

LNG Shipping News

AN LNG JOURNAL TITLE ON LNG CARRIERS

2 March 2023

Planned US projects could double exports

High prices and the demand for energy security could lead to \$100 bill in new US developments to support long-term growth, according to a new report from Wood Mackenzie (Woodmac).

In 2022, the US was the third-largest LNG exporter at 76.4 mill tonnes per annum. With the resumption of Freeport, the US will overtake Qatar and Australia this year exporting around 89 mill tonnes.

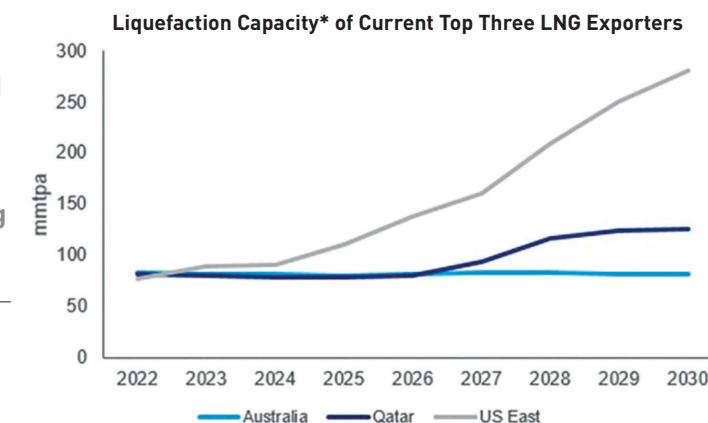
Woodmac predicted that based on the combination of projects already under construction and planned project momentum, US LNG capacity could grow between 70 mill tonnes and 190 mill tonnes before the end of the decade, potentially more than doubling current exports.

To achieve this, a mass of new projects will have to be announced, which could lead to the \$100 bill mark in new projects in the next five years.

"Record-high prices and the need for energy security drove buyers, which included portfolio players and US producers and infrastructure companies, to seek long-term US LNG deals in 2022 and created huge contracting momentum for projects," said Giles Farrer, Woodmac's head of gas and LNG asset research.

"Last year alone, 65 mill tonnes of long-term US deals were signed, dwarfing the 18.5 mill tonnes we saw in 2021. This activity has pushed a host of pre-final investment decision (FID) US projects forward and we could see a wave of FIDs this year and next."

According to Farrer, projects will be undertaken by both privately and publicly-owned devel-



opers and most pre-FID projects are currently seeking external financing for investments.

"In most cases, project financing will support between 60-80% of the required capital, with the remainder either financed via equity raises and/or balance sheets," he added.

Capacity growth risks

The potential for cost increases is challenging developers, as they move forward, particularly through supply chain triggered inflation and competition for resources.

"Our benchmarking analysis indicates we have already seen inflation of over 20% on the US Gulf Coast, compared to projects which were built in the last five years," said Sean Harrison, Woodmac's research analyst, gas and LNG.

"As developers continue to push more projects forward, competition for service contracts will rise, creating a squeeze on both work force and material prices. This could cause further cost inflation, along with delays to some projects," he said.

Harrison added that despite rising costs, competition for customers is keeping liquefaction fees low, potentially between \$2-\$2.5 per MMBtu for fixed price long-term agreements, challeng-

ing profitability.

"The combination of low fees and increasing costs mean we estimate unlevered internal rates of return (IRR) as low as 5-6% for some projects. Based on these returns, some projects are finding it challenging to secure finance, particularly via equity raises.

"Projects are looking for ways to create additional value for developers and equity investors. Ways they might find upside include procuring feedgas efficiently, securing good prices for uncontracted LNG sales, de-bottlenecking and re-rating of trains and the sale of pre-commercial volumes. Charging customers for additional services to reduce project emissions could also deliver additional returns," he added.

Poten & Partners' Jason Feer said in a webinar that Semptra is close to a FID on Port Arthur LNG and maybe for Cameron Train 4, while NextDecade had one major SPA pending that would take up all the capacity of Rio Grande LNG's first three trains and Venture Global was making steady progress on CP2 and Plaquemines 2.

He also advised that the industry was trying to persuade the US authorities to speed up the approval process on planned projects. ■

SHIPPING NEWS AGENDA

MARKETING

European imports **2**

BUSINESS

China signs SPAs **3**

Perenco takes FID **3**



Sabine Pass expansion **4**

FINANCE

Höegh's FSRU confidence **7**

FLNGs buoy Golar **8**

GTT's strong outlook **9**

CoolCo to cash in **10**

TECHNOLOGY

Wärtsilä extends contract **12**



LNGC upgrades **12**

LNG ORDERBOOK

LNG carrier orderbook **13**

LNG small scale fleet **19**

European LNG demand to dominate long term trade

Europe's increased need for LNG looks set to intensify competition with Asia for the limited new supply available over the next two years.

The region might also dominate LNG trades over the longer term, according to Shell's LNG Outlook 2023.

European countries, including the UK, imported 121 mill tonnes of LNG last year, an increase of 60%, compared to 2021, which enabled them to withstand a slump in Russian pipeline gas imports following its invasion of Ukraine.

A 15 mill tonne fall in Chinese imports combined with reduced imports by South Asian buyers helped European countries to secure enough gas and avoid shortages.

Europe's rapidly rising appetite for LNG also pushed prices to record highs and generated volatility in energy markets around the world, Shell said.

With reduced Russian pipeline gas, LNG is becoming an increasingly important pillar of European energy security, supported by the rapid development of new regasification terminals in northwest Europe.

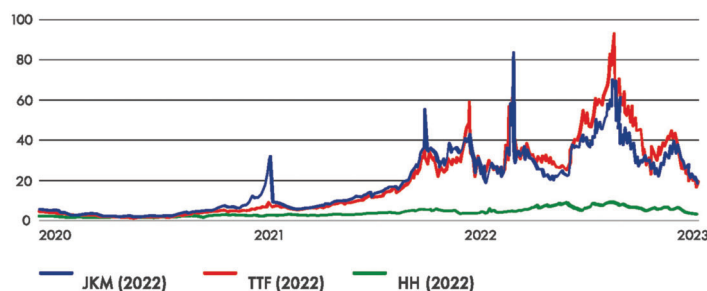
In contrast, China is evolving from being a fast growing import market to playing a more flexible role with an increased ability to balance the global LNG market.

"The war in Ukraine has had far-reaching impacts on energy security around the world and caused structural shifts in the market that are likely to impact the global LNG industry over the long term," Steve Hill, Shell's Executive Vice President for Energy Marketing, said.

"It has also underscored the need for a more strategic approach - through longer-term contracts - to secure reliable supply to avoid exposure to price spikes," he added.

Government intervention

The drop in Russian pipeline gas flows prompted unprecedented policy and regulatory intervention as governments in Europe sought to bolster energy security and shield their economies from high costs, including prioritising LNG



Gas and LNG Prices Hit Record Levels Last Year. Source: Shell

imports and quickly developing new import terminals.

Last year, Europe's LNG demand forced other buyers to reduce their imports and switch to other fuels, generating more emissions. High global LNG prices led to a drop in LNG imports in South Asia, with Pakistan and Bangladesh importing more fuel oil to minimise power supply shortages and India using more coal.

Total global trade in LNG reached 397 mill tonnes in 2022, Shell said. Industry forecasts expected LNG demand to reach 650 to over 700 mill tonnes a year by

2040. More investment in liquefaction projects is required to avoid a supply/demand gap that is expected to emerge by the late 2020s.

Diverse new technologies to reduce emissions from gas and LNG supply chains will help to consolidate its role in the energy transition. And there is growing industry focus on the development and deployment of de-carbonised gases - including renewable natural gas, synthetic natural gas, hydrogen and ammonia - to deliver more sustainable energy security in the future. ■

Leviathan to invest in FLNG

On 20th February, 2023, the Leviathan partners approved a \$96.4 mill for Front End Engineering and Design (pre-FEED) for Phase 1B of the Israeli offshore Leviathan gas reservoir development project.

This includes the utilisation of an FLNG.

Leviathan is claimed to be the largest gas field in the Mediterranean and the aim is to increase the total gas production capacity by another 9 bill cu m per annum, to give a total of around 21 bill cu m per year, leading partner NewMed confirmed.

As part of the new phase, the partners will tender for an FLNG, to be owned by the partnership. The unit will have an annual production capacity of about 4.6 mill tonnes of LNG for both export and for use in Israel's domestic market.

The money includes \$44.9 mill (100%, the Partnership's share is

\$20.4 mill) for the performance of pre-FEED and the commencement of FEED, for the expansion of the Leviathan reservoir's production system, as well as \$51.5 mill (100%, the Partnership's share is \$23.3 mill) for the FLNG's pre-FEED.

This unit will be the subject of a competitive tender process

involving international groups specialising in their design and construction.

The rights holders in the Leviathan project, and their holding rates are - The Partnership (45.34%), Chevron Mediterranean Limited (39.66%) and Ratio Energies - a limited partnership of 15%. ■

LNG Shipping News

2 Prospect Road
St Albans AL1 2AX
United Kingdom
www.lngjournal.com
Tel: +44 (0)20 7253 2700

Publisher

Stuart Fryer

Editor

Ian Cochran
+44 (0)7748 144265
lancochran74@gmail.com

Ad sales enquiries

David Jeffries
+44 (0)20 8150 5293
djeffries@lngjournal.com

Subscriptions

Stephan Venter
Tel: +44 (0) 20 7253 2700
venter@lngjournal.com

Production

Vivian Chee
Tel: +44 (0) 20 8995 5540
chee@btconnect.com

No part of this publication may be reproduced or stored in any form by any mechanical, electronic, photocopying, recording or any other means without the prior written consent of the publisher. Whilst the information and articles in LNG Shipping News are published in good faith and every effort is made to check accuracy, readers should verify facts and statements direct with official sources before acting on them as the publisher can accept no responsibility in this respect. Any opinions expressed in this publication should not be construed as those of the publisher."

Venture Global signs more SPAs

Last month, Venture Global LNG signed another three SPAs - two with China and one with a US concern.

The Chinese deals concerned China Gas Holdings' wholly-owned subsidiary, China Gas Hongda Energy Trading Co, which signed two 20-year LNG Sales and Purchase Agreements (SPAs).

China Gas will buy 1 mill tonnes per annum of LNG on a free on board (FOB) basis from Plaquemines LNG and another 1 mill tonnes from the CP2 LNG export facility.

Liu Minghui China Gas Holdings' Chairman and President, said "As a major participant in China's energy market, we are committed to providing reliable and low-carbon LNG to Chinese customers.

"These two SPAs increase additional volume for our LNG portfolio and strengthen China Gas's supply ability. We look forward to working with Venture Global over the coming years to help further reduce greenhouse gas emissions," he said.

Mike Sabel, Venture Global LNG CEO, added, "Venture Global is pleased to welcome China Gas as a customer both at Plaquemines and CP2.

"Through relentless execution and innovation, our company will continue to bring much needed new capacity to the global LNG market, supporting energy security and environmental progress both in Asia and Europe.

"Importantly, low-cost LNG supplied to the region will accelerate fuel switching and lower carbon emissions, contributing meaningfully to China and the world's existing climate targets," he said.

Supply is scheduled to start in 2027, according to newswires.

The contracts were agreed on a free-on-board (FOB) basis and their prices were linked to the US benchmark Henry Hub gas market.

The terms also allow the flexibility to either import the LNG to China or trade it in the global market at the buyer's behest.

Accelerate SPA

The third SPA concerns Accelerate Energy, which has also agreed a 20-year supply deal.

Under this SPA, Accelerate will purchase 0.7 mill tonnes per annum of LNG on a free-on-board (FOB) basis from Plaquemines.

"We are proud to enter this new strategic partnership with Venture Global, which supports our efforts to enhance energy security and accelerate the energy transition by delivering natural gas to our customers worldwide," said Steven Kobos, Accelerate President and CEO.

"This agreement is an important milestone for Accelerate as we continue to execute our growth strategy. Building a diversified LNG supply portfolio with strong partners like Venture Global will allow us to offer more flexible and cost-effective products to existing and new customers in downstream markets," he said.

"Venture Global is thrilled to launch this new collaboration with



Venture Global's CEO Mike Sabel has overseen three SPAs recently

Accelerate, a leader in the FSRU industry, as their inaugural long-term LNG supplier," added Venture Global's Sabel.

"Their foresight and transformational work to bring much needed energy infrastructure to markets around the globe has enabled countries from Europe, the global south, and the developing world to fuel switch from coal to natural gas while lifting millions out of energy poverty. We look forward to many years ahead of working together as strategic partners to fuel these diverse markets worldwide," he said. ■

“Through relentless execution and innovation, our company will continue to bring much needed new capacity to the global LNG market”

- Mike Sabel, Venture Global LNG CEO

Perenco takes Gabon LNG project FID

Independent oil and gas developer, Perenco has reached a final investment decision (FID) for a 700,000 tonne per annum LNG facility at the Cap Lopez terminal in Gabon, West Africa.

With FID now secured, construction of the large-scale LNG facility can officially start, the company said.

This project represents a significant development for Gabon and has an initial investment of \$1 bill and a development timeline of up to three years.

Production is due to start in 2026, with the facility producing 700,000 tonnes of LNG per year, as well as 20,000 tonnes of butane.

As a result Gabon will become

self-sufficient in terms of butane supply, as well as a major exporter of LNG.

Today, the company operates both on- and offshore oil field licenses, in addition to two FPSOs. Perenco has been producing and supplying gas for power generation industrialisation and economic growth to Gabon for over 10 years.

"The drive by Perenco in Gabon, as well as across other resource-rich countries in Africa

solidifies the company's commitment to ushering in a new era of economic prosperity across the continent on the back of oil and gas.

"We are excited to see the company hit another milestone with the securing of FID for an LNG facility in Gabon, and we consider this a critical step forward towards achieving energy security and fuel independence in Africa.

"This achievement represents just one of the many driven by

Perenco and we look forward to seeing a fruitful and successful future, both for the company and the countries in which Perenco operates," said NJ Ayuk, Executive Chairman of the African Energy Chamber (AEC) to local media.

In addition, Perenco developed and is now operating the 'Hilli Episeyo' FLNG facility in Cameroon - the first of its kind worldwide and also acquired Glencore's entire upstream interests in North Africa. ■

Cheniere to expand Sabine Pass

Cheniere Energy Partners' subsidiaries have started the pre-filing review process for the proposed Sabine Pass Stage 5 Expansion Project (SPL).

This review process comes under the US National Environmental Policy Act and will be conducted by the Federal Energy Regulatory Commission (FERC).

The proposed site is adjacent to the existing Sabine Pass liquefaction project and is being designed for a total LNG production capacity of around 20 mill tonnes per annum.

It could include up to three large-scale liquefaction trains, each with a production capacity of about 6.5 mill tonnes per annum,

a boil-off-gas (BOG) re-liquefaction unit with a production capacity of around 0.75 mill tonnes and two 220,000 cu m LNG storage tanks.

Also included will be facilities for waste heat recovery, as well as carbon capture from acid gas removal units.

This expansion project is expected to benefit from the significant existing infrastructure at Sabine Pass with various enhancements to its current capabilities, including optimised ship loading

at the existing marine facilities, Cheniere said.

FEED study

The company has contracted Bechtel Energy to complete a Front-End Engineering and Design (FEED) project study.

"As the first and largest LNG export facility in the Lower 48, Sabine Pass has pioneered an industry critical to supplying reliable, flexible, and cleaner burning natural gas to markets and customers around the world, and we look forward to significantly growing those capabilities through the SPL expansion project," explained Jack Fusco, Chairman, President and CEO of Cheniere Partners.

"The SPL expansion project is being designed to leverage the infrastructure platform we've built at Sabine Pass to deliver economically advantaged incremental LNG capacity in a safe and environmentally responsible manner. We are committed to developing the SPL expansion project utilising the same rigorous and financially disciplined approach to project development and capital investment that's become synonymous with the Cheniere brand," he said.

This development is subject to

the receipt of all the required regulatory approvals and permits, and sufficient commercial and financing arrangements before a final investment decision (FID) can be reached.

Cheniere also reported that during the three and 12 months ended 31st December, 2022, it generated revenues of around \$9.1 bill and \$33.4 bill, respectively.

In addition, the group reported net income of about \$3.9 bill and \$1.4 bill, respectively, consolidated adjusted EBITDA of around \$3.1 bill and \$11.6 bill, respectively, and distributable cash flow of about \$2.3 bill and \$8.7 bill, respectively.

For this year, Cheniere offered consolidated adjusted EBITDA guidance of \$8 - \$8.5 bill and full year 2023 distributable cash flow of \$5.5 - \$6 bill.

Last year, Cheniere's subsidiaries signed new long-term contracts totalling over 180 mill tonnes of LNG through 2050 with creditworthy counterparties in the form of free-on-board (FOB) and delivered ex-ship (DES) LNG sale and purchase agreements (SPAs), as well as integrated production marketing (IPM) gas supply agreements. ■



Cheniere has announced a Sabine Pass expansion plan

OLT reveals allocation capacities

OLT Offshore LNG Toscana has published the available capacity for the annual and multi-year allocation process with expression of interest until gas year 2033/2034.

This capacity is offered in slots of 155,000 cu m (+2% tolerance), up to the maximum authorised capacity of 3.75 bill cu m.

For the current gas year 2022/2023 and for 2023/2024, the capacity has already been fully allocated.

The available continuous capacity is equal to:

- 7 slots for gas years 2024/2025, 2025/2026, 2026/2027.

- 39 slots available for the next two gas years 2027/2028, 2028/2029.
- 41 slots available from gas year 2029/2030 to gas year 2032/2033.
- 7 slots available for gas year 2033/2034.

The expressions of interest must be forwarded by 1st March, 2023 and, according to the expressions of interest received, OLT will prepare a proposal to the authorities

for the capacity offer as part of the subsequent allocation process.

Following verification, by 15th March, 2023, OLT will publish the continuous capacity making it available, as consistently as possible, with any expressions of interest received.

Subsequently, on 19th April, 2023, the capacity auction will be held for all interests, through the Platform for the Allocation of Regasification Capacity (PAR)

managed by GME.

Any remaining capacity, which will be available following the April allocation process, will be offered in July through the annual and multi-year allocation process without expression of interest, as required by its regasification code.

Simultaneously, by 1st March 2023, users will also be able to express interest in any capacity to be made available after 2033. ■

Fast Solution for all your LNG Storage & Transport needs.



Factory-built 1,200+ m³ LNG Tanks



40' & 53' ISO Tank Containers



1,228 m³



Railroad Tank Wagons



Marine LNG Tanks

On-site / Factory-Built Storage Tanks, Intermodal ISO Tank-Containers, Tank Trailers, Ship / Barge Cargo Tanks, Railroad Tank Wagons, & more..

Corban Energy Group (CEG), based in New Jersey, USA, has been creating highly engineered products for the natural gas supply chain in the Americas, Europe, and Africa. With its global network of engineers and its manufacturing facilities optimized for building large tanks, CEG has provided unmatched quality and value in LNG equipment for producers, suppliers, and end-users.

Call or e-mail us to find out how your company can benefit from our comprehensive natural gas products and services today.

www.CorbanEnergyGroup.com

CORBAN ENERGY GROUP

Your Solution for LNG/LPG



T. 201.509.8555 info@corbanenergygroup.com
418 Falmouth Avenue, Elmwood Park, NJ 07407, USA

Gulfstream begins LNG project permitting process

Gulfstream LNG Development, a recently launched mid-sized greenfield LNG export project, has filed an application to the US Department of Energy (DOE) seeking authorisation to export gas.

The company is looking to export up to 4 mill tonnes per annum to US Free Trade Agreement (FTA) and non-FTA countries.

This announcement follows Gulfstream LNG's signing of a long-term lease agreement in Plaquemines Parish, Louisiana, to secure a prime location in which to develop an export project.

"Our DOE application to export LNG to FTA and non-FTA countries, and our recent execution of our site lease agreement, are important milestones in progressing the Gulfstream LNG project," Vivek Chandra, Gulfstream LNG's CEO and Founder, said.

"We expect to receive FTA export approval later this year, and non-FTA approval once our FERC application has progressed. In the meantime, we are progressing our engineering and project development efforts, as well as discussions with potential equity investors," he added.

Gulfstream LNG's 500-acre site, which includes over 1.3 km of deepwater of around 15 m on the Mississippi River frontage, is located south of New Orleans.

The leased site is exclusively available through a long-term Ground Lease and Joint Development Agreement with a private company developing an inter-modal container port with the Plaquemines Port, Harbor & Terminal District.

This site, which may be one of the last remaining permissible sites on the US Gulf Coast, has multiple feed gas pipeline networks, a robust electrical grid, ample distance from local communities, deepwater access not requiring additional dredging, availability of skilled workforce, highway and river infrastructure, and an improved flood control levee system.

Gulfstream said that its LNG team is designing the facility based on the use of mid-scale

modular liquefaction trains successfully deployed and operating in other projects in the area.

Discussions and data exchanges with key technical, construction, and permitting partners, as well as with local stakeholders, have received positive feedback, the company claimed.

Electric drives

The liquefaction trains will be operated by electrical drives using power generated from low carbon and renewable fuels. This design will result in reduced cost and schedule risk, manageable local construction requirements, and lower capex than other facilities based on larger and more complex trains.

Gulfstream's team is focused on speed to production, customer flexibility, efficient use of capital, good corporate citizenship, safety of operations, and enabling energy transition by providing affordable

LNG to markets currently dominated by higher-carbon fuels, the company said.

It will ask the Federal Energy Regulatory Commission (FERC) to begin the pre-filing process after completion of the current initial equity funding round.

First production, anticipated in less than six years, will coincide with forecast shortfall in global LNG supply exacerbated by recent geopolitical events and natural decline in many legacy facilities.

All commercial business models, including tolling by offtake customers and by upstream gas producers, as well as FOB sales and co-production of ammonia, will be evaluated.

In contrast to other facilities on the Gulf Coast, Gulfstream LNG plans to service domestic, regional, and international LNG markets via river barges, small ships, bunkering vessels, and large LNGC exports. ■

NEWS NUDGE

Ships – Newbuildings, sales, deliveries

The two newbuildings reported as ordered at Samsung in LNG Shipping News dated 2nd February, were contracted by MOL, according to broking sources.

They were ordered for the equivalent of about \$248 mill each and will be delivered in 2027 and could be earmarked for a new Ineos charter.

Elsewhere, Daewoo Shipbuilding & Marine Engineering (DSME) has won its first LNGC order of the year.

Oceania interests contracted an LNGC for around Won314.5 bill (\$246 mill), according to a regulatory filing.

DSME will deliver the vessel to the undisclosed shipowner, also believed to be MOL, by March, 2027.

These latest orders show that newbuilding prices are coming off from their recent highs of over \$250 mill per unit for a standard 174,000 cu m LNGC.

Brokers have also reported that the K Line-managed 2008-built, 152,655 cu m 'Trinity Arrow' has been sold to China's Jovo for a price said to be in the low \$60s mill.

Höegh LNG Holdings is to acquire the 2013, 160,000 cu m LNGC 'Golar Seal' from CoolCo.

The company said that it expected to take delivery of the vessel in late March or April, 2023 and employ the vessel in the charter market on a term timecharter, before a possible

conversion to an FSRU.

CoolCo said the sale price was \$184.3 mill (see page 10).

Seapeak has sold the 1993-built, 87,305 cu m LNGC 'Seapeak Arctic' to Indian recyclers on the basis of 'as is' Malaysia under Hong Kong Convention recycling rules.

Capital Product Partners (CPP) has taken delivery of its seventh LNGC - 'Asterix 1'.

Built by Hyundai Heavy Industries (HHI), CPP bought the vessel in June, 2022, which had already been chartered to Hartree for five years. This has since been extended to seven with an option for another two years.

She is classed by ABS and features two Hyundai-WinGD 5X72DF dual-fuel main engines. The ship comes equipped with HHI's self-developed Hi-ALS air lubrication

system, which can cut fuel consumption by up to 8% and she is fitted with an energy-saving fin and rudder, also developed by Hyundai.

Her containment system is a GTT Mark III Flex, which offer a guaranteed boil-off rate of 0.07% V/day.

What is claimed to be the world's largest shallow draft LNGC was delivered last month by Hudong-Zhonghua to operator Shenzhen Gas.

The 82,000 cu m 'Dapeng Princess' is fitted with GTT's NO.96 L03+ containment system.

She was designed to trade within coastal areas of Southeast Asia, and to also enter China's inland waterway system, such as the Pearl River, Huangpu River and the middle and lower reaches of the Yangtze River. ■

Höegh narrows loss - bullish on FSRU future

Höegh LNG Partners has reported a net loss of \$4 mill and an EBITDA of \$51.9 mill for the fourth quarter of last year.

Overall, Höegh LNG Holdings reported a total income of \$106.1 mill, compared to \$96.1 mill for 3Q22.

The net loss was an improvement on the loss of \$45.9 mill recorded in the preceding quarter, which was mainly related to the increase in EBITDA, partly offset by reversal of the unrealised foreign exchange gains on the unhedged portion of the NOK-denominated bonds.

In addition, the third quarter result included a reduction of provision for potential tax liabilities related to the group's operations in Indonesia, which was not repeated in 4Q22.

The EBITDA increase was mainly due to higher revenues from 'Höegh Giant', which was redeployed having been idle since April and reimbursement of certain costs incurred when modifying the two vessels allocated to the German contracts.

Höegh's share of joint venture results declined quarter-on-quarter, due to impairment provisions made for the two Arctic LNGCs. Furthermore, EBITDA also increased because of non-recurring administrative expenses incurred in 3Q22 not being repeated.

Fourth quarter operating cash flows increased by \$36.9 mill to \$69.6 mill. This increase was also mainly driven by higher EBITDA, which was partly offset by a lower

positive effect from changes in working capital than in the previous quarter.

Net cash outflows from investing activities of \$14.3 mill was mainly related to class renewals and modifications to ready three vessels for FSRU operations.

On 31st December, 2022, Höegh LNG held \$146.8 mill in unrestricted cash. Net interest-bearing debt, including lease liabilities, decreased during 4Q22 by \$7 mill to \$1,337 mill.

For the full year, Höegh LNG reported a total income of \$380.8 mill and an EBITDA of \$153.2 mill, compared to \$351.8 mill and \$217.2 mill for 2021.

Höegh LNG reported a net loss of \$55.4 mill for 2022, compared to a net loss of \$21.3 mill for 2021.

In 4Q22, Höegh LNG prepared three vessels for FSRU operations in Germany (two) and Brazil (one). The two 10-year timecharter contracts with the German Government were signed in December and January, respectively (see below).

Interim LNGC

'Höegh Giant', left the shipyard in November, and is now operating in the LNGC market on an interim charter before she is scheduled to go to Brazil in 2Q23 and commence operations under Höegh LNG's 10-year timecharter contract with TSRP/Compass.

'Höegh Esperanza' commenced regas operations at Wilhelmshaven in late December, 2022 and is on hire under a new contract. 'Höegh Gannet' arrived in Brunsbüttel in January, 2023 when hire started to accrue under her new contract.

'Neptune', which is employed on a long-term charter to TotalEnergies, started regas operations for Deutsche ReGas in Lubmin, Germany, during January/February 2023.

The demand for FSRUs is expected to remain strong. While Höegh LNG has secured long-term contracts for its entire FSRU fleet, the business development team is in active dialogue with several potential new projects looking for FSRU capacity. 'Golar Seal's' acquisition (see page 10) provides flexibility to pursue FSRU conversion opportunities, the company said.

Höegh LNG said it expected that the 1Q23 EBITDA will improve, compared to 4Q22 with the commencement of the new contracts.

*** Watson Farley & Williams (WFW) advised Höegh LNG on the refinancing of the FSRUs 'Höegh Esperanza' and 'Höegh Gannet' that are servicing Germany's new FLNG terminals at Wilhelmshaven and Brunsbüttel.

WFW London and Germany advised Höegh LNG on a new 10-year \$685 mill loan to refinance the two FSRUs provided by leading

international banks.

The money will be used to repay existing loan facilities and for general corporate use and is split into two tranches, one per vessel.

'Höegh Esperanza's' refinancing has now taken place with the 'Höegh Gannet's' refinancing expected to occur in March/April 2023 upon the FSRU completing its commissioning.

In addition, a WFW Germany multi-disciplinary team advised Höegh LNG on regulatory matters regarding the entry of the FSRUs into Germany. ■

NEWS NUDGE

Dhamra to receive first cargo in April

Adani Total Private will receive its first LNG cargo at the Dhamra terminal on India's east coast in April.

The company expected to start commercial operations around 30 to 45 days after receiving the shipment, the Adani Group told Reuters.

Dhamra will become India's second import terminal to be located on the east coast, adding to the five others on the west coast.

Adani Total, in which French energy giant TotalEnergies has a 50% stake, said that the terminal's safety checks and tests were scheduled to be completed by last month, adding that all key regulatory approvals have been granted.

The company expected to receive 2.2 mill tonnes of LNG at Dhamra in the year to March, 2024, the company's CEO said. It has a 20-year take-or-pay contract to provide regasification services to state-run Indian Oil Corp (IOC) for 3 mill tonnes per annum of LNG and 1.5 mill tonnes for government-run gas distributor GAIL (India) Ltd. ■



Höegh is looking to expand its FSRU fleet

Golar looks for FLNG opportunities

Golar LNG Limited has reported 2022 annual net income of \$788 mill, compared to \$414 mill for 2021.

The fourth quarter net income was \$71 mill and adjusted EBITDA was \$87 mill, compared with \$8 mill and \$56 mill, respectively, for the previous year.

Last year, the company exited New Fortress Energy (NFE) investment, by selling 8.3 mill NFE shares for net proceeds of \$418 mill, and by agreeing to acquire NFE's interest in 'Golar Hilli' for the remaining 4.1 mill shares and \$100 mill in cash, increasing Golar's run-rate adjusted EBITDA by about \$70 mill.

Golar also exited Cool Company (CoolCo) investment, by selling 8 mill shares in 4Q22, raising net proceeds of \$98 mill, and a further 4.5 mill shares on 28th February, 2023 that are expected to raise net proceeds of around \$56 mill.

The company also secured an LNGC, which is intended for conversion to a 3.5 mill tonnes per annum Mark II FLNG.

Golar's focus on FLNGs positions the company to take advantage of the most profitable segment of the LNG value chain, the company claimed. For example, the recently announced 'Hilli' transaction, the upcoming commencement of the 20-year 'Gimi' contract, and cash flows locked in through the TTF hedges, secure strong growth in free cash flow from operations.

Distributable adjusted EBITDA from FLNG 'Hilli' increased by \$20 mill from \$94 mill in 3Q22 to \$114 mill in 4Q22, of which Golar's share was \$86 mill, compared to \$64 mill in 3Q22.

Technical issues resolved

Due to a combination of upstream technical issues and the FLNG's maintenance, last year's LNG production was 3.5% below the annual contracted 1.4 mill tonnes per year and a \$36 mill accounting liability was recognised. These issues were resolved in 4Q22.

Subject to customary documen-



Golar is to concentrate on FLNGs going forward

tation, Golar and the customer agreed that the \$36 mill 2022 production shortfall will be compensated through overproduction this year, where Golar expects to recognise an additional 2023 adjusted EBITDA of \$36 mill, offsetting the 2022 under-utilisation liability with no expected net cash impact.

Golar's share of annual distributable adjusted EBITDA from 'Hilli' is expected to increase by about \$70 mill through to the current liquefaction tolling agreement (LTA) conclusion in July, 2026.

Assuming the 'Hilli' transaction with NFE closes and TTF and Brent oil forward prices of \$16.6 per MMBtu and \$81.3 per barrel, respectively, 2023 distributable adjusted EBITDA is expected to be

around \$335 mill.

For 2024, assuming the Hilli transaction closes and TTF and Brent oil forward prices of \$17.9 per MMBtu and \$77.3 per barrel, respectively, distributable adjusted EBITDA is expected to be around \$283 mill.

The conversion of FLNG 'Gimi' for its 20-year contract with BP was 92% technically complete on 12th February, 2023, still on track for a 1H23 sail away.

FLNG 'Gimi' is expected to unlock around \$3 bill of earnings backlog to Golar, equivalent to around \$151 mill in annual adjusted EBITDA.

Golar has been increasingly engaging with prospective clients for a potential redeployment of 'Hilli' once her current contract ends.

The company has also secured

an option to acquire a 148,000 cu m moss design LNGC for a MKII FLNG conversion. A non-refundable payment of \$5 mill was made last month, which, subject to the option being exercised in 2Q23, will be deducted from the agreed \$78 mill purchase price.

Significant progress has been made with the conversion shipyard, procurement of long lead items and financing.

By sub-chartering the FSRU 'Tundra' to a third party until November, 2022, net of operating costs and hire paid to Snam Group, amounted to \$2 mill in 4Q22. Fees recognised in respect of the services agreement to assist Snam with her drydocking, site commissioning and hook-up, amounted to \$9 mill in the quarter.

GTT forecasts strong outlook going forward

Paris-based service group GTT reported that 2022's consolidated revenues totalled €307.3 mill, down 2.4% compared to the previous year.

Consolidated EBITDA came in at €161.1 mill.

Newbuilding revenues were €279.5 mill for the year, down 4.4% on 2021, however, the fourth quarter started to benefit from the strong commercial activity seen in the second half of 2021.

Royalties amounted to €242.3 mill from LNG and ethane carriers, €16.2 mill from FSUs, €1.2 mill from FLNGs, €6.2 mill from on-shore storage tanks and €6.8 mill from GBS.

LNG as fuel royalties (€6.8 mill) were not impacted by the high order intake recorded in 2021 and 2022, thus far, GTT said.

Revenues from Elogen's electrolyser business amounted to €4.7 mill in 2022, plus €0.6 mill of operating subsidies, in a context of sustained commercial momentum.

Services revenues rose sharply by 33.1% to €23.1 mill during the year, driven by growth in digital solutions and engineering studies, including those related to the conversion of LNGCs to FSRUs.

The orderbook was at a record level with 274 units for the core business and 70 units for the LNG as fuel business.

Numerous approvals in principle

(AiPs) were granted, notably in the field of liquid hydrogen transport and for the three tank LNGC concept.

GTT said that the outlook was strong for the core business with €1,594 mill cumulated revenues over the next four to five years.

For example, the 2023 guidance showed consolidated revenues between €385 mill and €430 mill, consolidated EBITDA of between €190 mill and €235 mill and a dividend payout of at least 80% of the consolidated net income.

In the next 10 years, the company also said in its presentation that another 450 LNGCs could be ordered.

Philippe Berterottière, GTT's Chairman and CEO, commented: "With 162 orders for LNG carriers, two orders for large-capacity ethane carriers and one order for a floating storage and regasification unit, GTT achieved exceptional commercial performance in 2022.

"Continued strong demand for LNG, particularly in Europe, is generating additional needs for LNG carriers. In addition, the replacement market is expected to grow in the coming years, notably as new environmental regulations

come into force. For LNG as fuel, GTT booked 42 orders in 2022, a new record for this business line.

"Although the high price of LNG in Europe hampered sales momentum in the fourth quarter of 2022, GTT remains convinced of the relevance of its solutions, which enable vessels to comply with new environmental standards, and therefore of the medium- and long-term potential of this business.

"With regard to innovation, GTT continues to deploy its R&D roadmap with the ambition of being a major technological player in the de-carbonisation of maritime transportation, in particular by supporting its customers in their energy transition.

"In 2022, we obtained numerous approvals in principle from classification societies to develop new technologies in a wide variety of areas, particularly for the design of a hydrogen carrier and an innovative design for a three-tank LNG carrier.

"From a financial standpoint, revenues for 2022 are in line with our expectations with a limited decline of 2.4%, compared to 2021, due to an unfavourable base

effect, which is gradually disappearing as a result of order momentum. This is illustrated by the strong growth of 14.1% in revenues in 4Q22, compared to 4Q21. EBITDA stood at €161 mill in 2022, slightly higher than forecast, due to good cost control.

"In the mid-term, GTT benefits from a very strong visibility on its core business over the next four to five years, with cumulated revenues of €1,594 mill. Regarding our outlook for the current year, taking into account the distribution over time of our orderbook, we estimate that consolidated revenues for 2023 should be in the range of €385 mill to €430 mill, consolidated EBITDA in the range of €190 mill to €235 mill, and we maintain our commitment to distribute a minimum of 80% of our net income for 2023," he said.

Subsequently, GTT announced that it has received an order from Samsung Heavy Industries for the tank design of two new 174,000 cu m LNGCs.

They will be fitted with the Mark III Flex membrane containment system and will be delivered between the third quarter of 2026 and the first quarter of 2027. ■

NEWS NUDGE

QatarEnergy to takeover Qatargas' activities

QatarEnergy is to assume responsibility for all of the marketing and related activities currently managed by Qatargas Operating Co (Qatargas).

Integration is expected to be completed by the end of this year, the company said.

A strengthened alignment of LNG marketing activities within QatarEnergy will leverage a combined set of technical, commercial and financial capabilities of both organisations to create an enhanced centre of excellence for the marketing and sale of all

energy products exported from Qatar.

QatarEnergy currently manages the marketing and sale of all products produced for export by its subsidiaries and affiliates, with the exception of LNG and Helium.

Once the integration is concluded, QatarEnergy will be the single point of contact for all existing and prospective customers interested in the purchase of energy products from Qatar and will be able to provide a diversified products and services offering with a superior integrated portfolio, it claimed.

Svanehoj to supply equipment to Calcasieu Pass

Svanehoj France has supplied safety instrumentation and software solutions for a large new LNG export facility in the US state of Louisiana.

The Svanehoj subsidiary was chosen by construction company CB&I to supply a tank gauging system for two LNG tanks at Venture Global's Calcasieu Pass LNG terminal.

Stored LNG's chemical composition is in constant state of flux. Therefore, it is vital to monitor the possible develop-

ment of stratification and to be warned of any unstable stratifications, the company said.

Svanehoj's instrumentation and software solutions are utilised to ensure that all hazardous aspects related to liquefied gas storage are known and controllable. The systems pro-actively measure possible development or creation of stratification by monitoring the tanks.

The product range includes gauges, temperature transmitters, and control systems that operate accurately under cryogenic conditions. ■

CoolCo to cash in on charter market

In a business update, Cool Company Ltd (CoolCo) said it had generated total operating revenues of \$90.3 mill for the fourth quarter of last year, compared to \$65.8 mill for 3Q22.

The 4Q22 net income was \$33.1 mill with an earnings per share of \$0.68.

CoolCo achieved average TCE of \$83,600 per day in the quarter, compared to \$73,200 per day for 3Q22.

Adjusted 4Q22 EBITDA of \$58.6 mill, compared to \$42.4 mill for 3Q22.

During 4Q22, an LNGC commenced a three-year charter from October, 2022 at around \$120,000 per day and subsequently, another three-year charter was agreed that commenced in February, 2023 at a rate averaging \$120,000 per day for the charter period.

In addition, the company entered into an option agreement, which expires on 30th June, 2023, to acquire two Hyundai Samho LNGC newbuildings with scheduled deliveries in the second half of 2024.

The sale of the 'Golar Seal' for \$184.3 mill, with the buyer assuming all costs associated with the

vessel's forthcoming scheduled drydocking, released around \$94 mill, after repayment of its associated debt.

This will be made available to fund the acquisition of the two Hyundai Samho LNGCs, if the company decides to exercise the option.

NYSE filing

In another move, CoolCo publicly filed a registration statement for direct listing of its shares on the New York Stock Exchange (NYSE), subject to the registration statement being declared effective, with the intention of listing around mid-March, 2023.

CEO Richard Tyrrell, commented: "At its IPO a year ago, CoolCo outlined its intention to target growth by consolidation and to focus on shareholder returns by allocating its free cash-flow to equity primarily to dividends. I am pleased to see us deliver on both as a result of steps taken during and sub-

sequent to the fourth quarter.

"We acquired four high-spec, in-service vessels on attractive terms, placed two of our existing vessels on highly attractive charters, and on the back of a strong set of 4Q22 results were able to declare our first quarterly dividend.

"Through the sale of the 'Golar Seal', the earliest vessel in our fleet to be built, we are demonstrating our disciplined approach to locking in shareholder value. The valuation highlights the re-pricing of the LNG carrier market and strategic value of such LNG infrastructure assets in providing crucial energy security.

"A 2.5x cash-on-cash return in little more than 12 months since CoolCo's formation shows the considerable upside potential in our fleet.

"With our recently announced planned NYSE listing, we are also delivering on our intention to provide expanded access to CoolCo for US investors, broaden the in-

vestor base and drive trading liquidity in our shares.

"Despite seasonal market softness in the spot market for LNG carriers, the 12-month market remains strong and 2023 looks fundamentally tighter than 2022. Freeport LNG's export terminal in the US Gulf is now well into the process of restarting after several months offline, Europe will not have access to the same level of Russian pipeline gas as it previously relied upon, and Asia could soon outbid Europe for spot volumes, potentially pushing up tonne/miles.

"As one of the few listed LNG shipping companies with open tonnage this year and next, we look forward to securing additional contracts that reflect the re-priced LNG carrier charter market and realise significant value for shareholders, including for the two highly sought-after Hyundai Samho newbuildings on which we hold an option," he concluded. ■

Fixed rate contracts boost Awilco

Awilco LNG, the Norwegian listed owner of two LNGCs, achieved a net result of USD 4.9 mill and profit per share of \$0.04 for the fourth quarter of last year, up from a net loss of \$5.1 mill recorded in 3Q22.

The annual result for 2022 was \$5.8 mill and \$0.04 per share.

Net freight income was \$16.2 mill for 4Q22, up from \$4.8 mill in the previous quarter, while net freight income for the year was \$45.3 mill.

Fourth quarter EBITDA was \$12.1 mill, up from \$1.3 mill in the third quarter of last year and the 12-month EBITDA was \$31.1 mill.

Vessel utilisation was 93% in 4Q22, up from 44% for 3Q22, with a net TCE of \$88,100 per day. For the full year, utilisation was 81% with a net TCE of \$62,000 per day.

In November, Awilco signed an 18-month charter contract for 'WilForce' that commenced at the end of January this year in direct continuation from the previous six-month charter.

On 15th February, 2023 the

Board authorised a cash dividend payment of NOK0.50 per share.

CEO Jon Skule Storheill, commented: "We are pleased to report a full year profit of \$5.8 mill after a roller-coaster 2022 in the LNG market driven by world events.

"In the fourth quarter we resumed profitability on the back of increased earnings from spot and fixed rate contracts for both vessels. This is set to continue for the next years, and earnings can be expected to remain solid throughout the next two years.

"The market has as usual experienced a seasonal downturn at the start of the year on the back of a mild winter in Europe in combination with high LNG inventories. We expect the market conditions to improve throughout the year as energy security con-

tinue to be in focus, as it has been in 2022, and China returns to the market after reopening.

"The fixed earnings contracts enable the company to return value to our shareholders, starting with a payment in first quarter 2023, which will be proposed to be extended and affirmed at the Annual General Meeting," he said.

'WilForce' traded on a fixed rate contract throughout 4Q22, while 'WilPride' undertook a spot voyage until she commenced a fixed rate contract at the start of December, 2022.

Awilco's cash and cash equivalents increased to \$26.1 mill at the end of the year, up from \$24.3 mill at the end of 3Q22. The increase was mainly related to higher rates achieved in 4Q22, compared to the previous quarter.

Interest bearing debt net of

capitalised and amortising transaction costs was reduced by \$4.5 mill in 4Q22 to \$207.6 mill on 31st December, 2022 in accordance with the repayment profile of the leases.

Total book value of 'WilForce' and 'WilPride' was \$317.1 mill at the end of the year after depreciation of \$3.1 mill and capitalised cost for engine overhauls of \$0.4 mill in 4Q22.

Last year, Awilco undertook a scheduled overhaul of three main engines, two on 'WilPride' and one on 'WilForce', at a total cost \$2.3 mill. This cost was capitalised and will be amortised over the next four years.

Another overhaul originally scheduled for 4Q22 on 'WilForce' was postponed to January, 2023. Both ships are scheduled to drydock later this year. ■

LNG Solutions for the Marine Industry



Chart's maritime LNG solutions reduce operating costs while dramatically improving emissions for compliance with today's stringent requirements in the marine industry.

Cryogenic Solutions for:

- LNG ship fueling systems
- FLNG
- FSRUs
- Bunkering vessels
- Bunkering stations
- Port power applications

www.ChartLNG.com
LNG@ChartIndustries.com



Innovation. Experience. Performance.®

Chevron turns to Sembcorp for LNGC upgrades

Chevron Shipping Co has entered into an agreement with Sembcorp Marine Repairs & Upgrades, a wholly owned subsidiary of Sembcorp Marine Ltd, to reduce the carbon intensity of its LNGC fleet operations.

Under the agreement, with Sembcorp Marine's support, Chevron will install new technologies on board its vessels to support their energy transition goals. The upgrades are also in line with the IMO's de-carbonisation targets.

New technologies will include reliquefaction and hull air lubrication systems, plus new gas compressors. Together, these enhancements are expected to reduce cargo boil-off, lower fuel consumption and increase volumes of cargo delivered.

"We are excited to work with Sembcorp Marine to help us advance our lower carbon goals," said Mark Ross, Chevron Shipping's President. "We believe LNG will

be a key component of the global energy transition for years to come, and Chevron is focused on continuing its disciplined capital investment in our LNG fleet."

Sembcorp Marine has significant expertise in complex LNGC modifications and will provide Chevron with engineering, procurement, installation, and commissioning (EPIC) services. The work is expected to be completed by mid-2025.

Wong Weng Sun, Sembcorp Marine President and CEO, said: "Sembcorp Marine is committed to advancing environmental sustainability through the development of industry-leading solutions. Working with Chevron on its LNG

fleet upgrades is an immediate way to accelerate the lowering of the carbon footprint in the maritime industry, to achieve the

IMO's target to reduce emissions from international shipping by at least half by 2050, compared to the levels in 2008."



'Asia Energy' is one of Chevron's LNGCs to benefit from a Sembcorp upgrade

Höegh extends Wärtsilä maintenance agreement

Wärtsilä has signed a five-year renewal agreement on its existing maintenance contract with Norway's Höegh LNG Fleet Management (HLNG).

This extension includes the delivery of spare parts and field maintenance services, as well as Wärtsilä's latest digital solutions, which extends the value adding co-operation between the two companies, it said.

The contract covers maintenance on the Wärtsilä 50DF dual-fuel engines fitted on 10 vessels, nine of which are operating as FSRUs.

One of the FSRUs, 'Höegh Esperanza', is currently being used to supply gas to the new LNG terminal in Wilhelmshaven,

Germany.

The agreement's scope includes digital solutions, such as Wärtsilä's Expert Insight predictive maintenance service, remote operational support, data-driven dynamic maintenance planning, and fluids management service.

Also included is the use of a new collaboration app, which makes communication between HLNG's technical crew and Wärtsilä experts easy and manages all the necessary reporting.

HLNG also has direct access to the Wärtsilä Expertise Centres,

which provide 24/7 support and guidance.

"We recognise Wärtsilä as a technology leader in developing efficiency-based solutions that support de-carbonisation efforts, which is an important target for our company. We see this renewed agreement as providing a solid foundation for continued co-operation, and a partnership for joint projects towards de-carbonised operations," said Nils Jakob Hasle, Head of Fleet Management at Höegh LNG.

"Renewal of the earlier agree-

ment is an endorsement of its value to our customer. It also positions Wärtsilä to continue to support Höegh LNG on their de-carbonisation and digital development journey. Expert Insight and the remote support services offered enables issues to be resolved pro-actively without having to have the physical presence of a service engineer. These services also lessen the environmental footprint and address concerns regarding cyber security," added Henrik Wilhelms, Director Agreement Sales at Wärtsilä.

LNG rate assessments

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

Region	This week	Change*
East of Suez	\$78,000	+ \$8,000
West of Suez	\$68,000	+ \$13,000
12 mos T/C	\$152,000	-

*Since last report (16/02/23)

Source: Fearnleys (01/03/23)

Monthly Large LNGC Values*

Newbuildings (174,000 cu m)	\$265.85 mill
Five years old (174,000 cu m)	\$218.76 mill
Total Fleet (566 ships)	\$91.84 bill
Orderbook (303 ships)	\$79.83 bill

*Source: VesselsValue (01/03/23)

*The above is updated each month courtesy of VesselsValue

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

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