LNG Shipping News

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Upcoming FIDs to drive LNG trades

Aggressive LNG buying will be driven by competition between Europe and Asia this year.

Port Arthur LNG is one of three projects to take FID so far this year

European gas storage volumes have benefited from a mild winter, although storage will need to remain around 90% full, said Drewry's lead gas shipping analyst, Aman Sud, in a webinar.

However, industrial demand for LNG worldwide has fallen by 26% year-on-year.

Very little Russian gas will arrive in Europe this year, while an El Nino affect could cause hot summers and cold winters worldwide, thus affecting energy usage, which could deplete storage volumes. As a result, Europe could stock up again in the second half of this year, he said.

In 1Q23, the main European buyers - Spain, UK and Italy - imported 10.8 mill tonnes, compared to 13.9 mill tonnes in 1Q22 - a volume, which is expected to remain much the same for the rest of this year.

Asia's top buyers - Japan, China, India, South Korea and Taiwan - also showed a drop, importing 55.5 mill tonnes during 1Q23, compared with 61.3 mill in 1Q22.

US exports to Europe rose by 121% to 58.5 mill tonnes last year but declined to Asia by 40% to 19 mill tonnes. Russian exports to China increased by 66% year-on-year. This year could also see rising Russian imports into India and Pakistan.

In addition, US LNG exports improved by 6.1% in 1Q23, mainly due to better terminal utilisation and operations.

Sud forecast that between 2023 and 2028, LNG trade will increase to 632 mill tonnes, compared to 416.5 mill tonnes. Asia will account for over half of this increase.

As for supply, there is a very positive final investment decision (FID) scenario for 2023/2024 with over 200 mill tonnes per annum of extra capacity due to take FID, especially in the second and third quarters of this year.

Three projects have already reached FID this year - Plaquemines LNG Phase 2 (10.7 mill tonnes), Port Arthur LNG (13.5 mill tonnes) and Gabon LNG (0.7 mill tonnes per annum).

By 2028, liquefaction capacity is forecast to reach 798.2 mill tonnes, compared to today's 470.5 mill tonnes, while regasification capacity is expected to rise by 2.9% CAGR to reach 1,397 mill tonnes per annum by the end of 2028.

Tight markets

Shipping markets should remain tight this year and next until the new batch of projects come on line from 2025 onwards. Sud also said that buyers were moving towards longer term contracts, in contrast to 2021 and 2022.

LNGC newbuildings are at an all time high with another 90 contracts forecast to be placed this year. The newbuildings will mainly be placed on the back of the Qatar phase 2 project, plus others.

However, rising newbuilding prices and shipyard capacity problems could play a part when deciding on newbuilding projects. Europe and Asia will compete for newbuildings and converted FSRUs, due to only a few being available.

Daily charter rates will remain relatively weak and could fall still further in 2Q23 to around an average of $59,000 per day before recovering in 2H23. There should also be a decrease in the number of spikes this year, compared with 2022.

In general, charterers are looking to fix newbuildings on long term business, especially ships due to be delivered in 2024/2026. Extra demand could be seen in 2025 with new projects coming online, although the number of newbuilding deliveries will also increase.

Due to the number of steam LNGCs still in operation, several of which are due to come off charter in the next few years, recycling could increase, as could conversions for storage and regas projects.

Another factor that could impact the market in the short term is vessel speed reductions, due to regulatory factors, Sud said. ■

SHIPPING NEWS AGENDA

European import volumes to fall

Poten & Partners European import forecasts for 2023 and 2024 has been amended downwards by 8% and 4%, respectively.

The drop was due to a mild winter, voluntary demand cuts by some industrial consumers and a steady influx of LNG, resulting in the European natural gas supply crunch easing and inventory levels becoming stronger.

European imports are forecast to fall to 124 mill tonnes in 2023 - down from 133.4 mill tonnes in the previous forecast. For next year, European imports are forecast to rise to 131.3 mill tonnes, 5.4 mill tonnes lower than previously forecast.

Imports in 1Q23 reached 36.5 mill tonnes. However, imports are forecast to fall to 28.6 mill in 2Q23, and 26.6 mill in 3Q23 before increasing to 32.3 mill tonnes in the fourth quarter of this year.

Given the current European inventory levels, less LNG will be required to keep levels healthy, compared to last year, Poten said.

Heading into the shoulder months, the European gas market will focus on maintaining above average storage levels. At the end of March 2023, there was around 55.6 bill cu m in storage and this level rose by about 1 bill in April to 56.7 bill cu m.

Despite lower LNG imports and low Russian pipeline gas imports, compared to last year, Europe is still forecast to inject roughly 36.5 bill cu m of gas into storage over the shoulder months of April through September this year.

By October, 2023, European inventory levels will peak at 94 bill cu m - similar to the volume of gas in storage at the same stage last year.

However, the import forecasts for 4Q23 and 1Q24 will result in inventories ending the winter in March, 2024 at around 28% lower than March, 2023 equalling roughly 40 bill cu m, which will be near the middle of the five-year range.

In this case scenario, Europe will need to increase LNG imports. However, storage levels are expected to remain in the middle of the five-year range throughout 2024, Poten said.

In the first half April, imports rose, similar to the figures seen in February. This was due to an increase in Spanish imports.

Not only is Spain increasing LNG send-out to France, due to strikes at French LNG import terminals, but a severe drought has also caused lower Spanish hydropower levels, increasing the need for additional imports. ■

Texas LNG to take FID this year

The US Federal Energy Regulatory Commission (FERC) has issued an Order on Remand for the Brownsville Texas LNG project.

Texas LNG is expected to take FID this year

This project is a 4 mill tonnes per annum LNG export terminal to be built at Brownsville, Texas, being developed by Texas LNG Brownsville, an affiliate of Glenfarne Energy Transition.

FERC's Order on Remand includes two modified mitigation requirements regarding air monitoring and emergency response communications that Texas LNG will incorporate into its plan.

Texas LNG said that it expects to make a final investment decision (FID) this year and begin commercial operations in 2027.

The developer's 'Green by Design' approach is aimed at avoiding emissions rather than minimising or mitigating them, the company said.

By using renewable energy to power the entire facility and drive Texas LNG's electric motors, this eliminates most CO2 emissions, less than half of a typical LNG export project, making it one of the lowest-emitting liquefaction facilities in the world, it was claimed.

"Environmental justice and the carbon footprint of our project are among the most important issues we regularly consider as we progress Texas LNG to a final investment decision this year. We thank the FERC commissioners and staff for bringing this matter to a thoughtful resolution," said Glenfarne Energy Transition CEO and Founder, Brendon Duval.

"Texas LNG will bring more than 1,200 new construction jobs and over 100 new full-time jobs to the Rio Grande Valley of which, a majority are intended to be hired from the local community.

"We are eager to begin construction on our facility to be able to safely export clean, environmentally sensible LNG that is 'Green by Design' around the globe providing long-term energy security when it is critically needed," he said.

Glenfarne is also the sole owner and developer of the 8.8 mill tonnes per annum Magnolia LNG at Lake Charles, Louisiana. ■

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Middle East to ramp up gas production

Increased Middle East gas production will boost LNG exports led by Qatar.

According to a recent Wood Mackenzie report, production will increase by 14 bill cu ft per day to 86 bill cu ft by 2030.

The report, 'The Middle East steps on the gas', said that gas supply growth is a compelling opportunity for the region given the competition to supply Europe with the volumes lost from Russia since the Ukraine invasion.

This production increase is equivalent to the gas consumption of the whole of the European power sector and could help energy companies solve the energy trilemma of sustainability, security and affordability, WoodMac said.

Around half of the increase will be earmarked for export, which could have a game-changing effect on the global gas markets, especially if the LNG liquefaction capacity in the Middle East keeps growing as predicted. The remaining 50% will be absorbed by domestic demand growth.

Qatar is driving Middle East gas production

"The Middle East can be part of the solution for the global gas markets as the region continues to ramp up production from its gigantic gas reserves," said Alexandre Araman, WoodMac's Principal Analyst for Middle East Upstream. "To fulfil the level of production growth that we have predicted, investments in non-associated gas projects are set to reach a record $25 bill this year and a cumulative total of $120 bill by the end of the decade."

For example, Qatar LNG exports alone should reach 126 mill tonnes per annum by 2030, while Abu Dhabi will be able to export 15.4 mill tonnes after a new LNG facility comes onstream in 2028.

The report added that for international companies, gas projects in the region presented attractive opportunities. Gas accounts for barely 35% of their Middle East production mix but generates more than 70% of the value.

Around 50% of the LNG value is created by Qatar involving just three companies - ExxonMobil, Shell and TotalEnergies. ■

Eni inaugurates Congo project - imports LNG into Piombino

Last month, the Republic of the Congo President, Denis Sassou Nguesso, and Eni CEO, Claudio Descalzi, laid the foundation stone of Congo LNG.

This will be the country's first natural gas liquefaction project and one of the Italian energy company's core supply diversification initiatives. Congo LNG is expected to reach a total LNG production capacity of 3 mill tonnes per year from 2025.

The project will tap into the huge gas resources of Marine XII, fulfilling the country's power generation needs, while also driving LNG exports, supplying new volumes of gas to international markets mainly focusing on Europe.

It has been designed though an accelerated development schedule and a zero-flaring approach, which will include the mooring of two FLNGs at the Nenè and Litchendjili fields – already in production – and at other fields still to be developed.

The first FLNG, currently under conversion and with a capacity of 0.6 mill tonnes per year, will begin production this year. The second, which is under construction, will become operational in 2025 with a capacity of 2.4 mill tonnes per annum.

Eni's Descalzi commented: "(Today) we celebrate the launch of one of Eni's main projects, made possible by the collaboration with the Republic of the Congo and destined to significantly contribute to both Italy and Europe's energy security and industrial competitiveness.

"This outcome speaks to the importance of long-term collaboration with our African partners at a time when important strategic choices need to be made in regards to future diversification of supply routes and European energy mixes, in the direction of energy accessibility and availability and progressive de-carbonisation," he said.

Eni has been operating in Congo for over 50 years and – to date – is the only company active in the development of its gas resources, guaranteeing 70% of national electricity production through the Centrale Electrique du Congo (CEC).

Piombino cargo

The energy company has also offloaded the first LNG cargo to arrive at Snam's new regasification terminal located at Piombino, Tuscany, Italy.

This terminal has a total processing capacity of 5 bill cu m per year, or around 7% of Italy's total gas demand. The LNG was produced at Egypt's Damietta liquefaction plant, in which Eni has invested with the goal of growing its integrated LNG portfolio.

Eni acquired regasification capacity at Piombino as part of its strategy to diversify LNG supplies to Italy. The company has also increased the volumes of gas from Algeria, Libya and Italy and increased the number of LNG cargoes negotiated from Egypt, Congo, Qatar, Angola, Nigeria, Indonesia and Mozambique.

As a result, Eni said it will be able to guarantee gas supplies to its customers through a more diversified portfolio. The company's contracted LNG is expected to exceed 18 mill tonnes per annum by 2026, twice as much as in 2022.

Piombino's new regasification capacity will help implement Eni's plan to completely replace Russian gas by 2024/2025 and increase the availability of gas for the country, with potential benefits in terms of prices and competitiveness of Italy's industrial and economic system, the company said. ■

JERA signs MoU with Summit - to import CP2 LNG

JERA Asia has signed a memorandum of understanding (MoU) with Bangladesh energy concern Summit Corp.

The MoU calls for the collaboration in the development of LNG supply, storage and regasification.

Summit Power generates energy and is a subsidiary of infrastructure company Summit Group. It owns a 500 mill cu ft capacity FSRU moored offshore Moheshkhalij, Bangladesh.

Since agreeing to buy 22% of Summit Power's shares in October, 2019, JERA has been aiming to enhance the Bangladesh company's corporate value through the construction and operation of power generation facilities.

Due to increasing gas demand and declining domestic production, Bangladesh needs a stable LNG supply, the Japanese company said.

JERA also claimed that LNG will play an more important role as a source of transitional energy in Asia, especially in Bangladesh.

Long term SPA

In addition, Venture Global LNG has announced the signing of a long-term sales and purchase agreement (SPA) with JERA, which calls for the supply of 1 mill tonnes per annum of LNG from CP2 LNG for 20 years.

CP2 LNG is Venture Global's third export project and construction is expected to commence later this year.

As at the end of last month, the company had announced SPAs for over a third of the 20 mill tonnes per annum nameplate facility with active discussions ongoing for the remainder of its capacity.

This deal follows JERA Global Markets' purchase of the inaugural commissioning cargo of LNG exported from Venture Global's first project - Calcasieu Pass.

"Venture Global is thrilled to be expanding our partnership with JERA, one of the world's premiere energy providers and largest buyers of LNG," said Mike Sabel, Venture Global LNG CEO.

"Japan has taken a pragmatic approach to ensuring its energy security while advancing environmental progress. We are honoured to supply our growing customer base in Japan with a clean and reliable source of lower carbon energy and look forward to supporting JERA in its efforts to bring LNG to the region for many years to come," he said.

Venture Global's Mike Sabel has negotiated another major SPA

"LNG procurement competition has been intensifying and thus, stable procurement of LNG in a timely manner in line with the domestic electricity supply-demand situation is needed to secure a stable supply of energy in Japan.

"This is a destination free FOB contract, which enables JERA to secure LNG in a high flexible manner and is expected to help with our capability to respond to volatility in the domestic electricity supply and demand," added Sunao Nakamura, JERA's Senior Managing Executive Officer, Optimisation. ■

NEWS NUDGE

HEH to test ammonia market

With around 80%, or 10 bill cu m per annum, of LNG long-term capacity allocated, commercial marketing of Stade Germany's Hanseatic Energy Hub (HEH) has been largely completed.

HEH is now pushing ahead with the parallel ramp-up of hydrogen. The River Elbe Stade land-based terminal is planned to be both technically and commercially ammonia-ready and is scheduled to go into operation in 2027.

At the same time, there is the option of building an additional, smaller ammonia tank as part of the future-flexible modular system before the large tanks are converted. As demand, schedule and design are largely dictated by market requirements, HEH will launch a market test for ammonia as a hydrogen-based energy source in the coming weeks.

HEH is a future-flexible modular system for the energy transition. In the first stage of expansion, LNG and green energy sources such as bio-LNG and synthetic natural gas (SNG) can be imported via the emission-free terminal from 2027.

Its planned regasification capacity is 13.3 bill cu m per annum.

The terminal, port, industrial park and connection infrastructure are designed to allow the conversion to ammonia as a hydrogen-based energy source to be undertaken in a modular fashion. ■

ADNOC to supply TotalEnergies - to build second export plant

Adnoc Gas has signed a contract to supply LNG to TotalEnergies.

Recently formed by Abu Dhabi National Oil Co (ADNOC) as a public listed company, Adnoc Gas will supply the LNG under a three-year contract running until 2025.

Its value is expected to be between $1 bill and $1.2 bill at today's prices, the company said, without disclosing the volumes involved.

The LNG will be delivered into various export markets worldwide. The UAE is aiming to almost triple its LNG production capacity to 15 mill tonnes per annum in the next few years.

ADNOC also recently decided to build its second LNG export plant at Al Ruwais, rather than at Fujairah, as originally planned.

As an operational hub for ADNOC and its operating companies, Al Ruwais offers significant synergies and existing infrastructure that will be leveraged to deliver project efficiencies, the company said.

Following a comprehensive evaluation of location options during the ongoing design phase, the proximity of Al Ruwais to ADNOC's current operations, as well as its future growth projects, in addition to a well-established local supplier base, were important considerations in the company's decision, it added.

Through its planned LNG growth project, ADNOC intends to more than double its LNG production capacity to meet increased global demand for natural gas.

The plant, which is designed with electric-powered processing facilities, will run on renewable and nuclear grid power, making it one of the world's lowest carbon intensity LNG facilities, ADNOC claimed. ■

'Ish' arrives in the Philippines

ADNOC Logistics & Services' (ADNOC L&S) recently converted FSU, 'Ish', has arrived at the AG&P Philippines LNG (PHLNG) import terminal in Batangas Bay with a cargo.

'Ish' will be commissioned as an FSU at PHLNG, thus becoming the first LNG import terminal in the Philippines.

AG&P subsidiary, GasEntec, converted the 137,500 cu m vessel to an FSU in five months. The FSU's supply, operations and maintenance will be undertaken by ADNOC L&S.

The charter agreement for 'Ish' to AG&P was signed in 2022 and spans 11 years with the option to extend for a further four years.

This arrangement boosts ADNOC L&S' FSU revenue stream and extends the life of the vessel, while securing PHLNG's resilience of LNG supply, the company said. The deal also builds on an existing long-term charter signed between ADNOC L&S and AG&P to provide another FSU in India.

The converted FSU 'Ish' seen arriving at Batangas

Captain Abdulkareem Al Masabi, ADNOC L&S CEO, said: "Successful partnerships create new value collaboratively, and the re-purposing of vessels provides a blueprint for sustainable value creation.

"For ADNOC L&S, this translates to extending the operational life of our vessel and unlocking new revenue streams and opportunities for growth. For AG&P, this means availing a flexible storage solution for their new LNG terminal, which will catalyse wider economic and social prosperity," he said.

Joseph Sigelman, AG&P Chairman and CEO, added: "AG&P prizes its growing partnership with ADNOC L&S. With the 'Ish' docking at PHLNG for the next decade or longer, AG&P is proudly set to open the first LNG terminal in the Philippines, one with both floating and, shortly, almost equal onshore tank storage, providing near 100% availability.

"As the first cargo of fuel originated in Abu Dhabi and with the long-term presence of the 'Ish', ADNOC L&S is playing a pivotal role alongside AG&P and San Miguel, our anchor customer, in bringing clean energy to the Philippines," he said. ■

Venice Energy gives project update

A joint study by South Australian LNG import terminal developer, Venice Energy, and piperline operator SEA Gas, has confirmed that a pipeline can be reconfigured to facilitate bi-directional flow between South Australia and Victoria.

This means the proposed LNG terminal at Port Adelaide's Outer Harbour will ensure that both South Australia and Victoria can secure their gas supplies and avoid shortages, particularly during the peak winter period, Venice Energy claimed.

The company's Managing Director, Kym Winter-Dewhirst, said last season's gas shortages in the southeast of Australia, particularly in Victoria, will become a thing of the past once the project becomes fully operational in 2026.

"Most gas producers, analysts and regulators agree that domestic gas supplies in southeast Australia will fall significantly over the next decade, as coal begins to exit the local market and gas becomes the primary back-up for renewable energy due to its intermittent nature.

"We believe that imported LNG provides insurance to energy supply companies as the nation makes its transition to a low carbon economy over the next 10-15 years and our LNG terminal will play a major role in that transition," he said.

The Adelaide project will be able to receive LNG from both the Northwest Shelf and Gladstone along with access to international gas supplies.

It will also provide significant additional storage by utilising an FSRU, via the 680 km SEA Gas pipeline and by maintaining storage at the Iona underground facility west of Melbourne through regular shipments, especially during peak winter periods.

Venice Energy secured all the Australian Government approvals for the project in December 2021. The LNG terminal will be the first in the world to operate exclusively on renewable energy. It will consist of two new berths, cryogenic piping, gas loading arms and other infrastructure to be located at the Outer Harbour at Port Adelaide.

A final investment decision (FID) is expected by August this year with construction due to start in October, Venice Energy said. ■

NEWS NUDGE

Golar to change bond terms

Golar LNG Limited has instructed Nordic Trustee to undertake a written resolution for the company's senior unsecured bonds maturing 20th October, 2025.

Its purpose is to consider a proposal for certain amendments to the bond terms.

This move was made, due to the significant strengthening of Golar's financial position since the issuing of the unsecured bonds.

As a result, the company is seeking to make certain amendments to the definition of 'permitted distribution', to increase the flexibility for potential future shareholder returns in return for a one-off financial compensation to the bondholders and implementation of an incurrence test, Golar explained.

The voting period will expire on 25th May, 2023 at the latest, at which time, the proposal's final outcome will be decided and made public. ■

Spot and short term charters boost GasLog's revenue

GasLog Partners reported higher revenues of $99.1 mill for the first quarter of this year, compared to $85.5 mill for the same period in 2022.

GasLog's Enoizi has reported improved results

The $13.6 mill increase was mainly due to a net rise in revenues from LNGCs operating in the spot and short-term markets in 1Q23, under timecharters that were signed in 2022.

However, the increase was partially offset by a fall in revenues, due to the offhire days encountered by scheduled drydocking of the 'GasLog Shanghai' and also the sale of the 'Methane Shirley Elisabeth' in 3Q22.

Daily operating costs per vessel decreased from $14,741 per day for 1Q22, to $12,640 per day for this quarter.

Adjusted EBITDA was $76.3 mill for 1Q23, compared to $60.9 mill for the same period in 2022. The $15.4 mill increase was mainly attributable to the rise in revenues of $13.6 mill and a decrease in vessel operating costs of $2.7 mill.

GasLog declared a profit of $36.4 mill for the quarter, compared to $35 mill for 1Q22, while adjusted profit was $39.3 mill, compared to $28.3 mill for the same period last year.

As of 31st March, 2023, GasLog had $225.6 mill of cash and cash equivalents and had an aggregate of $805.6 mill of bank borrowings outstanding under the credit facilities, of which $224.2 mill was repayable within a year.

Lease liabilities

In addition, the partnership had an aggregate of $114.8 mill of lease liabilities mainly related to the sale and lease-backs of the 'GasLog Shanghai', the 'Methane Heather Sally' and the 'GasLog Sydney', of which $27.9 mill was payable within 12 months.

Talking of the proposed merger, CEO Paolo Enoizi, explained: "The entering into an Agreement and Plan of Merger with GasLog is a transformative transaction for the Partnership that will enable its unitholders to take advantage of a significant premium to the unit trading price.

"Both the conflicts committee and the Partnership's board of directors have unanimously approved and determined the transaction to be fair and in the best interests of the Partnership and the common unitholders unaffiliated with GasLog.

"Subject to the affirmative vote of the majority of the common unitholders, we expect the transaction to close in the third quarter of this year. We are excited to join GasLog and look forward to continuing to build our business while maintaining our focus on operational excellence and our strategy execution.

"Overall, the term fixtures executed so far have enabled the execution of our capital allocation strategy, helping us make meaningful progress towards our leverage targets and strengthening our balance sheet with the repurchase of $49.2 mill in preference units in the past year, or approximately $68 mill since inception of the repurchase plan in August, 2021, which is also improving the Partnership's all-in break-even levels in our fleet.

"The Partnership has capitalised on the strong LNG market through profitable fixtures, exercised charterers' options and sale and lease-backs," he said.

> "Subject to the affirmative vote of the majority of the common unitholders, we expect the transaction to close in the third quarter of this year"
>
> *- Paolo Enoizi, CEO, Gaslog*

GasLog further explained that headline 1Q23 spot rates for 160,000 cu m TFDE vessels fell to an average of about $71,560 per day as per Clarksons Research's weekly assessment, or about 78% lower compared to the average for 4Q22 ($330,330 per day).

This rate fall was mainly due to the seasonal downturn, high inventories, continuing strong flows from the US to Europe and bearish sentiments caused by delays in the operation of Freeport and Calcasieu Pass and also compounded by the increased availability of relets.

One-year timecharter rates for TFDE LNGCs averaged $155,000 per day in 1Q23, about 18% lower than rates in the previous quarter, while 12-month timecharter rates for steam LNGCs averaged $71,550 per day in 1Q23, 13% lower than the previous quarter. ■

NEWS NUDGE

Platts adds Bilbao and Mugardos to its DES NWE LNG

Platts, part of S&P Global Commodity Insights, will add Bilbao and Mugardos in northern Spain as base delivery ports.

This reflects its Market on Close (MoC) assessment process for DES Northwest Europe LNG Marker and comes effective 16th June, 2023.

The additions are as a result of the changing trade practices around flexibility provided for cargoes historically categorised as having flexibility for delivery into Northwest Europe, following Platts analysis of market and trade data.

Platts DES NWE Marker assessment will now include deliveries into the Isle of Grain, Zeebrugge, Gate LNG, Dragon LNG, Montoir, South Hook, Dunkirk, Bilbao and Mugardos.

Bids and offers into other Northwest European destinations will continue to be considered for publication, Platts said.

Bilbao and Mugardos will also remain base delivery ports reflected in the MoC of the Platts DES MED Marker assessment for cargoes into the Mediterranean, which includes all other ports in the Iberian Peninsula and up to Fos Cavaou.

Vietnam's first LNG terminal permitted

PetroVietnam Gas has received a certificate from Vietnam's Ministry of Industry and Trade to enable it to become the country's first company to import and export LNG.

This certificate will allow the company to make its first LNG imports this year, it said.

PetroVietnam Gas also advised that it had completed the construction of an LNG terminal in the southern province of Ba Ria Vung Tau with an initial capacity of 1 mill tonnes of LNG a year, rising to 3 mill tonnes.

Last month, the company tendered to buy Vietnam's first LNG cargo of 50,000 tonnes to 70,000 tonnes to test the terminal. ■

Results roundup - Terminal developers

At least four of the leading US LNG terminal project developers have reported their first quarter results recently.

First, **Cheniere Energy** reported net income of about $5.4 bill for the period, compared to around $865 mill loss in the corresponding 2022 period.

The massive swing was primarily due to changes in fair value of the derivative portfolio of around $4.7 bill (before tax and non-controlling interests), compared to the $3.4 bill loss of changes in fair value in the previous period, as well as increased total margins per MMBtu of LNG delivered.

Consolidated adjusted EBITDA increased by about $446 mill in 1Q23, compared to 1Q22.

As of 31st March, 2023, Cheniere's total consolidated available liquidity was around $10.9 bill. Cash and cash equivalents were $2.9 bill, of which $834 mill was held by Cheniere Partners.

In addition, restricted cash and cash equivalents totalled $495 mill, $1.3 bill of available commitments under the Cheniere revolving credit facility, $1.3 bill of available commitments under the Cheniere Corpus Christi Holdings (CCH) working capital facility, $3.3 bill of available commitments under CCH's term loan credit facility, $750 mill of available commitments under Cheniere Partners' credit facilities, and $871 mill of available commitments under the SPL working capital facility.

As of 26th April, 2023, over 2,770 LNG cargoes totalling about 190 mill tonnes had been produced, loaded and exported from the liquefaction terminals.

New Fortress Energy (NFE) reported a record quarterly adjusted EBITDA of $440 mill for 1Q23, while net income was $152 mill.

NFE also announced a 2023 illustrative adjusted net income goal of $1.2 bill. If achieved, it would result in a six times increase in net income relative to 2022.

Construction of the first 'Fast' LNG unit is 90% complete and deployment to Altamira is expected in June of this year.

Units FLNG 2 and FLNG 3 are already under construction, and all long-lead items have been procured.

NFE recently signed a non-binding Letter of Intent (LoI) with Mexico's CFE to explore the installation of both units at an underutilised existing onshore terminal in Altamira.

Sempra announced first-quarter 2023 earnings of $969 mill, compared to 1Q22's figure of $612 mill.

On an adjusted basis, the company's 1Q23 earnings were $922 mill, compared to $924 mill in 1Q22.

Subsidiary, Sempra Infrastructure Partners reached a positive final investment decision (FID) for the development, construction and operation of the Port Arthur LNG Phase 1 project during the period.

The company also announced a joint venture with an affiliate of ConocoPhillips, which has acquired a 30% non-controlling interest in Phase 1, and an agreement to sell to an affiliate of KKR an indirect, non-controlling interest in Phase 1, subject to regulatory approvals and other customary closing conditions.

Sempra Infrastructure Partners is now targeting a 25% indirect ownership interest in Phase 1 under this project-level equity partnership.

The $13 bill total estimated capital expenditure for the project is being financed by $6.8 bill of non-recourse project-level debt and $6.2 bill of project-level equity.

Progress also continued at Energía Costa Azul LNG Phase 1, which remains on track to reach commercial operations by summer of 2025.

Finally, **Tellurian** continued to make progress on Driftwood LNG phase one construction, added to natural gas acreage, production and sales, and repaid $166.7 mill in principal balance of borrowing obligations in 1Q23.

Subsequent to the quarter end, Tellurian also increased Driftwood's funding through the execution of a $1 bill sale and leaseback Letter of Intent (LoI).

Tellurian generated around $50.9 mill in revenues from natural gas sales in 1Q23, driven by increased production volumes.

The company reduced its net loss to about $27.5 mill, compared to a $66.6 mill loss in the same period of 2022.

As of March 31, 2023, Tellurian had about $1.3 bill in total assets, including around $150 mill of cash and cash equivalents. ■

NEWS NUDGE

Ships - Orders, deliveries and sales

HD Korea Shipbuilding & Offshore Engineering (KSOE) has won orders for six LNGC recently.

Two 200,000 cu m LNGs were contracted by an Oceanian interest, believed to be Dynagas, for the equivalent of $277 mill each.

They are to be delivered in 2027 and will be built by Hyundai Heavy Industries (HHI).

In addition, four 174,000 cu m LNGCs, said to be affiliated to NYK, were also ordered at HHI for 2027 delivery.

They were thought to have been ordered on the back of long term charters to EnBW for the equivalent of $257 mill each.

Meanwhile, Sovcomflot's newbuilding Arctic LNG 2 LNGCs have been delayed by a year, Russian news agency, RIA reported.

Six out of the seven Arc7 LNGCs were expected to have been delivered by the end of 2024.

Nigeria's state-owned energy giant, NNPC, has signed a memorandum of understanding (MoU) with Golar LNG to build an FLNG.

NNPC said that the MoU was signed by NNPC CEO, Mele Kyari, and Golar in Abuja.

No further details were revealed.

As for vessel deliveries, last month proved a busy one for Knutsen LNG France, a subsidiary of the OAS Knutsen Group.

The company took delivery of the 30,000 cu m 'Ravenna Knutsen' on 18th April.

This was followed by the naming ceremony of the 'Gordon Waters Knutsen' at Hyundai Samho. She will be chartered to Engie.

Finally on 28th April, Knutsen LNG France took delivery of the 174,000 cu m 'Grazyna Gesicka' from HHI. She is the second LNGC to be chartered to ORLEN for about 10 years with extension options.

This vessel also brought the number of LNGCs under the French registry to seven.

In its results roundup, GasLog reported that on 30th March, 2023, GasLog Partners completed the sale and lease back of the 155,000 cu m 'GasLog Sydney', TFDE LNGC, built in 2013, with CDBL.

The vessel was sold and leased back under a bareboat charter with CDBL for five years with no re-purchase option or obligation, for $140 mill.

The completion of the transaction resulted in the recognition of an impairment loss of $0.1 mill and a loss on disposal of $1 mill in 1Q23.

In addition, the timecharter of the 'GasLog Geneva', another TFDE type, with a wholly-owned subsidiary of Shell was extended by five years, following the exercise of an option.

Brokers have reported the sale by Total Energies of the 151,383 cu m 'LNG Alliance', built 2007, for $68 mill to Sinokor. The deal includes a 15 month timecharter back to the French energy major. ■


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Hydrex undertakes pipe repairs on two LNGCs

Recently Belgian-based underwater repair specialist, Hydrex diver/technicians carried out scrubber overboard pipe repairs on two LNGCs in Munkebo, Denmark.

A total of seven corroded pipes were repaired. On five of the scrubber pipes, the corroded areas were ground out and rewelded.

They were then protected with Ecospeed, a chemically resistant coating produced by sister company, Subsea Industries. The same coating was applied to the two new pipes that were installed.

Exhaust scrubbers can severely corrode the pipes, which can result in water ingress if not handled quickly enough, Hydrex warned.

The first 295 m LNGC needed maintenance and repair work carried out at the Fayard shipyard at Munkebo. Hydrex was asked to undertake repairs on three scrubber overboard pipes while the ship was berthed at the yard.

After arriving at the ship on one of yard's work boats, the Hydrex team inspected the damaged areas on both the waterside and the on board side of the hull.

This revealed that two of the pipes needed to be completely replaced. As the corrosion on the third scrubber overboard pipe was not yet severe, a full replacement was deemed unneccesary.

Because of the location of the pipes' damaged parts, welding work on the inside shell plating of the hull was needed. As a result, the outside of the overboards could not be sealed off with a simple patch. Custom cofferdams were designed and constructed at the Hydrex workshop in Antwerp.

New pipes

After the installation of the cofferdams, the team cut away the old pipes. The shell plating was then prepared for the installation of the replacement part. In addition, new pipes were constructed at the company's Antwerp workshop. They were then positioned and secured with a full penetration weld. Next, an independent inspector carried out NDT testing of the welding work.

The diver/welders then sealed off the outlet of the final overboard pipe. The team ground away the corroded area before rebuilding it back to its original thickness.

When the welding was complete the surface was cleaned and a magnetic particle inspection (MPI) was carried out by an independent inspector.

To prevent both the new and the repaired pipes from corroding, the inside was coated with Ecospeed, which is highly chemically resistant. Considering the process taking place inside a scrubber, this is essential for lasting protection of the pipe. Ecospeed should also be used to protect a newly installed scrubber system from day one, Hydrex said.

A month later the LNG ship's sistership came to the yard and Hydrex was once again asked to perform an inspection and any repairs needed to the scrubber overboard pipes undertaken.

Luckily the pipe corrosion on this LNGC was less severe. A full replacement of the four pipes was not needed.

The diver/welders repaired the pipes using the same procedure as on the first ship. The inside of these pipes was also coated with Ecospeed to help keep them safe from further corrosion. ■

Hydrex has completed scrubber pipe repairs on two LNGCs

SHI wins DNV AiP for nearshore FLNG

South Korean Samsung Heavy Industries (SHI) has designed an FLNG model to target customers who need a quick and efficient development project.

SHI also announced that it had received Approval in Principle (AiP) for an FLNG floater independent model (MLF-N - multi-purpose LNG floater-nearshore) from DNV at the Offshore Technology Conference (OTC 2023) in Houston on 1st May.

MLF-N is designed for markets where faster and more economical FLNG models are needed, compared to onshore plants.

SHI said it had standardised this ship model and specifications by applying its FLNG EPC experience and technologies down the years.

MLF-N standardises the LNG cargo capacities and the hulls' widths and heights to enable the cargoes to be easily extended from 180,000 to 245,000 cu m in capacity.

It has also been designed with a stable structure to support about 50,000 tonnes of deck plant facilities, including natural gas liquefaction modules.

In addition, it standardises the optimal specifications of the major equipment mounted on the hull, drastically shortening the engineering period needed.

SHI said it is currently applying some of its MLF-N designs to a Petronas FLNG, for which it recently won the order and is undertaking marketing activities to win overseas gas field development projects.

"MLF-N is the best solution to meet customers' needs who want easy, simple and fast LNG development." explained Haeki Jang, SHI CTO, "We will continue to take a lead in FLNG through customer-oriented technology innovation."

Thus far, SHI has won four out of five of all the new FLNG orders placed worldwide and said that it is expecting additional orders, as it has participated in FEED work on a number of FLNG projects currently under discussion.

Delivered by SHI in 2017, Shell's 'Prelude' is the world's largest FLNG in operation being of 260,000 tonnes and 488 m in length. ■

Port Arthur LNG to use Air Products' technology

Air Products has signed an agreement with Bechtel Energy to provide its proprietary LNG process technology, equipment and advisory services to Sempra Infrastructure's Port Arthur LNG Phase 1 project.

This project is fully permitted and is designed to include two natural gas liquefaction trains, two LNG storage tanks and associated facilities with a nameplate capacity of about 13 mill tonnes per annum.

The expected commercial operation startup dates for Trains 1 and 2 are planned for 2027 and 2028.

Air Products' LNG equipment manufacturing facility in Port Manatee, Florida will manufacture two main cryogenic heat exchangers for its patented AP-C3MR LNG process technology.

Third project

This is the third Sempra Infrastructure project for which Air Products' LNG technology was chosen, the first being the three trains at the Cameron, Louisiana LNG facility that have been operating with AP-C3MR technology since 2019, while the second was the Energia Costa Azul (ECA) liquefaction project in Mexico.

"We are honoured to be selected for the Port Arthur LNG Phase 1 project and this opportunity to further support the North American LNG production market in the Gulf Coast. Our proven large scale heat exchangers and unrivalled process technology are at the heart of the majority of LNG export facilities around the world, both on and offshore.

"With the global demand for LNG increasing in the coming decades, our LNG equipment manufacturing facility located in Port Manatee is equipped to meet this demand, and the 2019 expansion of our production facilities there demonstrated Air Products' long-term commitment to this important market," said Dr Samir Serhan, Air Products' COO.

"Bechtel is proud to work with Air Products. Their reliable and proven technology is critical to the design, construction, and operations of Port Arthur LNG," added Paul Marsden, President of Bechtel Energy. "Together with Air Products, Bechtel will deliver a robustly engineered and well-constructed, quality plant for Sempra Infrastructure, enabling them to meet the growing demand for clean, affordable energy."

Under the terms of the agreement, Air Products will provide engineering, design and manufacturing of the heat exchanger equipment for the liquefaction sections of two large trains, which will use Air Products' proprietary AP-C3MR propane pre-cooled mixed refrigerant liquefaction process technology.

In addition, the company will provide engineering studies and technical advisory services for the installation and startup of each LNG train.

Chinese contract

In addition, Air Products signed an agreement to supply its proprietary LNG process technology and equipment to Technip Energies.

This is for the Xi'An LNG emergency reserve & peak regulation project with Shaanxi LNG Reserves & Logistics Co in China.

Air Products' technology will be used in the liquefaction train, which will produce 800,000 tonnes per year of LNG when the plant becomes operational.

The company will supply the patented AP-SMR LNG process technology, with proven performance for mid-scale LNG production, as well as the engineering, design and manufacturing of the coil wound main cryogenic heat exchanger for the liquefaction section of the plant.

Air Products will also provide technical advisory services for the installation and commissioning, and performance testing when operational. ■

Tritec oversees LNGC construction

Tritec Marine has begun the supervision of an LNGC newbuilding project in South Korea.

Hyundai Glovis, the logistics arm of South Korea's Hyundai Motor Group, had entered the LNG transportation business with the construction of a 174,000 cu m, dual-fuel LNGC.

Recently Tritec's team was present in Mokpo, South Korea, for the ceremonial steel cutting, before the construction project began.

As well as on-site supervision at the yard, led by Project Manager, Nino Prpa, the company will also provide project support from its in-house engineering team based in Glasgow, UK.

Prpa said: "We are very proud to support Hyundai Glovis with this important newbuild construction, marking their venture into LNG transportation. We will do our utmost to ensure that the vessel is built safely to the highest standards demanded by both Tritec and our clients."

George Mermiris, Tritec Marine's General Manager and Director, added: "At Tritec we have a long history in supporting leading shipping companies and energy majors with their newbuild and vessel modification requirements, and this new project will allow us to further demonstrate our competencies in project management and quality assurance.

"Within our parent Northern Marine Group, and in the wider Stena group, we offer wide-ranging, marine engineering and shipmanagement LNG solutions that provide operational and commercial advantage with increased safety," he said.

Chi-O Kwon, Hyundai Glovis' Head of Shipping Business Strategy Group, said: "We are grateful for the collaboration with Northern Marine and Tritec Marine, which have a great deal of experience in LNG vessel supervision and high level of technical expertise. We anticipate that this project will greatly contribute to Hyundai Glovis' operation of LNG energy transport vessels."

Complementing its newbuilding supervision services, Tritec also offers small-scale LNG delivery and fuelling solutions, such as the Energy Express gas transportation concept and the SAFE Bunker alternative fuelling vessel concept. ■

Monthly Large LNGC Values*

Newbuildings (174,000 cu m)	$268.38 mill
Five years old (174,000 cu m)	$221.84 mill
Total Fleet (565 ships)	$92.22 bill
Orderbook (311 ships)	$82.45 bill

*Source: VesselsValue (26/04/23)

*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	$50,000	- $5,000
West of Suez	$38,000	-
12 mos T/C	$130,000	+ $7,000

*Since last report (27/04/23)

Source: Fearnleys (10/05/23)

WORLD LNG CARRIER ORDERBOOK

Name	Owners	Yard	Ordered	Capacity	Propulsion	Delivery
Hudong-Zhonghua H1829a	CSSC	Hudong-Zhonghua	01/08/2019	174,000	XDF	01/01/2024
Wen Cheng	CSSC	Hudong-Zhonghua	01/08/2019	174,000	XDF	01/04/2024
Alexey Kosygin	Smart LNG	Zvezda SSK	01/09/2019	172,600	TFDE - Azipod	01/03/2024
Pyotr Stolypin	Smart LNG	Zvezda SSK	01/09/2019	172,600	TFDE - Azipod	01/09/2024
Samsung 2315	SinoKor	Samsung	01/12/2019	173,400	XDF	01/12/2023
Samsung 2316	SinoKor	Samsung	01/12/2019	173,400	ME-GA	01/12/2026
Samsung 2317	SinoKor	Samsung	01/12/2019	173,400	ME-GA	01/03/2027
Samsung 2318	SinoKor	Samsung	01/12/2019	173,400	ME-GA	01/06/2027
Kun Lun	ULT	Hudong-Zhonghua	30/06/2020	174,000	XDF	01/04/2023
Lng Harmony	JP Morgan	Hyundai Heavy	20/07/2020	174,000	XDF	01/07/2023
Orion Jessica	JP Morgan	Hyundai Heavy	20/07/2020	174,000	XDF	01/06/2023
Daewoo 2517	MOL, COSCO	DSME	01/08/2020	172,500	TFDE - Azipod	01/11/2023
Daewoo 2518	MOL, COSCO	DSME	01/08/2020	172,500	TFDE - Azipod	01/02/2024
Daewoo 2519	MOL, COSCO	DSME	01/08/2020	172,500	TFDE - Azipod	01/05/2026
Sm Golden Eagle	Korea Line	Hyundai Heavy	12/08/2020	174,000	XDF	01/09/2025
Sm Kestrel	Korea Line	Hyundai Heavy	12/08/2020	174,000	XDF	01/10/2023
Grazyna Gesicka	Knutsen	Hyundai Heavy	30/10/2020	174,000	XDF	01/06/2023
Samsung 2425	Maran Gas Maritime	Samsung	01/11/2020	174,000	XDF	01/08/2023
Hyundai Samho 8100	Knutsen	Hyundai Samho	14/12/2020	174,000	ME-GA	01/11/2024
Orion Sky	JP Morgan	Hyundai Heavy	14/12/2020	174,000	XDF	01/11/2024
New Brave	Pan Ocean	Hyundai Heavy	15/12/2020	174,000	XDF	01/09/2024
New Nature	Pan Ocean	Hyundai Heavy	15/12/2020	174,000	XDF	01/10/2024
Energy Fidelity	Alpha Gas	Hyundai Samho	08/01/2021	174,000	XDF	01/04/2023
Puteri Saadong	Hyundai LNG Shipping	Hyundai Heavy	15/04/2021	174,000	XDF	01/02/2024
Puteri Santubong	Hyundai LNG Shipping	Hyundai Heavy	29/04/2021	174,000	XDF	01/06/2024
Puteri Sejinjang	Hyundai LNG Shipping	Hyundai Heavy	29/04/2021	174,000	XDF	01/07/2024
Gordon Waters Knutsen	Knutsen	Hyundai Samho	30/04/2021	174,000	XDF	01/06/2023
Mulan Spirit	Jovo Energy	Jiangnan	01/05/2021	79,800	XDF	01/12/2023
Samsung 2473	Maran Gas Maritime	Samsung	01/05/2021	174,000	XDF	01/09/2024
Samsung 2474	Maran Gas Maritime	Samsung	01/05/2021	174,000	XDF	01/09/2024
Daewoo 2521	Hyundai LNG Shipping	DSME	28/05/2021	174,000	MEGI	01/09/2023
Clean Destiny	Dynagas	Hyundai Heavy	31/05/2021	200,000	ME-GA	01/11/2023
Clean Future	Dynagas	Hyundai Heavy	31/05/2021	200,000	ME-GA	01/03/2024
Clean Resolution	Dynagas	Hyundai Heavy	31/05/2021	200,000	ME-GA	01/09/2023
Clean Vitality	Dynagas	Hyundai Heavy	31/05/2021	200,000	ME-GA	01/02/2024
MOL Coral	MOL	DSME	01/06/2021	174,000	ME-GA	01/10/2023
Amore Mio I	Capital Gas	Hyundai Heavy	18/06/2021	174,000	ME-GA	01/10/2023
Axios II	Capital Gas	Hyundai Heavy	18/06/2021	174,000	ME-GA	01/12/2023
Celsius Geneva	Celsius Shipping	Samsung	01/07/2021	180,000	ME-GA	01/07/2023
Energy Fortitude	Alpha Gas	Hyundai Samho	01/07/2021	174,000	XDF	01/05/2024
Hyundai Samho 8106	Alpha Gas	Hyundai Samho	01/07/2021	174,000	XDF	01/07/2024
Hyundai Samho 8147	H-Line	Hyundai Samho	01/07/2021	174,000	XDF	01/11/2023
Samsung 2460	Celsius Shipping	Samsung	01/07/2021	180,000	ME-GA	01/10/2023
Samsung 2461	Celsius Shipping	Samsung	01/07/2021	180,000	ME-GA	01/02/2024
Hyundai Samho 8101	Knutsen	Hyundai Samho	13/07/2021	174,000	ME-GA	01/12/2023
Hyundai Samho 8102	Knutsen	Hyundai Samho	13/07/2021	174,000	ME-GA	01/09/2025
Orion Gaugin	JP Morgan	Hyundai Heavy	13/07/2021	174,000	ME-GA	01/09/2025
Orion Hugo	JP Morgan	Hyundai Heavy	13/07/2021	174,000	ME-GA	01/07/2025
New Green	Pan Ocean	Hyundai Heavy	14/07/2021	174,000	ME-GA	01/10/2024
New Oasis	Pan Ocean	Hyundai Heavy	14/07/2021	174,000	ME-GA	01/12/2024

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 = 28 March 2023

Fearnley LNG

Name	Owners	Yard	Ordered	Capacity	Propulsion	Delivery
Daewoo 2522	Hyundai LNG Shipping	DSME	15/07/2021	174,000	MEGI	01/05/2024
Ignacy Lukasiewicz	Knutsen	Hyundai Samho	22/07/2021	174,000	ME-GA	01/03/2024
Puteri Ledang	Hyundai LNG Shipping	Hyundai Heavy	22/07/2021	174,000	XDF	01/05/2024
Puteri Mahsuri	Hyundai LNG Shipping	Hyundai Heavy	22/07/2021	174,000	XDF	01/11/2024
Puteri Mayang	Hyundai LNG Shipping	Hyundai Heavy	22/07/2021	174,000	XDF	01/01/2025
Saint Barbara	Knutsen	Hyundai Samho	22/07/2021	174,000	ME-GA	01/02/2024
Samsung 2579	Celsius Shipping	Samsung	26/07/2021	180,000	ME-GA	01/04/2024
Samsung 2584	Celsius Shipping	Samsung	01/08/2021	180,000	ME-GA	01/08/2024
Samsung 2585	Celsius Shipping	Samsung	01/08/2021	180,000	ME-GA	01/09/2024
Aktoras	Capital Gas	Hyundai Samho	01/09/2021	174,000	ME-GA	01/07/2024
Hudong-Zhonghua H1838a	K-Line	Hudong-Zhonghua	01/09/2021	79,960	XDF	01/09/2023
Daewoo 2523	MOL	DSME	14/09/2021	174,000	ME-GA	01/02/2024
Daewoo 2524	MOL	DSME	14/09/2021	174,000	ME-GA	01/04/2024
Daewoo 2525	MOL	DSME	14/09/2021	174,000	ME-GA	01/08/2024
Daewoo 2526	MOL	DSME	14/09/2021	174,000	ME-GA	01/10/2024
Daewoo 2527	MOL	DSME	01/10/2021	174,000	ME-GA	01/07/2024
Hudong-Zhonghua H1790a	MOL	Hudong-Zhonghua	01/10/2021	175,000	XDF	01/09/2024
Hudong-Zhonghua H1791a	MOL	Hudong-Zhonghua	01/10/2021	175,000	XDF	01/12/2024
Hudong-Zhonghua H1792a	MOL	Hudong-Zhonghua	01/10/2021	175,000	XDF	01/03/2025
Hudong-Zhonghua H1793a	MOL	Hudong-Zhonghua	01/10/2021	175,000	XDF	01/05/2025
Samsung 2580	NYK	Samsung	01/10/2021	174,000	XDF	01/09/2023
Samsung 2581	NYK	Samsung	01/10/2021	174,000	XDF	01/11/2023
Samsung 2582	NYK	Samsung	01/10/2021	174,000	XDF	01/12/2023
Samsung 2583	NYK	Samsung	01/10/2021	174,000	XDF	01/02/2024
Samsung 2592	JP Morgan	Samsung	01/10/2021	174,000		01/04/2024
Samsung 2593	JP Morgan	Samsung	01/10/2021	174,000		01/07/2024
Samsung 2594	JP Morgan	Samsung	01/10/2021	174,000		01/10/2024
Samsung 2595	JP Morgan	Samsung	01/10/2021	174,000		01/01/2025
Samsung 2596	JP Morgan	Samsung	01/10/2021	174,000	ME-GA	01/11/2024
Samsung 2597	JP Morgan	Samsung	01/10/2021	174,000	ME-GA	01/12/2024
Apostolos	Capital Gas	Hyundai Heavy	04/11/2021	174,000	ME-GA	01/06/2024
Assos	Capital Gas	Hyundai Heavy	04/11/2021	174,000	ME-GA	01/05/2024
Daewoo 2528	Maran Gas Maritime	DSME	10/11/2021	174,000	MEGI	01/08/2024
Daewoo 2529	Maran Gas Maritime	DSME	10/11/2021	174,000	MEGI	01/11/2024
Daewoo 2530	BWGas	DSME	25/11/2021	174,000	MEGI	01/03/2025
Daewoo 2531	BWGas	DSME	25/11/2021	174,000	MEGI	01/05/2025
Samsung 2600	JP Morgan	Samsung	01/12/2021	174,000		01/07/2024
Samsung 2601	JP Morgan	Samsung	01/12/2021	174,000		01/01/2025
Samsung 2598	Celsius Shipping	Samsung	07/12/2021	180,000	ME-GA	01/01/2025
Samsung 2599	Celsius Shipping	Samsung	07/12/2021	180,000	ME-GA	01/05/2025
Hudong-Zhonghua H1834a	ULT	Hudong-Zhonghua	08/12/2021	174,000	XDF	01/09/2024
Hudong-Zhonghua H1835a	ULT	Hudong-Zhonghua	08/12/2021	174,000	XDF	01/12/2024
Hudong-Zhonghua H1836a	ULT	Hudong-Zhonghua	08/12/2021	174,000	XDF	01/03/2025
Samsung 2604	NYK	Samsung	27/12/2021	174,000	XDF	01/12/2024
Daewoo 2532	GasLog	DSME	01/01/2022	174,000	MEGI	01/05/2024
Daewoo 2533	GasLog	DSME	01/01/2022	174,000	MEGI	01/08/2024
Daewoo 2534	GasLog	DSME	01/01/2022	174,000	MEGI	01/06/2025
Daewoo 2535	GasLog	DSME	01/01/2022	174,000	MEGI	01/08/2025
Samsung 2602	H-Line, Pan Ocean, SK Shipping	Samsung	01/01/2022	174,000	ME-GA	01/12/2024
Samsung 2603	H-Line, Pan Ocean, SK Shipping	Samsung	01/01/2022	174,000	ME-GA	01/12/2024

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 = 28 March 2023

Name	Owners	Yard	Ordered	Capacity	Propulsion	Delivery
Hyundai Samho 8173	SK Shipping	Hyundai Samho	04/01/2022	174,000	ME-GA	01/09/2024
Daewoo 2537	Maran Gas Maritime	DSME	06/01/2022	174,000	MEGI	01/09/2025
Daewoo 2538	Maran Gas Maritime	DSME	06/01/2022	174,000	MEGI	01/11/2025
Hudong-zhonghua H1880a	MOL	Hudong-Zhonghua	07/01/2022	174,000	XDF	01/10/2024
Hudong-zhonghua H1881a	MOL	Hudong-Zhonghua	07/01/2022	174,000	XDF	01/08/2025
Hudong-zhonghua H1882a	MOL	Hudong-Zhonghua	07/01/2022	174,000	XDF	01/10/2025
Hudong-zhonghua H1883a	MOL	Hudong-Zhonghua	07/01/2022	174,000	XDF	01/03/2026
Hudong-zhonghua H1884a	MOL	Hudong-Zhonghua	07/01/2022	174,000	XDF	01/06/2026
Hudong-zhonghua H1885a	MOL	Hudong-Zhonghua	07/01/2022	174,000	XDF	01/09/2026
Daewoo 2536	MOL	DSME	17/01/2022	174,000	ME-GA	01/09/2024
Hyundai Samho 8175	H-Line	Hyundai Samho	26/01/2022	174,000	XDF	01/04/2025
MOL 1	MOL	Samsung	01/02/2022	174,000		01/12/2026
MOL 2	MOL	Samsung	01/02/2022	174,000		01/01/2027
Samsung 2607	H-Line	Samsung	01/02/2022	174,000	ME-GA	01/03/2025
Samsung 2608	H-Line	Samsung	01/02/2022	174,000	ME-GA	01/05/2025
Samsung 2609	H-Line	Samsung	01/02/2022	174,000	ME-GA	01/06/2025
Samsung 2610	H-Line	Samsung	01/02/2022	174,000	ME-GA	01/09/2025
Daewoo 2539	Maran Gas Maritime	DSME	07/02/2022	174,000	MEGI	01/11/2025
Daewoo 2540	Maran Gas Maritime	DSME	07/02/2022	174,000	MEGI	01/12/2025
Hyundai Samho 8170	Hyundai Glovis	Hyundai Samho	21/02/2022	174,000	ME-GA	01/08/2024
Daewoo 2541	Venture Global LNG	DSME	01/03/2022	200,000	ME-GA	01/07/2025
Daewoo 2542	Venture Global LNG	DSME	01/03/2022	200,000	ME-GA	01/10/2025
Daewoo 2543	Venture Global LNG	DSME	01/03/2022	200,000	ME-GA	01/12/2025
Jiangnan H2700	ADNOC	Jiangnan	01/03/2022	175,000	XDF	01/01/2025
Jiangnan H2701	ADNOC	Jiangnan	01/03/2022	175,000	XDF	01/05/2025
Samsung 2619	Celsius Shipping	Samsung	01/03/2022	180,000	ME-GA	01/10/2025
Clean Levant	Dynagas	Hyundai Heavy	02/03/2022	200,000	ME-GA	01/04/2025
Clean Mistral	Dynagas	Hyundai Heavy	02/03/2022	200,000	ME-GA	01/03/2025
Clean Srocco	Dynagas	Hyundai Heavy	02/03/2022	200,000	ME-GA	01/12/2025
Hyundai Samho 8179	Knutsen	Hyundai Samho	31/03/2022	174,000	ME-GA	01/03/2025
Hyundai Samho 8180	Knutsen	Hyundai Samho	31/03/2022	174,000	ME-GA	01/06/2025
Daewoo 2544	BWGas	DSME	01/04/2022	174,000	MEGI	01/11/2025
Daewoo 2545	BWGas	DSME	01/04/2022	174,000	MEGI	01/12/2025
Samsung 2635	TMS Cardiff Gas	Samsung	01/04/2022	174,000	ME-GA	01/09/2024
Samsung 2636	TMS Cardiff Gas	Samsung	01/04/2022	174,000	ME-GA	01/03/2026
Daewoo 2550	MOL	DSME	15/04/2022	174,000	ME-GA	01/09/2025
Daewoo 2551	MOL	DSME	15/04/2022	174,000	ME-GA	01/09/2026
Dalian No 1 G175k-1	China Merchant	Dalian Shipbuilding	19/04/2022	175,000	XDF	01/09/2025
Dalian No 1 G175k-2	China Merchant	Dalian Shipbuilding	19/04/2022	175,000	XDF	01/12/2025
Hyundai Samho 8181	Knutsen	Hyundai Samho	20/04/2022	174,000	ME-GA	01/12/2025
Shanghai Jiangnan Changxing SB H1889A		Hudong-Zhonghua	28/04/2022	174,000	XDF	01/03/2027
Shanghai Jiangnan Changxing SB H1890A		Hudong-Zhonghua	28/04/2022	174,000	XDF	01/05/2027
NYK CNOOC 1	NYK	Hudong-Zhonghua	29/04/2022	174,000		01/04/2027
NYK CNOOC 2	NYK	Hudong-Zhonghua	29/04/2022	174,000		01/03/2027
NYK CNOOC 3	NYK	Hudong-Zhonghua	29/04/2022	174,000		01/01/2027
NYK CNOOC 4	NYK	Hudong-Zhonghua	29/04/2022	174,000		01/05/2026
NYK CNOOC 5	NYK	Hudong-Zhonghua	29/04/2022	174,000		01/08/2026
NYK CNOOC 6	NYK	Hudong-Zhonghua	29/04/2022	174,000		01/11/2026
Jiangnan H2702	ADNOC	Jiangnan	01/05/2022	175,000	XDF	01/09/2025
Jiangnan H2703	ADNOC	Jiangnan	01/05/2022	175,000	XDF	01/01/2026
Jiangnan H2704	ADNOC	Jiangnan	01/05/2022	175,000	XDF	01/06/2026

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Data last updated = 28 March 2023

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Name	Owners	Yard	Ordered	Capacity	Propulsion	Delivery
Jiangnan H2705	ADNOC	Jiangnan	01/05/2022	175,000	XDF	01/09/2026
Samsung 2631	H-Line	Samsung	01/05/2022	174,000	ME-GA	01/07/2025
Samsung 2632	H-Line	Samsung	01/05/2022	174,000	ME-GA	01/12/2025
Samsung 2633	H-Line	Samsung	01/05/2022	174,000	ME-GA	01/01/2026
Hyundai Samho 8188	SK Shipping	Hyundai Samho	16/05/2022	174,000	ME-GA	01/07/2025
Hyundai Samho 8189	SK Shipping	Hyundai Samho	16/05/2022	174,000	ME-GA	01/08/2025
Hyundai Ulsan 3370	SK Shipping	Hyundai Heavy	16/05/2022	174,000	ME-GA	01/02/2025
Hyundai Ulsan 3371	SK Shipping	Hyundai Heavy	16/05/2022	174,000	ME-GA	01/03/2025
Petronas K-line 1	K-Line	Hudong-Zhonghua	17/05/2022	174,000	XDF	01/10/2026
Petronas K-line 2	K-Line	Hudong-Zhonghua	17/05/2022	174,000	XDF	01/12/2026
Petronas K-line 3	K-Line	Hudong-Zhonghua	17/05/2022	174,000	XDF	01/03/2027
Petronas K-line 4	K-Line	Hudong-Zhonghua	17/05/2022	174,000	XDF	01/06/2027
Daewoo 2559	SK Shipping, Pan Ocean, H-Line	DSME	01/06/2022	174,000	ME-GA	01/05/2024
Daewoo 2560	H-Line, Pan Ocean, SK Shipping	DSME	01/06/2022	174,000	ME-GA	01/04/2025
Daewoo 2561	Pan Ocean, SK Shipping, H-Line	DSME	01/06/2022	174,000	ME-GA	01/05/2025
Daewoo 2562	SK Shipping, Pan Ocean, H-Line	DSME	01/06/2022	174,000	ME-GA	01/06/2025
Daewoo 2563	H-Line, Pan Ocean, SK Shipping	DSME	01/06/2022	174,000	ME-GA	01/11/2025
Daewoo 2564	Pan Ocean, SK Shipping, H-Line	DSME	01/06/2022	174,000	ME-GA	01/11/2025
Daewoo 2565	Pan Ocean, SK Shipping, H-Line	DSME	01/06/2022	174,000	ME-GA	01/02/2026
Hyundai Samho 8196	EPS	Hyundai Samho	02/06/2022	174,000	ME-GA	01/09/2024
Hyundai Samho 8197	EPS	Hyundai Samho	02/06/2022	174,000	ME-GA	01/12/2024
Hyundai Ulsan 3380	Knutsen	Hyundai Heavy	03/06/2022	174,000	XDF	01/05/2025
Hyundai Ulsan 3381	Knutsen	Hyundai Heavy	03/06/2022	174,000	XDF	01/06/2025
Daewoo 2546	H-Line, Pan Ocean, SK Shipping	DSME	07/06/2022	174,000	ME-GA	01/12/2024
Daewoo 2547	H-Line, Pan Ocean, SK Shipping	DSME	07/06/2022	174,000	ME-GA	01/12/2024
Daewoo 2548	H-Line, Pan Ocean, SK Shipping	DSME	07/06/2022	174,000	ME-GA	01/01/2025
Daewoo 2549	H-Line, Pan Ocean, SK Shipping	DSME	07/06/2022	174,000	ME-GA	01/02/2025
Daewoo 2552	Maran Gas Maritime	DSME	08/06/2022	174,000	MEGI	01/05/2026
Daewoo 2553	Maran Gas Maritime	DSME	08/06/2022	174,000	MEGI	01/06/2026
Agamemnon	Capital Gas	Hyundai Samho	14/06/2022	174,000	ME-GA	01/03/2026
Archimidis	Capital Gas	Hyundai Samho	14/06/2022	174,000	ME-GA	01/01/2026
Samsung 2634	JP Morgan	Samsung	15/06/2022	174,000	ME-GA	01/05/2025
Samsung 2637	JP Morgan	Samsung	15/06/2022	174,000	ME-GA	01/07/2025
Samsung 2638	JP Morgan	Samsung	15/06/2022	174,000	ME-GA	01/08/2025
Samsung 2641	JP Morgan	Samsung	15/06/2022	174,000	ME-GA	01/11/2025
Samsung 2642	JP Morgan	Samsung	15/06/2022	174,000	ME-GA	01/01/2026
Samsung 2643	JP Morgan	Samsung	15/06/2022	174,000	ME-GA	01/02/2026
Samsung 2644	JP Morgan	Samsung	15/06/2022	174,000	ME-GA	01/05/2026
Samsung 2645	JP Morgan	Samsung	15/06/2022	174,000	ME-GA	01/06/2026
Samsung 2646	JP Morgan	Samsung	15/06/2022	174,000	ME-GA	01/07/2026
Samsung 2647	JP Morgan	Samsung	15/06/2022	174,000	ME-GA	01/08/2026
Hudong-Zhonghua H1892A	COSCO	Hudong-Zhonghua	01/07/2022	174,000	XDF	01/10/2025
Hudong-Zhonghua H1893A	COSCO	Hudong-Zhonghua	01/07/2022	174,000	XDF	01/03/2026
Hyundai Samho 8200	TMS Cardiff Gas	Hyundai Samho	06/07/2022	174,000	XDF	01/03/2026

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Name	Owners	Yard	Ordered	Capacity	Propulsion	Delivery
Hyundai Samho 8201	TMS Cardiff Gas	Hyundai Samho	06/07/2022	174,000	XDF	01/08/2026
Hyundai Ulsan 3382	Knutsen	Hyundai Heavy	06/07/2022	174,000	XDF	01/07/2025
Hyundai Ulsan 3383	Knutsen	Hyundai Heavy	06/07/2022	174,000	XDF	01/11/2025
Hyundai Ulsan 3384	Knutsen	Hyundai Heavy	06/07/2022	174,000	XDF	01/02/2026
Hyundai Ulsan 3385	Knutsen	Hyundai Heavy	06/07/2022	174,000	XDF	01/04/2026
Hyundai Ulsan 3386	Knutsen	Hyundai Heavy	06/07/2022	174,000	XDF	01/05/2026
Hyundai Ulsan 3387	Knutsen	Hyundai Heavy	06/07/2022	174,000	XDF	01/08/2026
Hyundai Ulsan 3393	Knutsen	Hyundai Heavy	06/07/2022	174,000	XDF	01/10/2026
Hyundai Ulsan 3394	Knutsen	Hyundai Heavy	06/07/2022	174,000	XDF	01/11/2026
Hyundai Samho 8049	NYK	Hyundai Samho	01/08/2022	174,000	XDF	01/03/2025
Hyundai Samho 8174	NYK	Hyundai Samho	01/08/2022	174,000	XDF	01/10/2025
Hyundai Ulsan 3395	NYK, MISC, K-Line, China LNG Shipping Holdings	Hyundai Heavy	09/08/2022	174,000	XDF	01/08/2025
Hyundai Ulsan 3396	NYK, MISC, K-Line, China LNG Shipping Holdings	Hyundai Heavy	09/08/2022	174,000	XDF	01/12/2025
Hyundai Ulsan 3397	NYK, MISC, K-Line, China LNG Shipping Holdings	Hyundai Heavy	09/08/2022	174,000	XDF	01/01/2026
Hyundai Ulsan 3398	NYK, MISC, K-Line, China LNG Shipping Holdings	Hyundai Heavy	09/08/2022	174,000	XDF	01/07/2026
Hyundai Ulsan 3399	NYK, MISC, K-Line, China LNG Shipping Holdings	Hyundai Heavy	09/08/2022	174,000	XDF	01/09/2026
Hyundai Ulsan 3400	NYK, MISC, K-Line, China LNG Shipping Holdings	Hyundai Heavy	09/08/2022	174,000	XDF	01/12/2026
Hyundai Ulsan 3401	NYK, MISC, K-Line, China LNG Shipping Holdings	Hyundai Heavy	09/08/2022	174,000	XDF	01/12/2026
DAEWOO 2558	MOL	DSME	01/09/2022	174,000	ME-GA	01/09/2026
Dalian No 1 G175k-3	China Merchant	Dalian Shipbuilding	01/09/2022	175,000	XDF	01/11/2025
Dalian No 1 G175k-4	China Merchant	Dalian Shipbuilding	01/09/2022	175,000	XDF	01/01/2026
Hudong-Zhonghua H1794A	MOL	Hudong-Zhonghua	01/09/2022	174,000	XDF	01/02/2027
Hudong-Zhonghua H1795A	MOL	Hudong-Zhonghua	01/09/2022	174,000	XDF	01/07/2027
Hudong-Zhonghua H1796A	MOL	Hudong-Zhonghua	01/09/2022	174,000	XDF	01/12/2027
Hudong-Zhonghua H1797a	NYK, MISC, K-Line, China LNG Shipping Holdings	Hudong-Zhonghua	01/09/2022	174,000	XDF	01/09/2025
Hudong-zhonghua H1798a	NYK, MISC, K-Line, China LNG Shipping Holdings	Hudong-Zhonghua	01/09/2022	174,000	XDF	01/11/2025
Hudong-zhonghua H1799a	NYK, MISC, K-Line, China LNG Shipping Holdings	Hudong-Zhonghua	01/09/2022	174,000	XDF	01/02/2026
Hudong-zhonghua H1800a	NYK, MISC, K-Line, China LNG Shipping Holdings	Hudong-Zhonghua	01/09/2022	174,000	XDF	01/05/2026
Hudong-zhonghua H1801a	NYK, MISC, K-Line, China LNG Shipping Holdings	Hudong-Zhonghua	01/09/2022	174,000	XDF	01/07/2026
Samsung 2611	H-Line, Pan Ocean, SK Shipping	Samsung	01/09/2022	174,000	ME-GA	01/01/2025
Samsung 2612	H-Line, Pan Ocean, SK Shipping	Samsung	01/09/2022	174,000	ME-GA	01/03/2025
Samsung 2639	JP Morgan	Samsung	01/09/2022	174,000	ME-GA	01/09/2025
Samsung 2640	JP Morgan	Samsung	01/09/2022	174,000	ME-GA	01/09/2025
MOL ENN 1	MOL	Hudong-Zhonghua	08/09/2022	174,000		01/06/2027
MOL ENN 2	MOL	Hudong-Zhonghua	08/09/2022	174,000		01/10/2027
MOL ENN 3	MOL	Hudong-Zhonghua	08/09/2022	174,000		01/12/2027
Dalian n5	China Merchant	Dalian Shipbuilding	26/09/2022	175,000	XDF	01/04/2026
Dalian n6	China Merchant	Dalian Shipbuilding	26/09/2022	175,000	XDF	01/02/2025
Daewoo 2566	Meiji Shipping	DSME	30/09/2022	174,000	XDF	01/08/2025
Daewoo 2567	Meiji Shipping	DSME	30/09/2022	174,000	XDF	01/09/2025

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Name	Owners	Yard	Ordered	Capacity	Propulsion	Delivery
Daewoo 2568	Meiji Shipping	DSME	30/09/2022	174,000	XDF	01/06/2026
Daewoo 2569	Meiji Shipping	DSME	30/09/2022	174,000	XDF	01/09/2026
DAEWOO 2570	MISC	DSME	30/09/2022	174,000	XDF	01/01/2026
DAEWOO 2571	MISC	DSME	30/09/2022	174,000	XDF	01/05/2026
Daewoo 2572	TMS Cardiff Gas	DSME	30/09/2022	174,000	ME-GA	01/03/2026
Daewoo 2573	TMS Cardiff Gas	DSME	30/09/2022	174,000	ME-GA	01/06/2026
MISC EM 1	MISC	Samsung	30/09/2022	174,000	XDF	01/06/2026
MISC EM 2	MISC	Samsung	30/09/2022	174,000	XDF	01/08/2026
Samsung 2651	Celsius Shipping	Samsung	01/10/2022	180,000	ME-GA	01/12/2025
Hyundai Samho 8182	TMS Cardiff Gas	Hyundai Samho	17/10/2022	174,000	XDF	01/01/2026
VG 1	Venture Global LNG	DSME	21/10/2022	200,000	ME-GA	01/10/2026
VG 2	Venture Global LNG	DSME	21/10/2022	200,000	ME-GA	01/12/2026
Shandong 1	Shandong Marine	Jiangnan	26/10/2022	175,000		01/03/2027
Shandong 2	Shandong Marine	Jiangnan	26/10/2022	175,000		01/05/2027
Shandong 3	Shandong Marine	Jiangnan	26/10/2022	175,000		01/12/2027
Yangzijiang 1	Hammonia Reederei	Yangzijiang	26/10/2022	175,000	ME-GA	01/10/2025
Yangzijiang 2	Hammonia Reederei	Yangzijiang	26/10/2022	175,000	ME-GA	01/03/2026
Wideshine 2	CSSC	Hudong-Zhonghua	27/10/2022	174,000	XDF	01/03/2028
Wideshine 3	CSSC	Hudong-Zhonghua	27/10/2022	174,000	XDF	01/06/2028
Wideshine 4	CSSC	Hudong-Zhonghua	27/10/2022	174,000	XDF	01/09/2028
Samsung 2652	Minerva Marine	Samsung	01/11/2022	174,000	ME-GA	01/02/2026
Samsung 2653	Minerva Marine	Samsung	01/11/2022	174,000	ME-GA	01/03/2026
Samsung 2656	Seapeak	Samsung	15/11/2022	174,000	ME-GA	01/03/2027
Samsung 2657	Seapeak	Samsung	15/11/2022	174,000	ME-GA	01/05/2027
Samsung 2658	Seapeak	Samsung	15/11/2022	174,000	ME-GA	01/08/2027
Samsung 2659	Seapeak	Samsung	15/11/2022	174,000	ME-GA	01/09/2027
Samsung 2660	Seapeak	Samsung	15/11/2022	174,000	ME-GA	01/12/2027
Dalian 7	China Merchant	Dalian Shipbuilding	05/12/2022	175,000	XDF	01/12/2026
Dalian 8	China Merchant	Dalian Shipbuilding	05/12/2022	175,000	XDF	01/06/2027
Celsius 1	Celsius Shipping	China Merchants HI Jiangsu	31/12/2022	180,000	ME-GA	01/01/2026
Celsius 2	Celsius Shipping	China Merchants HI Jiangsu	31/12/2022	180,000	ME-GA	01/03/2026
Celsius 3	Celsius Shipping	China Merchants HI Jiangsu	31/12/2022	180,000	ME-GA	01/05/2026
Celsius 4	Celsius Shipping	China Merchants HI Jiangsu	31/12/2022	180,000	ME-GA	01/07/2026
Hyundai Samho 8204	Oman Shipping Co.	Hyundai Samho	01/01/2023	174,000		01/01/2026
Hyundai Samho 8205	Oman Shipping Co.	Hyundai Samho	01/01/2023	174,000		01/04/2026
Hyundai Ulsan 3433	Dynagas	Hyundai Heavy	16/01/2023	200,000	XDF	01/04/2026
Hyundai Ulsan 3434	Dynagas	Hyundai Heavy	16/01/2023	200,000	XDF	01/07/2026
Hyundai Ulsan 3435	Dynagas	Hyundai Heavy	16/01/2023	200,000	XDF	01/11/2026
Hyundai Samho 8202	Capital Gas	Hyundai Samho	18/01/2023	174,000	ME-GA	01/09/2026
Hyundai Samho 8203	Capital Gas	Hyundai Samho	18/01/2023	174,000	ME-GA	01/11/2026
DAEWOO 2580	MOL	DSME	13/02/2023	174,000	ME-GA	01/03/2027
DAEWOO 2574	Maran Gas Maritime	DSME	01/03/2023	174,000	MEGI	01/09/2026
DAEWOO 2575	Maran Gas Maritime	DSME	01/03/2023	174,000	MEGI	01/12/2026
Samho Mar 1	NYK	Hyundai Samho	02/03/2023	174,000		01/08/2027
Samho Mar 2	NYK	Hyundai Samho	02/03/2023	174,000		01/10/2027
Samho Mar 3	NYK	Hyundai Samho	02/03/2023	174,000		01/12/2027

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Fearnley LNG

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	Seapeak Unikum	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
2018	Bunker Breeze	1,200	LNG	Barcelona	Yes	Suardiaz Energy Shipping

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Built	Name	CBM	Cargo Type	Trading area	Trading in LNG?	Ship Owner / Operator
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	FuelLNG
2020	SM Jeju LNG2	7,500	LNG	Korea	Yes	Korea Line
2020	Q-LNG 4000	4,000	LNG	US Coast	Yes	Q-LNG Transport/Harvey Gulf
2020	Flexfueller 002	1,480	LNG	Antwerp	Yes	Titan LNG
2021	Avenir Ascension	7,500	LNG		Yes	Avenir LNG
2021	Hai Gang Wei Lai	20,000	LNG	China	Yes	SSES
2021	Bergen LNG	850	LNG	Norway	Yes	Bergen Tankers
2021	Dmitry Mendeleev	5,800	LNG	Russia	Yes	Gazprom Neft
2021	JMU TBN	2,500	LNG	Japan	Yes	JMU
2021	Ravenna Knutsen	30,000	LNG	Mediterranean	Yes	Knutsen OAS
2021	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	Xin Ao Pu Tuo Hao	8,500	LNG	China	Yes	ENN
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
2024	Anhui Changjiang TBN	14,000	LNG	China	Yes	Anhui Changjiang LNG
2024	LNG Erasmus	8,000	LNG	NWE	Yes	Shell
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

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