-date result ended at a positive \$0.9 mill and \$0.01 per share as at 30th September, 2022.

The net freight income of \$4.8 mill for 3Q22 was down from \$10.2 mill from the previous quarter. Third quarter EBITDA ended at \$1.3 mill, down from \$6.8 mill in 2Q22.

Vessel utilisation was 44% for the quarter, down from 88% for second quarter, with a net TCE of \$24,800 per day.

In August the company delivered the 'WilForce' on a six-month contract at market rates, while in November, the company signed an 18-month contract for the LNGC to commence in first quarter 2023 in direct continuation from the present charter.

This fixture will generate an EBITDA of around \$73 mill over the charter period.

CEO, Jon Skule Storheill, commented: "As indicated in the second quarter report, third quarter was a weak quarter for Awilco LNG. Both vessels had extended idle periods between their contracts as a result of the weak market caused by the temporary closure of Freeport LNG. The cost to position the vessels for next employment was also unusually high due to the very high cost of fuel.

"That being said, we are pleased to report that we have secured employment at strong rates for our vessels ensuring solid and stable earnings for the company through 2023 and most of 2024.

The fixed earnings will also enable the company to return value to our shareholders and our Board of Directors have approved a revised dividend policy which the company will follow up on in the coming quarters," he said.

Speaking about the latest charter, Storheill, said: "With this contract we have been able to take advantage of the strong market and have now covered all trading days in 2023 and approximately 80% of 2024 at an average rate of approximately \$120,000 per day.

"This ensures high cash generation and profitability for the next two years also considering both vessels are scheduled for special survey, and drydocking second half 2023," he said. ■

Enbridge confirms Woodfibre stake

Enbridge has finalised its partnership agreement with Pacific Energy Corp to jointly invest in the construction and operation of the Canadian Woodfibre LNG project.

The company said that it now has a 30% stake in the Woodfibre LNG project, which is located near Squamish, BC, with Pacific Energy retaining the remaining 70% stake.

Pacific Energy and Enbridge will each make pro-rata contributions during construction through a combination of expected asset level financing and equity investments.

In exchange for its capital contribution, Enbridge will receive a preferred equity interest that provides predictable future cash flows. The partners will jointly participate in the project's execution and governance of ongoing operations, while Pacific Energy retains responsibility for daily operations.

Preliminary construction activities, including site preparation are underway. The project remains on track for its targeted in-service date of fourth quarter of 2027, Enbridge said. ■

GAC behind Greek STS operation

The first ship-to-ship (STS) LNG transfer in Greek territorial waters was completed with the support of GAC Greece's shipping and project logistics teams.

About 140,000 cu m of LNG was transferred from Hoegh's LNGC 'Arctic Princess' to the 'GasLog Athens', a new FSU anchored at Pachi, west of Athens.

The fully-loaded FSU is now ready to supplement Greece's winter energy demands by topping up the Mediterranean country's Revithoussa LNG terminal, which is owned by Greece's Hellenic Gas Transmission System Operator (DESFA), GAC said.

To support the transfer, GAC Greece acted as the official husbandry agent for 'GasLog Athens', as well as the charterers' agent for 'Arctic Princess' and her cargo.

In addition, its Project Logistics Department imported six special fenders from China and the UK, as well as organising their land and sea transportation, storage and warehousing, inflation, mobilisation, fitting, demobilisation and their safe return.

Record time

The FSU was installed in record time, following close co-ordination between DESFA and the Hellenic Ministry of Environment and Energy, the Ministry of Maritime Affairs & Insular Policy and the Regulatory Authority for Energy.

In a statement, DESFA CEO, Maria Rita Galli, said the start of the FSU's operation in Revithoussa was the result of exemplary co-operation, under pressure, by all involved.

"We are satisfied that through our high technical expertise and our network, we are contributing significantly with yet another infrastructure to ensuring the country's security of natural gas supply for the coming winter while, at the same time, we are further strengthening the strategic role that the LNG terminal of Revithoussa plays in the wider region of Southeast Europe," she said.

George Fragos, GAC Greece's

Shipping Operations Manager, said: "It was a major milestone for GAC to play a role in the first ever LNG STS transfer in Greek waters. Everything went smoothly, and we are looking forward to supporting similar operations with our blend of shipping and logistics services in the future."

"Arrangements for the fenders were meticulously planned and executed in strict compliance with all safety and security measures," added Socrates Zorbas, GAC Greece's Project Logistics and Assistant General Manager. ■



GAC acted as agent for DESFA's recent Pachi STS

WFW advises Stade LNG on finance

Watson Farley & Williams (WFW) has advised Norddeutsche Landesbank Girozentrale (NORD/LB) on the long-term financing of an LNG import terminal to be built at Stade-Buetzfleh, Lower Saxony, Germany.

The project, which is being co-financed by both the German Federal Government and the state of Lower Saxony, is expected to be operational by the end of 2023.

It will initially involve an (FSRU) but a land-based regasification facility will be installed at a later stage.

The terminal will be owned by Niedersachsen Ports GmbH & Co KG, a wholly owned subsidiary of the State of Lower Saxony. The FRSU will initially be operated by the Federal Republic of Germany, while Hamburg-based Hanseatic Energy Hub GmbH is expected to operate the land-based regasification unit.

After completion, the terminal will be used to import various liquefied gases, including LNG, for the benefit of regional industries.

The multi-disciplinary WFW Hamburg team advising the lender was led by Projects & Structured

Finance Partner, Stefan Kilgus working closely with Corporate Partner, Björn-Axel Dißars and Regulatory, Public Law & Competition Partner, Maximilian Boemke, as well as Munich Corporate Partner, Simon Preisenbeger.

They were supported by Hamburg Projects & Structured Finance Associate, Marlene Kowerk and Transaction Lawyer, Annika Schulz.

Kilgus commented: "I'm delighted we were able to assist NORD/LB on ensuring financing was made quickly available for this important project that helps ensure Germany's energy security at a time of great geopolitical concern.

"That we were instructed to advise on this transaction is testament to WFW's unrivalled expertise advising on complex energy and infrastructure projects across multiple service lines," he said. ■

Trafigura secures loan to supply LNG

Commodities trading house, Trafigura has agreed a \$3 bill four-year loan jointly arranged and underwritten by Deutsche Bank and another international bank and syndicated to a number of participating banks.

Over 25 banks participated in the successful syndication, which was 1.6 times oversubscribed.

The loan is secured, in part, by a guarantee under the Untied Financial Loan program (UFG) of the German Government acting through the German Export Credit Agency (ECA) Euler Hermes AG, which is a programme to secure the long-term delivery of strategic commodities to Germany.

The loan will support Trafigura's new commitment to deliver substantial volumes of gas into the European gas grid, and ultimately into Germany, over the next four years.

Trafigura will supply the gas to Securing Energy for Europe

(SEFE), which was recently recapitalised by the German Government.

The first gas delivery took place on 1st November, 2022 and Trafigura will primarily use existing volumes from its global gas and LNG portfolio to help secure gas supplies to SEFE. The agreement included a review of Trafigura's environmental, social and governance (ESG) policies and performance.

"We are proud to be contributing to Europe's energy security by supplying this significant volume of gas to Germany backed by our extensive portfolio and long term US LNG contracts," said Richard Holtum, Trafigura's Head of Gas and Power Trading. ■

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

LNG rate assessments

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

Region	This week	Change*
East of Suez	\$160,000	- \$90,000
West of Suez	\$200,000	- \$75,000
12 mos T/C	\$184,000	- \$1,000

*Since last report (24/11/22)

Source: Fearnleys (07/12/22)



NEWS NUDGE

NYK to help Pertamina develop LNG facilities

NYK has concluded an investment agreement and a strategic alliance agreement with PT Pertamina International Shipping (PIS), the PT Pertamina (Persero) subsidiary.

In October, the parties had reached an agreement in principle on the investment.

Pertamina is the largest state-owned oil and gas company in Indonesia, where energy demand is expected to continue to increase in tandem with the nation's economic growth.

NYK has been collaborating with PIS, particularly in ship-management in energy transportation.

The Japanese shipping major will contribute to Indonesia's development by collaborating with PIS in a wide range of areas, including LNG transportation, FSRUs, and carbon capture and storage (CCS), for which demand is expected to grow in the future to realise a carbon-neutral society.

GTT benefits from Seoul High Court decision

South Korea's Seoul High Court has partially granted GTT's appeal against the Korea Fair Trade Commission's (KFTC) corrective order by revoking the €9.5 mill administrative fine paid by GTT in early 2021.

In the same decision, dated 1st December, the Seoul High Court confirmed GTT's obligation to separate the technology license agreement from the technical assistance if requested by South Korean shipyards.

GTT said that it is currently reviewing the details of this decision in order to define the most appropriate available actions to best preserve its rights.

Wärtsilä to develop on board hydrogen production from LNG

Wärtsilä has signed a joint development agreement with Hycamite TCD Technologies, a privately-owned Finnish company.

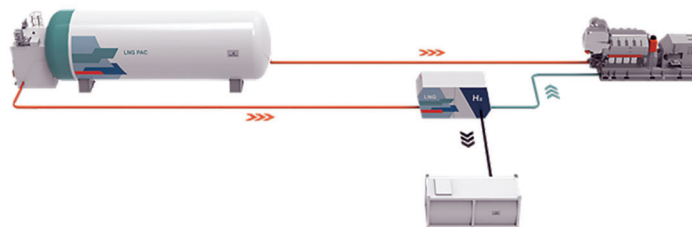
Hycamite specialises in the development of technology for producing clean hydrogen and solid carbon from methane.

The two companies will work together to enable cost-effective production of hydrogen from LNG on board vessels. The concept design will be ready by mid-2023 and the prototype testing unit will be ready during the second half of 2024.

This concept will allow the existing LNG infrastructure to be utilised and enable production of hydrogen on board in combination with Wärtsilä's LNGPac fuel gas supply system.

By producing hydrogen on board and blending it with LNG, the current range of Wärtsilä dual-fuel (DF) engines can reduce the vessel's overall carbon dioxide and methane slip emissions. Alternatively, the hydrogen can also be used in fuel cells on board, the company claimed.

"We are investing in the development of viable future marine



Wärtsilä has joined together with Hycamite to develop on board hydrogen from LNG

fuel technologies and solutions that can accelerate the efforts to de-carbonise shipping operations. This collaboration with Hycamite is an important step forward towards meeting our corporate targets.

"Our gas engines can already operate with mixtures of hydrogen and LNG. The ability to produce the H₂ on board opens up exciting new opportunities. This solution overcomes the lack of an existing hydrogen supply infrastructure. It also supports reducing the safety risks around storing and handling of liquid hydrogen and enables a gradual decrease of the vessels' environmental impact," explained Mathias Jansson, Director, Fuel

Gas Supply Systems, Wärtsilä.

"We are delighted to be partnering with an established technology leader such as Wärtsilä. They bring a vast depth of knowledge and experience in marine fuel gas supply systems, and by working together, we can make the availability and on board storage of hydrogen a realistic option for the marine industry," added Laura Rahikka, Hycamite founder and CEO.

In Principle, this technology can be applied for all vessels operating with LNG as a fuel. When using bioLNG, this solution will enable power generation on board ships with a negative carbon footprint. ■

The company also added that it strongly believed that its unique expertise is key to the safe development of LNG maritime transport by providing ever more innovative, safe and efficient technologies, for the benefit of the entire industry.

Key timelines

- 2nd December, 2020: KFTC's decision ordering GTT to allow the South Korean shipyards upon their request, to perform all or part of the technical assistance services currently included in the technology license and to pay an administrative fine of €9.5 mill.
- 31st December, 2020: GTT's appeal before the Seoul High Court and application to suspend the effect of the KFTC decision.
- 6th January, 2021: Seoul High Court decision to suspend the

effect of the KFTC decision.

- 14th January, 2021: KFTC's appeal of the suspension of effect decision before the Supreme Court of Korea.
- 14th May, 2021: decision of the Supreme Court of Korea to reject the appeal from the KFTC.
- 1st December, 2022: decision on the merits of the Seoul High Court.

In addition, GTT announced that it has received two orders from Samsung Heavy Industries (SHI) for the tank design of seven new LNGCs, on behalf of a European shipowner and an American shipowner.

GTT will design the tanks of the 174,000 cu m vessels, which will be fitted with the Mark III Flex membrane containment system.

The delivery of the vessels is

scheduled between the first quarter of 2026 and the fourth quarter of 2027.

TMC appoints head of sales

LNGC equipment supplier, TMC Compressors (TMC) has appointed Jens Erik Tøstad to head up the company's international sales.

Tøstad joins TMC from Kaeser Kompressor in Norway where he has held roles as both sales manager and product manager marine. He also has experience from Wärtsilä Moss, where he was sales manager for nitrogen and inert gas systems.

At TMC, Tøstad will head up the company's international sales team. He will report to Hans Petter Tanum, TMC's director of sales and business development. ■

WinGD wins LNGC engine diagnostics orders

Swiss marine power company, WinGD has received orders from two LNGC operators for its WinGD Integrated Digital Expert (WiDE) engine monitoring, diagnostics and remote support service.

Knutsen OAS Shipping has ordered WiDE for seven vessels, which include a recently delivered LNGC and six under construction.

CoolCo, formed in 2021 by shareholders Eastern Pacific Shipping (EPS) and Golar LNG, will use the service on two existing vessels.

In total, diagnostics will be applied to 17 WinGD X-DF dual-fuel engines.

Rudolf Holtbecker, Director Operations, WinGD, said: "WiDE empowers the vessel's operation team with the tools needed to increase insight into engine performance, manage their maintenance plan and troubleshoot any challenges in order to reduce operating costs."

WiDE uses data sensors, analysis and modelling to compare en-

gines' in-service operation with their ideal reference performance for real-time conditions, identifying anomalies before they raise alarms and alerting crew to potential issues.

This enables crews to avoid or dramatically reduce the time taken for troubleshooting, while fleet managers can optimise maintenance programmes based on detailed and up-to-date insight into component condition.

Dedicated experts

WiDE enables support from dedicated WinGD operations experts and provides regular updates on engine performance and condition. Robust connectivity through a telecommunications provider powers the WinGD 24/7 emer-

gency response service, offering vessel operators around-the-clock remote support when needed.

"WiDE is a powerful tool for operators who want to take operating expenses into their own hands," Holtbecker added. "Backed by our on-call experts, they can have total confidence that they will be able to maximise engine availability and optimise performance. As new engine technologies start to enter the market this level of support will become an increasingly important safeguard for early adopters and pioneers."

More than 200 vessels are now monitored through WiDE. All new WinGD engines are now fitted with the WiDE hardware as standard.

WinGD has also claimed to become the first marine engine designer to gain cybersecurity type approval for its engine control system.

This comes ahead of mandatory regulations, due to enter force in 2024.

Class society DNV granted



WinGD's Rudolf Holtbecker

WinGD Control Electronics (WiCE) an SP1 type approval, aligning with International Association of Classification Societies (IACS) Unified Requirement (UR) E27 technical system requirements - a cybersecurity standard that will apply to all newbuildings.

DNV's SP1 'Cyber Secure Essential' notation certifies that vessels are built with cybersecurity standards equivalent to UR E26, governing system integration, and UR E27, applying to installed technologies. ■

“**WiDE is a powerful tool for operators who want to take operating expenses into their own hands**”

- Rudolf Holtbecker, Director Operations, WinGD

NEWS NUDGE

Ships - Newbuildings

Through a subsidiary, China Merchants Energy Transportation has signed a contract for two more 175,000 cu m LNGCs with Dalian Shipbuilding Industry Group (DSIC).

The total cost was \$470 mill and the payments will be made in five instalments, according to the building progress, specifically 20% of the contract, 10% for the construction development, 10% at keel laying, 10% at launching, and 50% upon delivery.

They will be delivered in the second half of 2026.

Celsius Tankers has also ordered another 180,000 cu m, 'ultra-eco' LNGC from Samsung

Heavy Industries (SHI).

In October 2021, Celsius Tankers ordered four LNGCs from SHI.

With this latest order, the company's newbuilding programme totals 10 x 180,000 cu m 'ultra-eco' LNGCs.

Previously, four vessels were delivered in 2020 and 2021.

According to Celsius, the vessels' highly efficient design minimises CO2 emissions and methane slip from operations via installation of air lubrication systems, optimisation of the hull shape and use of the best available paint system to reduce the vessels' friction in the water.

They will be built to Lloyd's Register class notation 'EEDI-3' meeting IMO's requirements for ships built after 2025 for 30%

more energy efficiency.

The latest vessel is scheduled to be delivered in January, 2026 and will enter into a long-term timecharter with a major charterer.

Broking sources put the price per vessel at about \$249 mill.

Daewoo Shipbuilding & Marine Engineering (DSME) has filed a note saying that the contracts for all three LNGCs awarded by a Russian client two years ago have now been cancelled.

The Russians, believed to be Sovcomflot under a NOVATEK charter, failed to make payments for the ships on time, amid sanctions by the international community against Russia for the prolonged invasion of Ukraine, DSME claimed.

On 25th November, DSME an-

nounced that it had notified a Russian client of the termination of the contract for one LNGC, which was signed in October, 2020. The value of the cancelled contract was Won337.9 bill.

The shipbuilder said in a filing that due to the export control on Russia, the supply of major equipment and materials was delayed or suspended, making it impossible to build the ship.

"Currently, we notified the client of the termination of the contracts but whether the contract is actually terminated or not will be determined by the client," a DSME official said to local media. "Apart from the contract cancellation notification, we will build the ships as scheduled and look for ways to handle them." ■

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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
El 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

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
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

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

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
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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	Kuntsen 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