LNG Shipping News

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US LNG export expansion pause challenged

The US federal judge attempt at disrupting the pause on US LNG export licenses earlier this month may not accelerate project permitting or investment decisions, ICIS has warned.

Judge James Cain of the Western District of Louisiana decreed on 1st July that the US Department of Energy (DoE) should begin approving licenses for LNG plants to export to countries outside the US Free Trade Agreement (FTA).

Judge Cain's decision was the result of a lawsuit filed in March by 16 Republican-controlled US states, including Texas and Louisiana, whose attorney generals argued that the LNG permitting pause would impact their economies.

US President Joe Biden's administration placed what it called a pause on approving the key LNG permits, which are issued by the DoE, in January of this year, saying the DoE required time to update its analysis of whether additional LNG exports fall within the public interest.

In a statement, Judge Cain agreed with the plaintiffs' argument that the DoE did not provide an adequate reason to halt new approvals while updating the analysis.

Louisiana's 8.4 mill tonnes per annum Commonwealth LNG and Venture Global's CP2 LNG, plus the second phase of Sempra Infrastructure's Port Arthur LNG in Texas, at 13.5 mill tonnes per annum capacity, were considered to be the most advanced export projects that require DoE approvals, ICIS said.

However, the direct impact of Judge Cain's decision was uncertain, as the DoE falls directly under Biden's administration. It has not specified whether or how it would re-start non-FTA license approvals.

If the DoE holds true to the remarks of US Secretary, Jennifer Granholm in March, the LNG permitting pause could already be near the halfway point: she had said that she expected the review process would cease by March, 2025.

However, if Republican Donald Trump wins the November election, non-FTA license approvals would likely re-start soon after his January inauguration.

During the DoE pause, the Federal Energy Regulatory Commission (FERC) approved the long-pending application by Venture Global's CP2 LNG in late June.

No US LNG export projects have announced final investment decisions (FIDs) thus far in 2024. Canada's Cedar LNG was the only project to secure adequate commercial support and financing to move ahead, ICIS said. ■

SHIPPING NEWS AGENDA

FSRUs to boost market growth - Technavio

Global FSRU market size is estimated to grow by $891.1 mill from 2024/2028, according to a report from Technavio.

This sector is predicted to rise at a CAGR of 8.09% during the period.

FSRU cost competitiveness is driving demand, with a trend towards stabilisation of crude oil prices. However, growth in number of alternatives poses a challenge.

In its latest market research report entitled 'Global floating storage regasification unit (FSRU) market 2024-2028', the second FSRU report to be highlighted in *LNG Shipping Review* in consecutive issues, Technavio outlined the pros and cons of this particular market segment.

The crude oil market experienced significant price fluctuations from 2017 to 2023, impacting exploration and production (E&P) activities.

The fall in 2014 and 2020 led to a halt of several E&P projects. However, according to the International Energy Agency (IEA), crude oil prices have stabilised, enabling the resumption of E&P activities and the production of natural gas.

The IEA predicted that natural gas will account for over 25% of global energy demand by 2040, growing at a rate of 1.6% per year. This anticipated growth is expected to fuel the expansion of the FSRU market, Technavio said.

The FSRU market is experiencing significant growth, particularly for the power plant and automotive sectors. FSRUs convert LNG back into its gaseous state for use as fuel, making the units essential for importing natural gas in regions without pipeline networks.

Addressing constraints

New FSRUs and converted LNGCs are increasing storage capacity, addressing constraints in the sector. FSRUs can be located inshore or offshore, with mooring systems securing them to the shoreline or specialist buoy systems. However, port congestion and geo-technical analysis are challenges.

FSRU 'Neptune' has arrived at Deutsche ReGas' Mukran terminal

FSRUs are used for gas power plants, small-scale LNG imports, and carrier vessel-based applications. The shale gas revolution and increasing LNG imports have driven demand for FSRUs, which operate in the semi-cooled state to vaporise the intermediate fluid in an open circuit. Environmental concerns and hydrocarbon handling are ongoing considerations.

While FSRUs offer advantages, such as rapid development and easy relocation, their increased ownership cost, due to additional equipment and safety measures, limits their adoption.

In addition, the high FSO and FPSO adoption rate is expected to hinder the growth of the global FSRU market.

FSRUs are experiencing significant growth, due to increasing natural gas production, particularly from shale formations, leading to a surge in LNG imports.

However, gas-to-energy projects require intermediate fluid vaporisation in an open circuit, which can lead to hydrocarbon emissions and potential pollution. Operators must also consider freezing temperatures and low carbon emissions, while transportation and energy consumption add to production costs.

Technological flexibility, mobility, feasibility, availability, and affordability are crucial for their success. LNG importers in the energy, transportation, and maritime sectors rely on FSRUs for fuel, but construction and capital for installations are significant challenges.

The global LNG trade and LNG import demand will continue to shape the FSRU market landscape going forward, the report said.

'Neptune' arrives

Remaining with FSRUs, 'Neptune' arrived at the German Baltic port of Mukran on 3rd July.

She moored at Deutsche ReGas' energy terminal, Deutsche Ostsee.

Following her arrival, a second regasification ship, 'Energos Power', was due to be moored alongside 'Neptune', thus completing the terminal.

Once online, Deutsche Ostsee will offer an annual regasification capacity of up to 13.5 bill cu m of natural gas and will be able to cover up to 15% of Germany's total natural gas demand.

Thanks to its connection to the EUGAL/OPAL and NEL gas pipeline network, the privately financed energy terminal will have the largest free transit capacity of any German LNG terminal and will play a central role in supplying eastern Germany, the industrial sites in southwest Germany and the neighbouring Eastern European countries.

"With our terminal in Mukran and the good connection to the European gas pipeline network, we will soon be able to make an even greater contribution to security of supply," said Ingo Wagner, Deutsche ReGas Managing Partner. ■

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FLNG 'Hilli' Argentina bound

Golar LNG has signed definitive agreements with Pan American Energy (PAE) for the deployment of an FLNG in Argentina for 20 years.

This project aims to monetise Argentine gas by tapping into the Vaca Muerta shale formation's vast resources in the Neuquina Basin, the world's second-largest shale gas reserves.

LNG exports are expected to start in 2027, establishing Argentina as an exporter.

Golar claimed that the agreements were built on a robust commercial foundation, featuring: (i) a sales agreement from PAE for the supply of gas; and (ii) an FLNG charter agreement with Golar which includes a base tariff and commodity exposure to LNG sales prices.

Earmarked for the project is Golar's FLNG 'Hilli', which has a nameplate capacity of 2.45 mill tonnes per annum, providing an equivalent net tariff of \$2.6 per MMBtu (based on 90% capacity utilisation) with an additional commodity linked pricing element.

Under the agreement, Golar has the flexibility to consider an alternative FLNG unit.

In addition, Golar will hold a 10% stake in Southern Energy, a joint venture with PAE, responsible for the purchase of domestic natural gas, operations, and sale and marketing of Argentina's LNG volumes.

This initiative is envisaged to be the first phase of a potential multi-vessel project and it is anticipated that other large natural gas producers in Argentina will join.

Golar's CEO, Karl Fredrik Staubo, said "We are excited to enter a partnership with Pan American Energy, one of the leading energy companies in Latin America.

"The project will provide an international outlet for Argentina's vast and attractive natural gas reserves, creating value to Argentina and its gas stakeholders. The project expands Golar's global footprint, with further growth potential," he said.

The agreements are still subject to the signing-off of customary conditions.

Golar was advised by law firm Latham & Watkins with a multi-jurisdictional team led by partner, Chris Peponis, with support from partner, Guido Liniado, and associates, Salvador Jose, Taylor López, Chidi Onyeche, and Andres Chester. ■

'Hilli' will be on her way to Argentina soon

MET secures long-term Shell US LNG

Swiss-based energy trading concern, MET Group has signed a 10-year free-on-board (FOB) LNG purchase agreement with Shell.

MET's primary objective is to supply its European customers with US LNG, the company said.

Through the Shell long-term contract, the Group will be able to further diversify its LNG supply portfolio, helping to ensure security of supply for its customers across Europe, ranging from its own gas-fired power plant demand to energy-intensive industrial companies, SMEs and households.

In addition to bolstering security of supply for MET's European portfolio, this flexible LNG deal enables its diversification ambitions, allowing the company to extend its geographical scope to new regions, such as Asia, it said.

MET claimed that it had one of the most diversified LNG import structures from a geographical perspective in Europe.

For example, it has long-term regasification capacity bookings in Germany, Croatia and Spain, and has imported into eight different countries in recent years, including the Mediterranean (Greece, Italy, Croatia, Spain), Northwest Europe (UK, Belgium, Germany) and the Nordic region (Finland).

In 2023, MET delivered more than 30 LNG cargoes to Europe.

György Vargha, MET International CEO, said: "The long-term FOB source fits perfectly into MET's LNG strategy. We have a diverse European downstream position building on a regasification capacity portfolio around Europe, optimising our downstream requirements with flexible supply sources.

"As a natural next step, we have entered a long-term FOB position enabling diversification to the global LNG markets," he said.

Tom Summers, Senior Vice President of Shell LNG Marketing and Trading, added: "LNG has a crucial role to play in delivering energy security and agreements such as this are instrumental in achieving that.

"We look forward to working with MET Group to fulfil their gas requirements and help to meet the needs of its diverse customer base," he said. ■

More LNG sales deals reported

China's Shenzhen Energy Group has signed a long-term LNG supply deal with commodities trader Glencore.

According to Reuters, the sales and purchase agreement (SPA) was signed on 2nd July after a meeting between executives from the two companies, Shenzhen Energy said in a statement last week, without providing further details.

At the time of writing, Glencore had not commented on the deal.

Shenzhen Energy had previously signed a long-term LNG supply agreement with BP in November, 2022.

Elsewhere, Australian oil and gas developer, Woodside has signed a sale and purchase agreement (SPA) with Taiwan's state-owned CPC Corp for the long-term supply of LNG.

Under the SPA, Woodside will supply about 6 mill tonnes of LNG on a delivered basis (DES) over 10 years, commencing this month.

In addition, Woodside could deliver around 8.4 mill tonnes of LNG to CPC for a further 10 years, from 2034 to 2043, subject to conditions and an agreement to extend the period.

LNG delivered to CPC under the SPA will be sourced from Woodside's global portfolio.

Woodside CEO Meg O'Neill, said."This agreement with CPC for long-term supply to Taiwan is a first for Woodside and another demonstration of the ongoing demand for Australian LNG in Asian markets. It also reinforces the value our customers place on Woodside's ability to maintain safe and reliable supply of energy into the 2030s." ■

LNG Croatia tenders for extra capacity

Earlier this month, state-owned LNG terminal operator LNG Croatia (LNG Hrvatska) launched tenders for two contracts for the FSRU terminal's capacity expansion project.

LNG Croatia said that a public procurement procedure had been initiated to expand the terminal.

According to the tender documents posted on its website, the two contracts are worth €17 mill in total, excluding taxes.

The first contract, valued at around €15 mill, is for services, including installation, implementation, and commissioning of a new module for the FSRU, plus the relevant equipment.

According to the tender documents, the work is scheduled to start on 19th September, 2024, finishing by the end of 2025.

As for the second contract, this involves the procurement and installation of electrical power equipment for the integration of the FSRU with the module and its joining facility. This contract was valued at €2 mill by LNG Croatia.

Offers must be submitted by 8th August, 2024, the Croatian energy company said.

In May, the European Commission (EC) approved €25 mill state support for the expansion project.

The project will be partially financed from the 'Recovery and Resilience Mechanism', which will enable the installation of another gasification module with a capacity of 250,000 cu m per hour at the existing terminal.

This will increase the annual delivery capacity from 2.9 to 6.1 bill cu m of gas, the Government said.

A year ago, LNG Croatia and Wartsila Gas Solutions signed a contract for the delivery of the extra gasification module said to be worth €22.9 mill.

According to the EC announcement, the support will come in the form of direct grants, which will cover part of the investment costs for LNG Croatia. ■

FortisBC's Tilbury Marine Jetty approved

The Canadian Government has approved FortisBC Holdings' (FortisBC) Tilbury Jetty Limited Partnership's Tilbury Marine Jetty (TMJ) project.

TMJ involves the construction of a jetty, or dock, on the southern arm of the Fraser River, which will supply LNG bunkering vessels with refuelling services in the Vancouver (BC) region.

Strategically located adjacent to FortisBC's existing Tilbury LNG facility, the jetty will leverage its LNG production, which is claimed to be less carbon-intensive compared to the global average, due to the use of hydro-electric power.

With about 3,100 ships calling at the Port of Vancouver annually, switching from conventional marine fuel to LNG as a fuel could remove 90% of the particulate matter associated with shipping from the local air, according to a third-party study.

In 2022, FortisBC and Musqueam Indian Band signed an agreement to work in close collaboration as the Tilbury projects are developed.

It will help create economic and employment opportunities for Delta, neighbouring communities and indigenous communities.

TMJ will now proceed with securing the necessary remaining approvals and permits and will work towards the project's final investment decision (FID).

"We are excited to announce that the Government of Canada has approved the Tilbury Marine Jetty (TMJ) project. This significant milestone allows the project to move forward in its goal of reducing emissions in the marine industry and provide benefits to our local economy, including through our agreement with Musqueam," explained Roger Dall'Antonia, FortisBC President and CEO. ■

Tilbury Marine Jetty's BC location

NEWS NUDGE

GTT to design Celsius newbuilding tanks

GTT has won an order from Chinese shipyard, China Merchants Heavy Industry-Jiangsu for the tank design of a new LNGC, under construction for Celsius.

The vessel will have a total cargo capacity of 180,000 cu m and will be fitted with the Mark III Flex membrane containment system.

Her delivery is scheduled for the third quarter of 2027.

GTT also announced an order from Samsung Heavy Industries (SHI) for the tank design of a new FLNG, earmarked for Cedar LNG.

The FLNG will have a total capacity of 180,000 cu m, and will incorporate the Mark III Flex membrane containment system.

Her delivery is scheduled for the first quarter of 2028.

Hoegh's Egyptian FSRU gets first cargo

Hoegh LNG's FSRU 'Hoegh Galleon' received her first LNG cargo.

She is moored at Ain Sokhna, Egypt, under a charter with EGAS running from June, 2024 to February, 2026.

This deployment aims to address potential gas shortages and fuel power plants during the summer months.

According to ship tracking data, the 174,000 cu m LNGC, 'Hellas Athina', owned by Latsco Shipping and chartered by commodity trader, Trafigura, delivered the shipment to the FSRU from the Freeport LNG terminal in Texas.

She has now sailed having discharged the cargo. ■

Honeywell to buy Air Products' LNG business

Honeywell is to acquire Air Products' LNG process technology and equipment business for $1.81 bill in an all-cash transaction.

This represents around 13x estimated 2024 EBITDA, Air Products said.

As a result of the acquisition, Honeywell will be able to offer natural gas pre-treatment and up-to-date liquefaction, utilising digital automation technologies unified under the Honeywell Forge and Experion platforms.

This full-service solution will enable efficient, reliable and optimised management of natural gas assets, delivering unparalleled value and support, Honeywell said.

Currently, Honeywell provides a pre-treatment solution serving LNG customers globally, while Air Products' complementary LNG process technology and equipment business consists of a comprehensive portfolio, including in-house design and manufacturing of coil-wound heat exchangers (CWHE) and related equipment.

CWHEs provide the highest throughput of natural gas in a single exchanger with a small footprint and robust, reliable and safe operations both onshore and offshore, the company claimed.

"While the world continues to build the renewables-based energy infrastructure of the future, natural gas is a critical lower-emission and affordable transition fuel that will help meet ever-increasing and dynamic global energy demands," said Vimal Kapur, Honeywell Chairman and CEO.

"This highly complementary acquisition will further strengthen our energy transition portfolio, and Air Products' CWHE technology will immediately expand our installed base - creating new opportunities to compound growth in after market services and digitalisation through our Honeywell Forge platform," he added.

"The decision to divest our LNG heat exchanger technology and equipment business reflects Air Products' continued focus on its two-pillar strategy - to grow our core industrial gas business and related technology and equipment, and to be a first mover delivering clean hydrogen at scale to de-carbonise industrial and heavy-duty transportation sectors," explained Air Products' Chairman, President and CEO, Seifi Ghasemi.

"The LNG business is a great business and at its strongest point in its decades-long history thanks to the outstanding work of our people, and they will be in good hands to advance as part of Honeywell's related portfolio of technologies," he said.

The LNG market has quadrupled over the past 20 years and is expected to double over the next two decades, driven by demand in key end markets, including power and data centres according to industry research.

Ken West, President and CEO of Honeywell's Energy and Sustainability Solutions (ESS) segment, commented, "The integration of this talented team and the acquired proprietary technologies will enable Honeywell UOP to bring a full spectrum of scalable solutions and services that help our global customers navigate the complex journey to more sustainable and efficient energy practices."

Air Products' LNG business employs about 475 persons with its headquarters in Allentown, Pennsylvania and a 390,000 sq ft manufacturing facility in Port Manatee, Florida, where all sizes of CWHEs are made.

This is the fourth acquisition Honeywell has announced this year and this transaction, which is expected to be adjusted earnings per share accretive in the first full year of ownership, is not subject to any financing conditions and is expected to close before the end of this calendar year, subject to customary closing conditions, including receipt of certain regulatory approvals. ■

Air Products manufactures cold boxes

Shell buys into Ruwais

Shell Overseas Holdings, a subsidiary of energy major Shell, has invested in Abu Dhabi National Oil Company's (ADNOC) Ruwais LNG project through a 10% participating interest.

"This investment decision builds on our long-standing partnership with ADNOC," said Shell's CEO, Wael Sawan. "In line with our strategy to create more value with less emissions, we are investing in additional LNG capacity and further growing our world leading LNG portfolio, with energy-efficient and carbon-competitive projects."

Once built, the Ruwais LNG project will consist of two 4.8 mill tonnes per annum LNG liquefaction trains giving a total capacity of 9.6 mill tonnes.

Shell, through another subsidiary, Shell International Trading Middle East, has also signed an agreement to offtake 1 mill tonnes per annum of LNG produced at Ruwais.

This facility is to be fitted with an electric-powered liquefaction system and will have access to a renewable power supply, which will support lower operational emissions, compared to traditional gas-powered LNG facilities.

ADNOC will hold a majority 60% share in the project and will be the lead developer and operator, while Shell, BP, Mitsui & Co and TotalEnergies will each hold a 10% interest.

An engineering, procurement and construction (EPC) contract has been awarded to a Technip-led joint venture, which will soon start construction at Al Ruwais Industrial City, Abu Dhabi.

LNG deliveries are expected to start in 2028, ADNOC added. ■

Crown and Catcha's new business up and running

Crown LNG Holding, a provider of LNG liquefaction and regasification terminal technologies for harsh weather locations, has completed its previously announced business venture tie-up with Catcha Investment Corp.

This transaction was unanimously approved by Catcha's board of directors and at an extraordinary general meeting of Catcha shareholders on 12th June, 2024.

The combined entity was renamed Crown LNG Holdings Limited and, as from 9th July, 2024, the Class A ordinary shares and warrants were trading on Nasdaq under the new ticker symbols 'CGBS' and 'CGBSW,' respectively.

Founded to secure stable energy supplies to growth markets exposed to harsh weather conditions, Crown LNG designs and plans to own and operate offshore LNG terminals in locations where onshore facilities are not feasible.

Environmental impact, access for LNGCs and cost – or where offshore floating terminals are not a preferred solution, due to lower availability than a fixed installation, such as the gravity based structure (GBS), which the company offers, were among the reasons for setting up the company.

Crown said it is active in the two parts of the LNG value chain: (1) liquefaction, where natural gas from producers is supercooled to a liquid for transport by ship as LNG, and (2) regasification, where the LNG is turned back into gas and delivered to consumers and businesses as natural gas.

With expertise in both areas, Crown has the potential to enable stable, secure, year-round LNG supplies to growing markets and locations exposed to harsh weather conditions, the company claimed.

In doing so, it aims to expand LNG's global market, particularly US supplied LNG and contribute to lower carbon emissions in markets it serves by replacing coal with LNG.

Lower costs

Crown's bottom-fixed, GBS design is also expected to ensure lower costs and a reduced environmental footprint, versus a comparable land-based LNG terminal.

Currently, Crown is involved in the development of two projects toward final investment decisions (FID) – Kakinada, on the east coast of India, and Grangemouth, in Scotland.

Swapan Kataria, Crown LNG CEO, said: "We are incredibly proud to complete this transaction and become a US listed public company.

"This transformative step enables the next phase of growth at Crown, and the capital raised in this transaction will further strengthen our ability to execute on our diversified project pipeline in India, the UK, Vietnam, Canada, and other global markets.

"We look forward to our continued partnership with the Catcha team and delivering value to all of our stakeholders," he said.

Patrick Grove, Catcha CEO, added: "Crown LNG is a leader in the fast-growing LNG market and as a public company is well-positioned to capitalise on the strong market tailwinds of rising energy security concerns and the increasing use of natural gas as a transition fuel.

"We look forward to continuing our partnership with Crown, and are confident that the company's deep industry experience and innovative and proven gravity-based structure technology will enable the company to be a leader in addressing the global demand for LNG," he said.

Crown's senior management team will continue to lead the new combined company and includes CEO Swapan Kataria and CFO Jorn Husemoen, while Gunnar Knutsen will continue to serve as President of Crown LNG AS, a wholly-owned subsidiary of Crown LNG Holdings Limited, responsible for technology selection and project execution.

The new company's board is comprised Kataria, Husemoen, Ellen Hanetho, Gry Osnes, and Andrew Judson.

Cohen & Co Capital Markets (CCM), a division of JVB Financial Group, served as exclusive financial advisor and lead capital markets advisor, while in partnership with CCM, WestOak Advisors served as energy capital markets advisor to Catcha.

Emerging Asia Capital Partners Co (EACP) served as financial advisor to Crown, Goodwin Procter served as legal counsel to Catcha, while Nelson Mullins Riley & Scarborough served as legal counsel to Crown. ■

Ravenna regas terminal on schedule for first quarter of 2025 opening

Work has continued on schedule with the Ravenna offshore regasification terminal.

The FSRU 'BW Singspore' will moor about 8.5 km from Punta Marina at the end of this year and be ready to come online in the first quarter of 2025.

Last week, during a visit by the Italian Minister for the Environment and Energy Security, Gilberto Pichetto Fratin, to the area, developer Snam reported that progress amounted to about 90% for the land work and more than 50% for the offshore work.

The FSRU is currently in a Dubai shipyard being prepared for her new location off the coast off Marina di Ravenna.

In addition, since February 2024, work has been underway on the Petra platform's recycling, which was followed, since mid-May, by the installation of the new mooring structure of about 440 m in length and weighing over 14,000 tonnes.

The 900 m breakwater work is currently at the tender phase, which began in August, 2024 and is due to to be finalised in October, 2026, to ensure the terminal's safety and continuous operation even in particularly bad weather and sea conditions.

At a press conference held in Ravenna last Friday, the Minister, the Mayor of Ravenna, Michele de Pascale and Snam CEO, Stefano Venier took stock of the roadmap for the arrival of the 'BW Singapore', purchased by Snam in July, 2022 and equipped for an annual regasification capacity of 5 bill cu m, similar to the Italis LNG in operation in Piombino since July, 2023.

With her entry into service, Italy's total regasification capacity will rise to 28 bill cu m per year, which represents about 45% of Italy's gas demand in 2023.

This figure is also equal to Russian gas imports in 2021 and, thus is capable of consolidating the security of supply that Italy needs, the Minister stressed.

Of the more than 240 suppliers involved in the project, more than 80 come from the Province of Ravenna or Emilia-Romagna. Contracts were awarded to companies in the Ravenna area totalling over €300 mill, corresponding to about 30% of the entire investment.

Each year, Snam will incur costs of €30 mill (maritime services, O&M activities, weather services and monitoring), which in turn will fuel the local economy.

From an employment viewpoint, 800 people are involved in the project, but at the peak of activity there will be more than 1,200 working on the terminal and its infrastructure, Snam said. ■

Ocean Yield invests in the LNGC sector

Ship investment company, Ocean Yield has agreed to purchase infrastructure fund CVC DIF's share in the French company Geogas LNG.

This will provide an indirect economic interest of up to 34% in France LNG Shipping (FLS), which owns LNGCs on long term charters and is 50/50 owned by NYK and Geogas LNG.

FLS currently has six vessels operating with an average age of three years, with another two due to be delivered this year and next. Another four newbuildings are expected to be novated to FLS at or around the closing of the transaction and will be delivered in 2027.

All of the vessels are employed on long term charters to tier one investment grade-rated European energy companies, with an average contract duration of 10 years, or 14 years including extension options.

Based on an indirect economic interest of 34%, the transaction will add around $840 mill to Ocean Yield's EBITDA backlog, the company said.

Closing of the transaction is expected to occur during the second half of 2024, subject to certain customary conditions.

CEO, Andreas Røde said: "We are pleased to partner with NYK, Geogas Maritime and Access Capital Partners for our first transaction in the LNG segment. FLS controls a fleet of modern LNG carriers with a low carbon footprint and long term charters to investment grade-rated counterparties."

BAHR and Stephenson Harwood acted as legal advisors to Ocean Yield in connection with the transaction. ■

Ocean Yield CEO Andreas Røde

ENI contracts ABL for FLNG transportation and installation verification

Italian energy major, Eni has appointed energy and marine consultancy ABL to provide marine warranty survey services (MWS) for the offshore transportation and installation (T&I) of the Marine XII Congo LNG Phase 2 development project.

Phase 2 involves the fabrication, transportation and installation of a new floating FLNG; a converted floating separation, storage and booster unit (FSU); wellhead platforms and associated tie-in pipelines and ancillaries offshore the Republic of Congo.

ABL has been asked to undertake a technical review of the key project and procedural documentation, drawings and calculations, the suitability surveys of the proposed vessels for all T&I operations, and on-site attendance to review and approve attendances for warranted operations.

The consultancy's involvement in the project is expected to run from 2024 until the completion of the offshore work. The company has also supported Phase 1 since February, 2023.

ABL's French operation will lead the company's undertaking.

"Winning this latest project in the Congo is a testament to the successful work we have been doing in the country over many years, establishing ABL France as the leading technical consultant for the successful and safe delivery of energy infrastructure projects in Africa's Francophone countries," said Guillaume Henin, Operational Manager for ABL's activities in Congo.

"We are really pleased to continue our work in supporting the Republic of Congo's energy infrastructure with this key project," he said.

Based in Paris, ABL France, provides the company's full technical offering to support renewables, maritime and oil & gas sectors in France, Benelux countries, Spain and Francophone Africa.

ABL's operations in Africa cover a coast-to-coast footprint, with offices in Nigeria, Ghana, Senegal and Mauritania, South Africa, and Egypt. Additional marine surveyor presence is available in Algeria and Namibia.

ABL is part of Oslo-listed consultancy, ABL Group. ■

Rio Grande LNG in private notes placement

NextDecade Corp's subsidiary Rio Grande LNG has issued $1.115 bill of senior secured notes in a private placement.

These senior secured notes will accrue interest at a fixed rate of 6.58%. Proceeds will be used to reduce outstanding borrowings and commitments under Rio Grande LNG's existing term loan facilities for its Phase 1 LNG facility.

The senior secured notes will be amortised over a period of 18 years beginning in September, 2029, with a final maturity in September, 2047. The senior secured notes rank pari passu with Rio Grande LNG's existing senior secured financings.

Including this transaction, NextDecade has refinanced over $1.85 bill of the original $11.1 bill Rio Grande LNG term loan facilities since a positive final investment decision (FID) was reached on Phase 1 in July, 2023. ■

NEWS NUDGE

AG&P to provide Chinese spot LNG cargo

Singapore-based LNG terminals and downstream infrastructure company, AG&P LNG, and BK LNG Solution (BKLS), also based in Singapore, have signed an agreement to transport their first spot cargo to China.

A signing ceremony took place on 11th July, 2024, with the cargo due to be delivered by end of August, 2024, according to local media.

This partnership signifies a pivotal moment for both AG&P LNG and BKLS, highlighting their co-operation in enhancing LNG supply reliability in China, the companies reportedly said.

AG&P LNG will leverage its global LNG sourcing expertise to ensure efficient and secure delivery of the gas to the Chinese market.

In addition to the spot cargo, AG&P LNG and BKLS have agreed to collaborate on small-scale LNG (ssLNG) initiatives, utilising the Cai Mep, Vietnam terminal for cargoes into China using small LNGCs and ISO containers. ■


Fast solutions for your LNG Storage & Transportation needs.
UNITED HEAVY LIFT
UHL FLASH
MADEIRA
We can build your small-scale LNG terminal or peak-shaving plant within 18 months.

LNGC to test AI solutions

Late last month, HD Hyundai Marine Solutions, together with its parent, HD Korea Shipbuilding & Offshore Engineering (HD KSOE), signed an agreement with Pan Ocean, shipmanagement company POS SM, and class society, American Bureau of Shipping (ABS) for the application of AI-based solutions.

Under the agreement, the parties agreed to actively use AI-based technology to strengthen future ship safety and reduce carbon emissions.

An 'AI Shipboard Safety Management Package Solution' developed by HD KSOE will be used. This solution diagnoses the status of major equipment on board ship in real time to prevent accidents, and automatically recognises emergency and unexpected situations to help respond quickly, HD KSOE said.

The solution is to be trialled on a Pan Ocean 174,000 cu m LNGC, which is currently under construction at HD Hyundai Heavy Industries to verify its effectiveness. She is due for delivery in December of this year.

HD Hyundai Marine Solutions' AI-based solution 'OceanWise' will also be applied to reduce carbon emissions.

This solution measures and predicts carbon emissions using only the ship's location information through accumulated big data and AI algorithms, and provides the optimal operation route to minimise fuel consumption.

Pan Ocean said that it planned to apply the solution to reduce carbon emissions generated during ship operations, improve operational efficiency, and reduce costs (OPEX).

> **The importance of marine AI solutions that provide optimal operation guidelines is expected to continue to increase...**
>
> *- Lee Ki-dong, HD Hyundai Marine Solutions CEO*

ABS will verify the reliability of the solution and explore ways to automatically issue approval documents in conjunction with OceanWise when measuring carbon emissions required for the EU Emissions Trading System (EU ETS) in the future.

"We will do our best to fulfil our role so that our country's marine industry can secure global competitiveness in the 4th industrial revolution utilising artificial intelligence (AI) technology and lead the market with global standards," Ahn Jung-ho, Pan Ocean CEO, said.

"We plan to realise the ocean transformation envisioned by HD Hyundai by advancing marine AI solutions together with leading Korean shipping companies, ship operators, and credible classification societies," Kim Sung-jun, HD Hyundai Shipbuilding & Marine Engineering's CEO, added.

"The importance of marine AI solutions that provide optimal operation guidelines is expected to continue to increase," Lee Ki-dong, HD Hyundai Marine Solutions CEO, commented. "We will explore supply channels for AI solutions through this business agreement."

HD KSOE and ABS also recently signed a memorandum of understanding (MoU) with Liberian International Ship and Corporate Registry (LISCR) to collaborate on the application of artificial intelligence (AI) to eliminate ship safety blind spots.

Under the MoU, advanced technologies to increase seafarers' situational awareness will be utilised. These solutions could ultimately support increased autonomy on board, according to those involved. ■

NEWS NUDGE

Ships - Deliveries, newbuildings, charters

A naming ceremony for three new PETRONAS' LNGCs was held at the Hyundai Heavy Industries (HHI) Shipyard in Ulsan on 1st July, 2024.

They were named 'Puteri Sejinjang', 'Puteri Mahsuri', and 'Puteri Mayang'.

The 174,000 cu m LNGCs are expected to enhance PETRONAS' capacity to deliver LNG efficiently and meet the expanding needs of its global LNG business, the energy giant said.

On 8th July, PETRONAS confirmed that it would be adding three energy-efficient LNGCs to its North American operations, bringing the total controlled from the region to six.

This also comes ahead of the startup of LNG Canada's LNG export facility at Kitimat, scheduled for later this year in which, PETRONAS has a 25% stake.

It has also been reported that PETRONAS' MISC has signed a letter of intent (LoI) with Samsung Heavy Industries for two more LNGCs.

No further details have merged thus far.

Vitol has secured three LNG bunkering vessels (LNGBV) through its shipping company, Vitol International Shipping (VIS).

They were taken on seven to 10 year timecharters from Avenir LNG plus an order for two vessels at the CIMC Sinopacific Offshore & Engineering shipyard in Nantong, China.

The Avenir timecharter agreement is for one newbuilding 20,000 cu m LNGBV, which will commence upon her delivery from the shipyard in 4Q26 and will serve for a period of seven years with options to extend up to 10 years.

Vitol also ordered one 12,500 cu m and one 20,000 cu m LNGBV at the CIMC SOE shipyard. The vessels will be delivered in 4Q26 and 3Q27, respectively.

Large South Korean terminal completed

POSCO International Corp has completed the construction of an LNG terminal at Gwangyang, South Korea.

This marks the first LNG terminal to be operated by a private business in South Korea, the company claimed.

POSCO said that the terminal's opening, which included six storage tanks, came after construction began in 2002 at a total investment of Won1.04 trill ($750 mill).

The new terminal has facilities to store 930,000 kilolitres of LNG and is capable of accommodating 180,000 cu m capacity LNGCs.

It will offer comprehensive services from offloading and storage to regasification of natural gas purchased not only by POSCO but also by S-Oil Corp and SK E&S Co.

The construction of a second LNG terminal in Gwangyang was started last year at an investment of Won930 bill. This terminal is expected to be completed in 2026. ■

Wood to provide engineering for 'Prelude'

Engineering company, Wood Group has won a six-year contract to provide brownfield engineering, procurement, and construction management (EPCm) solutions for Shell's FLNG 'Prelude' moored off Western Australia.

Ken Gilmartin, Wood Group CEO, said "LNG is a key transition fuel as industry balances the need for global energy security with the importance of urgent reduction in carbon emissions.

"We are delighted to build on our 70-year global relationship with Shell to deliver integrated brownfield engineering solutions for 'Prelude', the world's largest floating offshore gas facility.

"The contract will draw on our global LNG expertise and underlines our position as a market leader for brownfield engineering across Australia," he said.

Earlier, Wood had announced that it had been selected as the lead specialist consultant for an independent study for the Sunrise Joint Venture's (SJV) Greater Sunrise Development.

A comprehensive concept study will be undertaken, which will consider engineering, technology, financing, commercial structures, fiscal, environmental, health & safety and socio-economic drivers, including local content.

'Prelude' seen loading the LNGC 'Gallina

The study, on target for completion by no later than 4Q24, will support the SJV to advance the development to the next stage.

Azad Hessamodini, Wood's President of Consulting, said: "This is an important concept study for the Greater Sunrise Development. We are delighted to support and deliver the work at pace to ensure the SJV has the impartial insights to advance this regionally significant project."

SJV comprises Timor GAP (56.56%), operator Woodside Energy (33.44%) and Osaka Gas (10%).

The project is located between Timor-Leste and Australia's Northern Territory and comprises the Sunrise and Troubadour gas and condensate fields.

Wood has completed over 100 LNG feasibility studies globally, providing technical consulting and advisory services at the earliest stages to support clients in making informed and independent decisions, the company claimed. ■

WinGD completes type approval testing for new short-stroke engine size

Swiss marine power company WinGD has successfully completed type approval and factory acceptance testing for its X52-S2.0 engine, bringing a new option to shipowners in need of compact, medium-bore 2-stroke engines.

The tests at Yuchai Marine Power Co (YCMP) confirmed the engine's performance and compliance, while the prototype project validated its ease of assembly and maintenance.

The X S series succeeds the well-established RT flex50 and RT flex58 engines and is available in 52 cm and 62 cm bore sizes, with confirmed orders already for diesel, LNG and methanol configurations and an ammonia fuel option under development. The combination of small footprint and best in class fuel efficiency – around 10g/kWh lower than equivalent RT flex engines, a saving of around 4% depending on operating profile – make the new platform ideal for vessels requiring a compact, medium-bore solution.

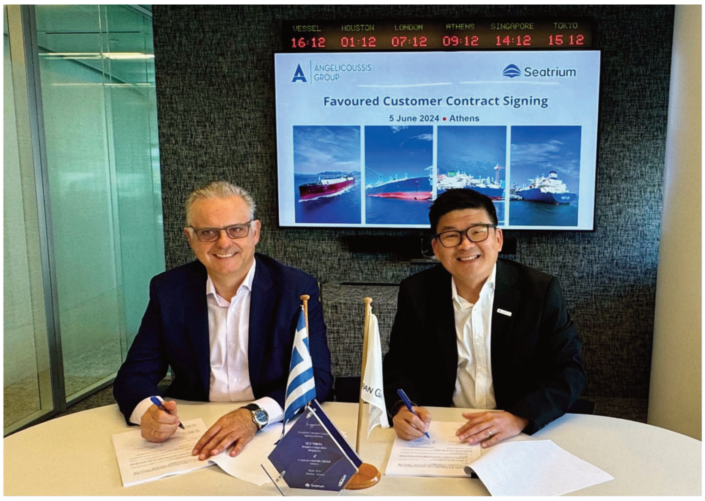
WinGD Head of Global Testing & Validation, Sotiris Topaloglou said: "The recent test campaign of this newest X-S engine has confirmed that this series delivers exceptional fuel efficiency and emissions performance. We're proud of the innovations that have enabled this performance. The footprint reduction will drive cost efficiencies while the new concept dramatically simplifies engine construction, installation, maintenance and service. Completing this prototyping and testing phase so efficiently was only possible thanks to our strong partnership with YCMP."

The X-S series highlights WinGD's unique approach to engine development, focused on close collaboration with engine builders like YCMP and with innovation rooted in proven technologies. The X-S, for example, uses key components with robust supply chains already well-established across WinGD's engine portfolio, while drawing on modern engineering and design innovations to reduce the size and footprint while simplifying the maintenance of those components and the overall engine.

The type approval tests followed similar successful tests for the larger X62-S2.0 engine at Dalian Marine Diesel in April. The first order for the X52-S2.0 was received in February 2023 followed by a second order with iSCR, WinGD's on-engine NOx abatement solution, in July that year. ■

Seatrium to maintain Angelicoussis' fleet

Singapore-based engineering company, Seatrium has secured a Favoured Customer Contract (FCC) with the Angelicoussis Group, Greece's largest shipping group.



From left to right: Andreas Spertos, Executive Vice President and Technical Director of Maran Gas on behalf of Angelicoussis Group and Alvin Gan, Executive Vice President, Repairs and Upgrades, Seatrium

The Group operates 141 ships, including LNGCs, under the banners of Maran Gas, Maran Tankers and Maran Dry.

This two-year contract with one-year renewal option includes the refit of 10 to 15 vessels per year, comprising LNGCs, tankers and bulk carriers.

It will involve close co-operation in joint planning, information exchange and experience sharing with the Angelicoussis Group, facilitating an efficient retrofitting process, Seatrium said.

This agreement was signed in Greece by Andreas Spertos, Executive Vice President and Technical Director of Maran Gas on behalf of Angelicoussis Group and Alvin Gan, Seatrium's Executive Vice President, Repairs and Upgrades.

Both companies will strive to achieve sustainable targets in Quality, Health, Safety and Environment (QHSE), cost efficiency and timely deliveries, which are critical performance indicators for highquality vessel maintenance, they said.

Spertos commented: "This strategic partnership marks a significant milestone for us. Seatrium was selected to be our partner as they have demonstrated a strong track record, and delivered over 70 successful retrofits including, 20 of our LNG carriers and a series of scrubber installations for our tanker fleet since 2012, demonstrating dedication and commitment to resolving challenges as a team.

"We are confident that this partnership will be the blueprint for a successful long-term fleet retrofitting programme, thereby enhancing our operational efficiency and instilling the highest standards of quality, safety, and environmental sustainability in the maintenance of our fleet of LNG carriers, bulk carriers and tankers. We look forward to a fruitful and successful partnership with Seatrium."

Gan added: "We are honoured to be selected as a partner by Angelicoussis Group, the largest shipping group owned by Greek interests and renowned for its status as one of the world's largest privately owned fleets.

"This Favoured Customer Contract not only affirms our leadership in the global ship repair market, but also our commitment to embarking on a shared journey of growth, trust and mutual success with our new partner, Angelicoussis Group.

"With the global focus on maritime de-carbonisation, Seatrium is well-positioned to provide our esteemed customers with a broad range of low-carbon, cleaner energy solutions and energy-saving retrofits to support a sustainable future. We look forward to fostering a close collaborative partnership with the Angelicoussis Group," he said ■

NEWS NUDGE

White & Case advises JAPEX on equity purchase

Law firm White & Case advised Japan Petroleum Exploration (JAPEX) on the acquisition of JERA's equity interests in US-based Gulf Coast LNG Holdings for about $380 mill.

Gulf Coast owns an interest in the Freeport LNG project in Texas and the acquisition was undertaken through JAPEX US' subsidiary.

White & Case's team, which advised on the transaction, was led by partner, Nels Hansen and local partner, Kristian Bradshaw (Tokyo) and included partners David Dreier (New York), Farhad Jalinous, Rebecca Farrington and Cristina Brayton-Lewis (Washington, DC) and Strati Sakellariou-Witt (Brussels), counsel Ryan Brady (Washington, DC) and Laura Mulry (Los Angeles) and associates Brendan Harvey and Shintaro Kitayama (Tokyo).

The law firm recently added Sayako Shiraki, as local partner and Hiroto Nakayama, as counsel, to its Tokyo office.

Both were managing associates at Linklaters. ■

Monthly Large LNGC Values*

Newbuildings (174,000 cu m)	$269.54 mill
Five years old (174,000 cu m)	$231.83 mill
Total Fleet (599 ships)	$101.34 bill
Orderbook (389 ships)	$108.29 bill

**Source: VesselsValue (01/07/24)*

**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	+$11,000
West of Suez	$65,000	-
12 mos T/C	$61,000	-

**Since last report (04/07/24)*

Source: Fearnleys (17/07/24)

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**
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WORLD LNG CARRIER ORDERBOOK

Name	Owners	Yard	Ordered	Capacity	Propulsion	Delivery
Agamemnon	Capital Gas	Hyundai Samho	01/06/2022	174,000	ME-GA	01/03/2026
Aktoras	Capital Gas	Hyundai Samho	01/09/2021	174,000	ME-GA	01/07/2024
Alcaios I	Capital Gas	Hyundai Samho	01/01/2023	174,000	ME-GA	01/09/2026
Alexey Kosygin	Smart LNG	Zvezda SSK	01/09/2019	172,600	TFDE - Azipod	01/03/2024
Al-kharrarah	H-Line, Pan Ocean, SK Shipping	Hanwha Ocean	01/06/2022	174,000	ME-GA	01/02/2025
Al-kheesah	Pan Ocean, SK Shipping, H-Line	Samsung	01/09/2022	174,000	ME-GA	01/01/2025
Al-slaimi	H-Line, Pan Ocean, SK Shipping	Hanwha Ocean	01/06/2022	174,000	ME-GA	01/04/2025
Antaios I	Capital Gas	Hyundai Samho	01/01/2023	174,000	ME-GA	01/11/2026
Apostolos	Capital Gas	Hyundai Heavy	01/11/2021	174,000	ME-GA	01/06/2024
Archimidis	Capital Gas	Hyundai Samho	01/06/2022	174,000	ME-GA	01/01/2026
Archon	Capital Gas	Hyundai Samho	01/03/2023	174,000	ME-GA	01/03/2027
Assos	Capital Gas	Hyundai Heavy	01/11/2021	174,000	ME-GA	01/05/2024
Athlos	Capital Gas	Hyundai Samho	01/03/2023	174,000	ME-GA	01/02/2027
Celsius 6	Celsius Shipping	China Merchants HI Jiangsu	24/10/2023	180,000	ME-GA	01/09/2027
Celsius Gandhinagar	Celsius Shipping	Samsung	01/07/2021	180,000	ME-GA	01/03/2024
Celsius Greenwich	Celsius Shipping	Samsung	01/08/2021	180,000	ME-GA	01/06/2024
Celsius Grenada	Celsius Shipping	Samsung	01/08/2021	180,000	ME-GA	01/07/2024
China Merchants Jiangsu Cmhi-282-01	Celsius Shipping	China Merchants HI Jiangsu	01/05/2023	180,000	ME-GA	01/03/2026
China Merchants Jiangsu Cmhi-282-02	Celsius Shipping	China Merchants HI Jiangsu	01/05/2023	180,000	ME-GA	01/07/2026
China Merchants Jiangsu Cmhi-282-03	Celsius Shipping	China Merchants HI Jiangsu	01/05/2023	180,000	ME-GA	01/11/2026
China Merchants Jiangsu Cmhi-282-04	Celsius Shipping	China Merchants HI Jiangsu	01/05/2023	180,000	ME-GA	01/03/2027
China Merchants Jiangsu Cmhi-282-05	Celsius Shipping	China Merchants HI Jiangsu	01/02/2024	180,000	ME-GA	01/06/2027
Clean Astraeus	Dynagas	Hyundai Heavy	01/04/2023	200,000	XDF	01/05/2027
Clean Azeus	Dynagas	Hyundai Heavy	01/04/2023	200,000	XDF	01/07/2027
Clean Brownsville	Dynagas	Hyundai Heavy	01/01/2023	200,000	XDF	01/07/2026
Clean Future	Dynagas	Hyundai Heavy	01/05/2021	200,000	ME-GA	01/03/2024
Clean Levant	Dynagas	Hyundai Heavy	01/03/2022	200,000	ME-GA	01/04/2025
Clean Mistral	Dynagas	Hyundai Heavy	01/03/2022	200,000	ME-GA	01/03/2025
Clean Rio Grande	Dynagas	Hyundai Heavy	01/01/2023	200,000	XDF	01/04/2026
Clean Srocco	Dynagas	Hyundai Heavy	01/03/2022	200,000	ME-GA	01/12/2025
Clean Texas	Dynagas	Hyundai Heavy	01/01/2023	200,000	XDF	01/12/2025
Clean Vitality	Dynagas	Hyundai Heavy	01/05/2021	200,000	ME-GA	01/02/2024
Cosco 1	COSCO	Dalian Shipbuilding	31/08/2023	175,000		01/03/2027
Cosco 2	COSCO	Dalian Shipbuilding	31/08/2023	175,000		01/06/2027
Cosco 3	COSCO	Dalian Shipbuilding	31/08/2023	175,000		01/04/2028
Daewoo 2522	Hyundai LNG Shipping	Hanwha Ocean	01/07/2021	174,000	MEGI	01/05/2024
Daewoo 2523	MOL	Hanwha Ocean	01/09/2021	174,000	ME-GA	01/02/2024
Daewoo 2524	MOL	Hanwha Ocean	01/09/2021	174,000	ME-GA	01/04/2024
Daewoo 2525	MOL	Hanwha Ocean	01/09/2021	174,000	ME-GA	01/08/2024
Daewoo 2526	MOL	Hanwha Ocean	01/09/2021	174,000	ME-GA	01/10/2024
Daewoo 2527	MOL	Hanwha Ocean	01/10/2021	174,000	ME-GA	01/07/2024
Daewoo 2528	Maran Gas Maritime	Hanwha Ocean	01/11/2021	174,000	MEGI	01/08/2024
Daewoo 2529	Maran Gas Maritime	Hanwha Ocean	01/11/2021	174,000	MEGI	01/11/2024
Daewoo 2530	BWGas	Hanwha Ocean	01/11/2021	174,000	MEGI	01/03/2025
Daewoo 2531	BWGas	Hanwha Ocean	01/11/2021	174,000	MEGI	01/05/2025
Daewoo 2532	GasLog	Hanwha Ocean	01/01/2022	174,000	MEGI	01/07/2024
Daewoo 2533	GasLog	Hanwha Ocean	01/01/2022	174,000	MEGI	01/09/2024
Daewoo 2534	GasLog	Hanwha Ocean	01/01/2022	174,000	MEGI	01/06/2025
Daewoo 2535	GasLog	Hanwha Ocean	01/01/2022	174,000	MEGI	01/09/2025
Daewoo 2536	MOL	Hanwha Ocean	01/01/2022	174,000	ME-GA	01/09/2024
Daewoo 2537	Maran Gas Maritime	Hanwha Ocean	01/01/2022	174,000	MEGI	01/09/2025
Daewoo 2538	Maran Gas Maritime	Hanwha Ocean	01/01/2022	174,000	MEGI	01/11/2025

DFDE = dual fuel diesel engines, STRH = steam turbine reheat / ultra steam turbine, MEGI = marine electric gas injection,
DRL = slow speed diesel, FSRU = vessel with regas capacity, FLNG = floating LNG production unit
Data last updated = 19 February 2024

Fearnley LNG

Name	Owners	Yard	Ordered	Capacity	Propulsion	Delivery
Daewoo 2539	Maran Gas Maritime	Hanwha Ocean	01/02/2022	174,000	MEGI	01/11/2025
Daewoo 2540	Maran Gas Maritime	Hanwha Ocean	01/02/2022	174,000	MEGI	01/12/2025
Daewoo 2541	Venture Global LNG	Hanwha Ocean	01/03/2022	200,000	ME-GA	01/07/2025
Daewoo 2542	Venture Global LNG	Hanwha Ocean	01/03/2022	200,000	ME-GA	01/10/2025
Daewoo 2543	Venture Global LNG	Hanwha Ocean	01/03/2022	200,000	ME-GA	01/12/2025
Daewoo 2544	BWGas	Hanwha Ocean	01/04/2022	174,000	MEGI	01/11/2025
Daewoo 2545	BWGas	Hanwha Ocean	01/04/2022	174,000	MEGI	01/12/2025
Daewoo 2547	H-Line, Pan Ocean, SK Shipping	Hanwha Ocean	01/06/2022	174,000	ME-GA	01/12/2024
Daewoo 2548	H-Line, Pan Ocean, SK Shipping	Hanwha Ocean	01/06/2022	174,000	ME-GA	01/01/2025
Daewoo 2550	MOL	Hanwha Ocean	01/04/2022	174,000	ME-GA	01/09/2025
Daewoo 2551	MOL	Hanwha Ocean	01/04/2022	174,000	ME-GA	01/09/2026
Daewoo 2552	Maran Gas Maritime	Hanwha Ocean	01/06/2022	174,000	MEGI	01/05/2026
Daewoo 2553	Maran Gas Maritime	Hanwha Ocean	01/06/2022	174,000	MEGI	01/06/2026
DAEWOO 2558	MOL	Hanwha Ocean	01/09/2022	174,000	ME-GA	01/09/2026
Daewoo 2559	SK Shipping, Pan Ocean, H-Line	Hanwha Ocean	01/06/2022	174,000	ME-GA	01/02/2025
Daewoo 2561	Pan Ocean, SK Shipping, H-Line	Hanwha Ocean	01/06/2022	174,000	ME-GA	01/05/2025
Daewoo 2562	SK Shipping, Pan Ocean, H-Line	Hanwha Ocean	01/06/2022	174,000	ME-GA	01/06/2025
Daewoo 2563	H-Line, Pan Ocean, SK Shipping	Hanwha Ocean	01/06/2022	174,000	ME-GA	01/11/2025
Daewoo 2564	Pan Ocean, SK Shipping, H-Line	Hanwha Ocean	01/06/2022	174,000	ME-GA	01/11/2025
Daewoo 2565	Pan Ocean, SK Shipping, H-Line	Hanwha Ocean	01/06/2022	174,000	ME-GA	01/02/2026
Daewoo 2566	Meiji Shipping	Hanwha Ocean	01/09/2022	174,000	XDF	01/08/2025
Daewoo 2567	Meiji Shipping	Hanwha Ocean	01/09/2022	174,000	XDF	01/09/2025
Daewoo 2568	Meiji Shipping	Hanwha Ocean	01/09/2022	174,000	XDF	01/06/2026
Daewoo 2569	Meiji Shipping	Hanwha Ocean	01/09/2022	174,000	XDF	01/09/2026
DAEWOO 2570	MISC	Hanwha Ocean	01/09/2022	174,000	XDF	01/01/2026
DAEWOO 2571	MISC	Hanwha Ocean	01/09/2022	174,000	XDF	01/05/2026
Daewoo 2572	TMS Cardiff Gas	Hanwha Ocean	01/09/2022	174,000	ME-GA	01/04/2026
Daewoo 2573	TMS Cardiff Gas	Hanwha Ocean	01/09/2022	174,000	ME-GA	01/07/2026
Daewoo 2574	Venture Global LNG	Hanwha Ocean	01/03/2023	200,000	MEGI	01/09/2026
Daewoo 2575	Venture Global LNG	Hanwha Ocean	01/03/2023	200,000	MEGI	01/12/2026
Dalian No 1 G175k-1	China Merchant	Dalian Shipbuilding		175,000	XDF	01/09/2025
Dalian No 1 G175k-12	Wah Kwong, China Gas, CSSC	Dalian Shipbuilding	21/08/2023	175,000		01/01/2027
Dalian No 1 G175k-13	Wah Kwong, China Gas, CSSC	Dalian Shipbuilding	21/08/2023	175,000		01/07/2027
Dalian No 1 G175k-2	China Merchant	Dalian Shipbuilding	01/04/2022	175,000	XDF	01/12/2025
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
DALIAN NO 1 G175K-5	China Merchant	Dalian Shipbuilding	01/03/2023	175,000	XDF	01/08/2026
DALIAN NO 1 G175K-6	China Merchant	Dalian Shipbuilding	01/03/2023	175,000	XDF	01/10/2026
DALIAN NO 1 G175K-7	China Merchant	Dalian Shipbuilding	01/03/2023	175,000	XDF	01/12/2026
DALIAN NO 1 G175K-8	China Merchant	Dalian Shipbuilding	01/03/2023	175,000	XDF	01/02/2027
Energy Fortitude	Alpha Gas	Hyundai Samho	01/07/2021	174,000	XDF	01/04/2024
Hanwha Ocean 2580	MOL	Hanwha Ocean	01/02/2023	174,000	ME-GA	01/03/2027
HANWHA OCEAN 2581	Maran Gas Maritime	Hanwha Ocean	01/04/2023	174,000	MEGI	01/04/2027
HANWHA OCEAN 2582	Maran Gas Maritime	Hanwha Ocean	01/04/2023	174,000	MEGI	01/06/2027
Hanwha Ocean 2583	MOL	Hanwha Ocean	01/04/2023	174,000	ME-GA	01/08/2027
Hanwha Ocean 2584	MOL	Hanwha Ocean	01/08/2023	174,000	ME-GA	31/01/2027
Hd Hyundai Ulsan 3441	NYK	Hyundai Heavy	28/04/2023	174,000		01/03/2027
Hd Hyundai Ulsan 3442	NYK	Hyundai Heavy	28/04/2023	174,000		01/06/2027
Hd Hyundai Ulsan 3443	NYK	Hyundai Heavy	28/04/2023	174,000		01/08/2027
Hd Hyundai Ulsan 3444	NYK	Hyundai Heavy	01/05/2023	174,000		31/08/2027
Hd Hyundai Ulsan 3454	Evalend Shipping	Hyundai Heavy	02/08/2023	174,000	XDF	01/12/2026
Hd Hyundai Ulsan 3455	Evalend Shipping	Hyundai Heavy	02/08/2023	174,000	XDF	30/06/2027
HD Hyundai Ulsan 3456	Evalend Shipping	Hyundai Heavy	14/11/2023	174,000		01/12/2027
Hd Hyundai Ulsan 3457	Evalend Shipping	Hyundai Heavy	14/11/2023	174,000		01/02/2028
Hd Hyundai Ulsan 3476	Qatar Energy Trading	Hyundai Heavy	01/09/2023	174,000	XDF	01/01/2027
Hd Hyundai Ulsan 3477	Qatar Energy Trading	Hyundai Heavy	01/09/2023	174,000	XDF	01/02/2027
Hd Hyundai Ulsan 3478	Qatar Energy Trading	Hyundai Heavy	01/09/2023	174,000	XDF	01/04/2027

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 = 19 February 2024

Fearnley LNG

Name	Owners	Yard	Ordered	Capacity	Propulsion	Delivery
Hd Hyundai Ulsan 3479	Qatar Energy Trading	Hyundai Heavy	01/09/2023	174,000	XDF	01/05/2027
Hd Hyundai Ulsan 3480	Qatar Energy Trading	Hyundai Heavy	01/09/2023	174,000	XDF	01/07/2027
Hd Hyundai Ulsan 3481	Qatar Energy Trading	Hyundai Heavy	01/09/2023	174,000	XDF	01/08/2027
Hd Hyundai Ulsan 3482	Qatar Energy Trading	Hyundai Heavy	01/09/2023	174,000	XDF	01/09/2027
Hd Hyundai Ulsan 3483	Qatar Energy Trading	Hyundai Heavy	01/09/2023	174,000	XDF	01/10/2027
Hd Hyundai Ulsan 3484	Qatar Energy Trading	Hyundai Heavy	01/09/2023	174,000	XDF	01/11/2027
Hd Hyundai Ulsan 3485	Qatar Energy Trading	Hyundai Heavy	01/09/2023	174,000	XDF	01/12/2027
Hd Hyundai Ulsan 3486	Qatar Energy Trading	Hyundai Heavy	01/09/2023	174,000	XDF	01/05/2028
Hd Hyundai Ulsan 3487	Qatar Energy Trading	Hyundai Heavy	01/09/2023	174,000	XDF	01/07/2028
Hd Hyundai Ulsan 3488	Qatar Energy Trading	Hyundai Heavy	01/09/2023	174,000	XDF	01/09/2028
Hd Hyundai Ulsan 3489	Qatar Energy Trading	Hyundai Heavy	01/09/2023	174,000	XDF	01/11/2028
Hd Hyundai Ulsan 3490	Qatar Energy Trading	Hyundai Heavy	01/09/2023	174,000	XDF	01/03/2029
Hd Hyundai Ulsan 3491	Qatar Energy Trading	Hyundai Heavy	01/09/2023	174,000	XDF	01/06/2029
Hd Hyundai Ulsan 3492	Qatar Energy Trading	Hyundai Heavy	01/09/2023	174,000	XDF	01/09/2029
Hl Alyssa Warner	H-Line	Samsung	01/02/2022	174,000	ME-GA	01/03/2025
Hl Edward Austin	H-Line	Samsung	01/02/2022	174,000	ME-GA	01/05/2025
HL Fortuna	H-Line	Hyundai Samho	01/01/2022	174,000	XDF	01/04/2025
Hl Puffin	H-Line	Samsung	01/02/2022	174,000	ME-GA	01/09/2025
Hl Sea Eagle	H-Line	Samsung	01/02/2022	174,000	ME-GA	01/06/2025
HLS Bilbao	Hyundai LNG Shipping	Hanwha Ocean	01/05/2021	174,000	MEGI	01/03/2024
Hudong Qatar 1	Qatar Energy Trading	Hudong-Zhonghua	12/01/2024	271,000		01/03/2028
Hudong Qatar 2	Qatar Energy Trading	Hudong-Zhonghua	12/01/2024	271,000		01/06/2028
Hudong Qatar 3	Qatar Energy Trading	Hudong-Zhonghua	12/01/2024	271,000		01/09/2028
Hudong Qatar 4	Qatar Energy Trading	Hudong-Zhonghua	12/01/2024	271,000		01/12/2028
Hudong Qatar 5	Qatar Energy Trading	Hudong-Zhonghua	12/01/2024	271,000		01/03/2029
Hudong Qatar 6	Qatar Energy Trading	Hudong-Zhonghua	12/01/2024	271,000		01/06/2029
Hudong Qatar 7	Qatar Energy Trading	Hudong-Zhonghua	12/01/2024	271,000		01/09/2029
Hudong Qatar 8	Qatar Energy Trading	Hudong-Zhonghua	12/01/2024	271,000		01/12/2029
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
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
Hudong-zhonghua H1835a	ULT	Hudong-Zhonghua	01/12/2021	174,000	XDF	01/12/2024
Hudong-zhonghua H1836a	ULT	Hudong-Zhonghua	01/12/2021	174,000	XDF	01/03/2025
Hudong-zhonghua H1880a	MOL	Hudong-Zhonghua	01/01/2022	174,000	XDF	01/10/2024
Hudong-zhonghua H1881a	MOL	Hudong-Zhonghua	01/01/2022	174,000	XDF	01/08/2025
Hudong-zhonghua H1882a	MOL	Hudong-Zhonghua	01/01/2022	174,000	XDF	01/10/2025
Hudong-zhonghua H1883a	MOL	Hudong-Zhonghua	01/01/2022	174,000	XDF	01/03/2026
Hudong-zhonghua H1884a	MOL	Hudong-Zhonghua	01/01/2022	174,000	XDF	01/06/2026
Hudong-zhonghua H1885a	MOL	Hudong-Zhonghua	01/01/2022	174,000	XDF	01/09/2026
Hudong-zhonghua H1886a	NYK	Hudong-Zhonghua	01/06/2023	174,000	XDF	01/08/2026
Hudong-zhonghua H1887a	NYK	Hudong-Zhonghua	01/06/2023	174,000	XDF	01/10/2026
Hudong-zhonghua H1888a	NYK	Hudong-Zhonghua	01/06/2023	174,000	XDF	01/12/2026
Hudong-zhonghua H1889a	NYK	Hudong-Zhonghua	01/04/2022	174,000	XDF	01/03/2027
Hudong-zhonghua H1890a	NYK	Hudong-Zhonghua	01/04/2022	174,000	XDF	01/05/2027

DFDE = dual fuel diesel engines, STRH = steam turbine reheat / ultra steam turbine, MEGI = marine electric gas injection,
DRL = slow speed diesel, FSRU = vessel with regas capacity, FLNG = floating LNG production unit
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Name	Owners	Yard	Ordered	Capacity	Propulsion	Delivery
Hudong-zhonghua H1891a	NYK	Hudong-Zhonghua	01/06/2023	174,000	XDF	01/10/2027
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
Hudong-zhonghua H1894a	K-Line	Hudong-Zhonghua	01/09/2022	174,000	XDF	01/10/2026
Hudong-zhonghua H1895a	K-Line	Hudong-Zhonghua	01/09/2022	174,000	XDF	01/12/2026
Hudong-zhonghua H1896a	K-Line	Hudong-Zhonghua	01/09/2022	174,000	XDF	01/03/2027
Hudong-zhonghua H1897a	K-Line	Hudong-Zhonghua	01/09/2022	174,000	XDF	01/06/2027
Hudong-zhonghua H1898a	MOL, COSCO, ENN	Hudong-Zhonghua	01/06/2023	174,000	XDF	01/10/2027
Hudong-zhonghua H1899a	MOL, COSCO, ENN	Hudong-Zhonghua	01/06/2023	174,000	XDF	01/12/2027
Hudong-zhonghua H1900a	MOL, COSCO, ENN	Hudong-Zhonghua	01/06/2023	174,000	XDF	01/03/2028
Hudong-zhonghua H1901a	CSSC	Hudong-Zhonghua	01/05/2023	174,000	XDF	31/05/2028
Hudong-zhonghua H1902a	CSSC	Hudong-Zhonghua	01/05/2023	174,000	XDF	01/09/2028
Hudong-zhonghua H1903a	CSSC	Hudong-Zhonghua	01/05/2023	174,000	XDF	01/12/2028
Hudong-zhonghua H1908a	ULT	Hudong-Zhonghua	01/06/2023	174,000	XDF	01/11/2025
Hudong-zhonghua H1909a	ULT	Hudong-Zhonghua	01/06/2023	174,000	XDF	01/12/2025
Hyundai Samho 8049	NYK	Hyundai Samho	01/08/2022	174,000	XDF	01/03/2025
Hyundai Samho 8100	Knutsen	Hyundai Samho	01/12/2020	174,000	ME-GA	01/11/2024
Hyundai Samho 8170	Hyundai Glovis	Hyundai Samho	01/02/2022	174,000	ME-GA	01/08/2024
Hyundai Samho 8174	NYK	Hyundai Samho	01/08/2022	174,000	XDF	01/10/2025
Hyundai Samho 8179	Knutsen	Hyundai Samho	01/03/2022	174,000	ME-GA	01/03/2025
Hyundai Samho 8180	Knutsen	Hyundai Samho	01/03/2022	174,000	ME-GA	01/06/2025
Hyundai Samho 8181	Knutsen	Hyundai Samho	01/04/2022	174,000	ME-GA	01/12/2025
Hyundai Samho 8182	TMS Cardiff Gas	Hyundai Samho	01/10/2022	174,000	XDF	01/01/2026
Hyundai Samho 8188	SK Shipping	Hyundai Samho	01/05/2022	174,000	ME-GA	01/07/2025
Hyundai Samho 8189	SK Shipping	Hyundai Samho	01/05/2022	174,000	ME-GA	01/08/2025
Hyundai Samho 8200	TMS Cardiff Gas	Hyundai Samho	01/07/2022	174,000	XDF	01/03/2026
Hyundai Samho 8201	TMS Cardiff Gas	Hyundai Samho	01/07/2022	174,000	XDF	01/08/2026
Hyundai Samho 8204	Oman Shipping Co.	Hyundai Samho	01/01/2023	174,000		01/05/2026
Hyundai Samho 8205	Oman Shipping Co.	Hyundai Samho	01/01/2023	174,000		01/06/2026
Hyundai Samho 8208	NYK	Hyundai Samho	01/02/2023	174,000	XDF	01/12/2026
Hyundai Samho 8209	NYK	Hyundai Samho	01/02/2023	174,000	XDF	01/07/2027
Hyundai Samho 8210	NYK	Hyundai Samho	01/02/2023	174,000	XDF	01/12/2027
Hyundai Samho 8238	NYK	Hyundai Samho	01/02/2023	174,000	XDF	01/05/2027
Hyundai Samho 8239	NYK	Hyundai Samho	01/02/2023	174,000	XDF	01/10/2027
Hyundai Ulsan 3380	Knutsen	Hyundai Heavy	01/06/2022	174,000	XDF	01/05/2025
Hyundai Ulsan 3381	Knutsen	Hyundai Heavy	01/06/2022	174,000	XDF	01/06/2025
Hyundai Ulsan 3382	Knutsen	Hyundai Heavy	01/07/2022	174,000	XDF	01/07/2025
Hyundai Ulsan 3383	Knutsen	Hyundai Heavy	01/07/2022	174,000	XDF	01/11/2025
Hyundai Ulsan 3384	Knutsen	Hyundai Heavy	01/07/2022	174,000	XDF	01/02/2026
Hyundai Ulsan 3385	Knutsen	Hyundai Heavy	01/07/2022	174,000	XDF	01/04/2026
Hyundai Ulsan 3386	Knutsen	Hyundai Heavy	01/07/2022	174,000	XDF	01/08/2025
Hyundai Ulsan 3387	Knutsen	Hyundai Heavy	01/07/2022	174,000	XDF	01/08/2026
Hyundai Ulsan 3393	Knutsen	Hyundai Heavy	01/07/2022	174,000	XDF	01/12/2025
Hyundai Ulsan 3394	Knutsen	Hyundai Heavy	01/07/2022	174,000	XDF	01/12/2025
Hyundai Ulsan 3395	NYK, MISC, K-Line, China LNG Shipping Holdings	Hyundai Heavy	01/08/2022	174,000	XDF	01/08/2025
Hyundai Ulsan 3396	NYK, MISC, K-Line, China LNG Shipping Holdings	Hyundai Heavy	01/08/2022	174,000	XDF	01/12/2025
Hyundai Ulsan 3397	NYK, MISC, K-Line, China LNG Shipping Holdings	Hyundai Heavy	01/08/2022	174,000	XDF	01/01/2026
Hyundai Ulsan 3398	NYK, MISC, K-Line, China LNG Shipping Holdings	Hyundai Heavy	01/08/2022	174,000	XDF	01/07/2026
Hyundai Ulsan 3399	NYK, MISC, K-Line, China LNG Shipping Holdings	Hyundai Heavy	01/08/2022	174,000	XDF	01/09/2026
Hyundai Ulsan 3400	NYK, MISC, K-Line, China LNG Shipping Holdings	Hyundai Heavy	01/08/2022	174,000	XDF	01/12/2026
Hyundai Ulsan 3401	NYK, MISC, K-Line, China LNG Shipping Holdings	Hyundai Heavy	01/08/2022	174,000	XDF	01/12/2026

DFDE = dual fuel diesel engines, STRH = steam turbine reheat / ultra steam turbine, MEGI = marine electric gas injection,
DRL = slow speed diesel, FSRU = vessel with regas capacity, FLNG = floating LNG production unit
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Fearnley LNG

Name	Owners	Yard	Ordered	Capacity	Propulsion	Delivery
Ilya Mechnikov	MOL, COSCO	Hanwha Ocean	01/08/2020	172,500	TFDE - Azipod	01/03/2024
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
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
Jiangnan H2705	ADNOC	Jiangnan	01/05/2022	175,000	XDF	01/09/2026
JIANGSU YANGZI XINFU YZJ2022-1475	Hammonia Reederei	Yangzijiang	01/10/2022	175,000	ME-GA	01/11/2025
JIANGSU YANGZI XINFU YZJ2022-1476	Hammonia Reederei	Yangzijiang	01/10/2022	175,000	ME-GA	01/05/2026
Kool Panther	Cool Co	Hyundai Samho	01/06/2022	174,000	ME-GA	01/12/2024
Kool Tiger	Cool Co	Hyundai Samho	01/06/2022	174,000	ME-GA	31/08/2024
Lev Landau	Hanwha Ocean	Hanwha Ocean	01/08/2020	172,500	TFDE - Azipod	01/03/2024
Lng Ping Hu	Zhejiang Huaxiang	Jiangsu Yixiang	01/07/2023	78,900	XDF	01/12/2024
Marseille Knutsen	Knutsen	Hyundai Samho	01/07/2021	174,000	ME-GA	01/09/2025
Marvel Dove	SK Shipping	Hyundai Samho	01/01/2022	174,000	ME-GA	01/09/2024
Mulan Spirit	Jovo Energy	Jiangnan	01/05/2021	79,800	XDF	01/03/2024
Nakilat 1	Nakilat	Hyundai Samho	09/01/2024	174,000		01/12/2026
Nakilat 2	Nakilat	Hyundai Samho	09/01/2024	174,000		01/03/2027
New Brave	Pan Ocean	Hyundai Heavy	01/12/2020	174,000	XDF	01/09/2024
New Green	Pan Ocean	Hyundai Heavy	01/07/2021	174,000	ME-GA	01/10/2024
New Nature	Pan Ocean	Hyundai Heavy	01/12/2020	174,000	XDF	01/10/2024
New Oasis	Pan Ocean	Hyundai Heavy	01/07/2021	174,000	ME-GA	01/12/2024
Nikolay Basov	MOL, COSCO	Hanwha Ocean	01/08/2020	172,500	TFDE - Azipod	01/03/2024
Nikolay Semenov	MOL, COSCO	Hanwha Ocean	01/08/2020	172,500	TFDE - Azipod	01/05/2026
North Wind	NYK	Samsung	01/10/2021	174,000	XDF	01/02/2024
Nuaijah	H-Line, Pan Ocean, SK Shipping	Hanwha Ocean	01/06/2022	174,000	ME-GA	01/12/2024
Orion Gaugin	JP Morgan	Hyundai Heavy	01/07/2021	174,000	ME-GA	01/09/2025
Orion Hugo	JP Morgan	Hyundai Heavy	01/07/2021	174,000	ME-GA	01/07/2025
Orion Sinead	JP Morgan	Hyundai Heavy	01/12/2020	174,000	XDF	01/11/2024
Pacific Success	SinoKor	Samsung	01/12/2019	173,400	XDF	01/03/2024
Puteri Ledang	Hyundai LNG Shipping	Hyundai Heavy	01/07/2021	174,000	XDF	01/05/2024
Puteri Mahsuri	Hyundai LNG Shipping	Hyundai Heavy	01/07/2021	174,000	XDF	01/11/2024
Puteri Mayang	Hyundai LNG Shipping	Hyundai Heavy	01/07/2021	174,000	XDF	01/01/2025
Puteri Saadong	Hyundai LNG Shipping	Hyundai Heavy	01/04/2021	174,000	XDF	01/02/2024
Puteri Sabah	SK Shipping	Hyundai Heavy	01/05/2022	174,000	ME-GA	01/02/2025
Puteri Santubong	Hyundai LNG Shipping	Hyundai Heavy	01/04/2021	174,000	XDF	01/06/2024
Puteri Sarawak	SK Shipping	Hyundai Heavy	01/05/2022	174,000	ME-GA	01/03/2025
Puteri Sejinjang	Hyundai LNG Shipping	Hyundai Heavy	01/04/2021	174,000	XDF	01/07/2024
Pyotr Kapitsa	Hanwha Ocean	Hanwha Ocean	01/08/2020	172,500	TFDE - Azipod	01/03/2024
Pyotr Stolypin	Smart LNG	Zvezda SSK	01/09/2019	172,600	TFDE - Azipod	01/06/2024
Samsung 2316	SinoKor	Samsung	01/12/2019	173,400	ME-GA	01/09/2026
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
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
Samsung 2592	JP Morgan	Samsung	01/10/2021	174,000		01/04/2024
Samsung 2594	JP Morgan	Samsung	01/10/2021	174,000		01/09/2024
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
Samsung 2598	Celsius Shipping	Samsung	01/12/2021	180,000	ME-GA	01/01/2025
Samsung 2599	Celsius Shipping	Samsung	01/12/2021	180,000	ME-GA	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 2602	H-Line, Pan Ocean, SK Shipping	Samsung	01/01/2022	174,000	ME-GA	01/12/2024

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DRL = slow speed diesel, FSRU = vessel with regas capacity, FLNG = floating LNG production unit
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Name	Owners	Yard	Ordered	Capacity	Propulsion	Delivery
Samsung 2603	H-Line, Pan Ocean, SK Shipping	Samsung	01/01/2022	174,000	ME-GA	01/12/2024
Samsung 2604	NYK	Samsung	01/12/2021	174,000	XDF	25/11/2024
Samsung 2612	Pan Ocean, SK Shipping, H-Line	Samsung	01/09/2022	174,000	ME-GA	01/02/2025
Samsung 2619	Celsius Shipping	Samsung	01/03/2022	180,000	ME-GA	01/10/2025
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
Samsung 2634	JP Morgan	Samsung	01/06/2022	174,000	ME-GA	01/05/2025
Samsung 2635	TMS Cardiff Gas	Samsung	01/04/2022	174,000	ME-GA	01/08/2024
Samsung 2636	TMS Cardiff Gas	Samsung	01/04/2022	174,000	ME-GA	01/03/2026
Samsung 2637	JP Morgan	Samsung	01/06/2022	174,000	ME-GA	01/07/2025
Samsung 2638	JP Morgan	Samsung	01/06/2022	174,000	ME-GA	01/08/2025
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	01/10/2025
Samsung 2641	JP Morgan	Samsung	01/06/2022	174,000	ME-GA	01/11/2025
Samsung 2642	JP Morgan	Samsung	01/06/2022	174,000	ME-GA	01/01/2026
Samsung 2643	JP Morgan	Samsung	01/06/2022	174,000	ME-GA	01/02/2026
Samsung 2644	JP Morgan	Samsung	01/06/2022	174,000	ME-GA	01/05/2026
Samsung 2645	JP Morgan	Samsung	01/06/2022	174,000	ME-GA	01/06/2026
Samsung 2646	JP Morgan	Samsung	01/06/2022	174,000	ME-GA	01/07/2026
Samsung 2647	JP Morgan	Samsung	01/06/2022	174,000	ME-GA	01/08/2026
Samsung 2651	Celsius Shipping	Samsung	01/10/2022	180,000	ME-GA	01/11/2025
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	01/11/2022	174,000	ME-GA	01/03/2027
Samsung 2657	Seapeak	Samsung	01/11/2022	174,000	ME-GA	01/05/2027
Samsung 2658	Seapeak	Samsung	01/11/2022	174,000	ME-GA	01/08/2027
Samsung 2659	Seapeak	Samsung	01/11/2022	174,000	ME-GA	01/09/2027
Samsung 2660	Seapeak	Samsung	01/11/2022	174,000	ME-GA	01/12/2027
Samsung 2662	MOL	Samsung	20/01/2023	174,000	ME-GA	01/09/2026
Samsung 2663	MOL	Samsung	20/01/2023	174,000	ME-GA	01/01/2027
Samsung 2664	K-Line	Samsung	31/03/2023	174,000	ME-GA	01/05/2026
Samsung 2665	K-Line	Samsung	31/03/2023	174,000	ME-GA	01/09/2026
Samsung 2668	Chevron	Samsung	01/06/2023	174,000		01/11/2027
Samsung 2669	Chevron	Samsung	01/06/2023	174,000		01/01/2028
Samsung 2687	MOL	Samsung	01/11/2023	174,000		01/09/2026
Samsung Qatar 1	Qatar Energy Trading	Samsung	06/02/2024	174,000		01/06/2026
Samsung Qatar 10	Qatar Energy Trading	Samsung	06/02/2024	174,000		01/12/2027
Samsung Qatar 11	Qatar Energy Trading	Samsung	06/02/2024	174,000		01/02/2028
Samsung Qatar 12	Qatar Energy Trading	Samsung	06/02/2024	174,000		01/04/2028
Samsung Qatar 13	Qatar Energy Trading	Samsung	06/02/2024	174,000		01/06/2028
Samsung Qatar 14	Qatar Energy Trading	Samsung	06/02/2024	174,000		01/08/2028
Samsung Qatar 15	Qatar Energy Trading	Samsung	06/02/2024	174,000		01/10/2028
Samsung Qatar 2	Qatar Energy Trading	Samsung	06/02/2024	174,000		01/08/2026
Samsung Qatar 3	Qatar Energy Trading	Samsung	06/02/2024	174,000		01/10/2026
Samsung Qatar 4	Qatar Energy Trading	Samsung	06/02/2024	174,000		01/12/2026
Samsung Qatar 5	Qatar Energy Trading	Samsung	06/02/2024	174,000		01/02/2027
Samsung Qatar 6	Qatar Energy Trading	Samsung	06/02/2024	174,000		01/04/2027
Samsung Qatar 7	Qatar Energy Trading	Samsung	06/02/2024	174,000		01/06/2027
Samsung Qatar 8	Qatar Energy Trading	Samsung	06/02/2024	174,000		01/08/2027
Samsung Qatar 9	Qatar Energy Trading	Samsung	06/02/2024	174,000		01/10/2027
Sergei Witte	Smart LNG	Zvezda SSK	01/09/2019	172,600	TFDE - Azipod	01/08/2024
Shandong 1	Shandong Marine	Jiangnan	01/03/2023	175,000		01/03/2027
Shandong 2	Shandong Marine	Jiangnan	01/03/2023	175,000		01/07/2027
Venture Gator	JP Morgan	Samsung	01/10/2021	174,000		01/06/2024
Zhores Alferov	Hanwha Ocean	Hanwha Ocean	01/08/2020	172,500	TFDE - Azipod	01/03/2024

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 = 19 February 2024

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	Titan Vision	12,000	LNG/LPG/Ethylene	Europe	No	Titan LNG
2011	Titan Unikum	12,000	LNG/LPG/Ethylene	Europe	No	Titan LNG
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
2018	HUA XIANG 8	13,720	LNG	China	Yes	Zhejiang Huaxiang
2019	Blue Whale	7,500	LNG	Korea	Yes	Korea Line

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Built	Name	CBM	Cargo Type	Trading area	Trading in LNG?	Ship Owner / Operator
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	Levante LNG	12,500	LNG	Spain	Yes	Knutsen OAS
2023	SM Jeju LNG3	7,500	LNG	Korea	Yes	Korea Line
2023	New Frontier 2	18,000	LNG	USG	Yes	Shell
2023	Krios	4,200	LNG	Benelux	Yes	Titan LNG
2023	Alice Cosulich	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	Clean Everglades	5,500	LNG	USG	Yes	PNE
2023	FueLNG Venosa	18,000	LNG	Singapore	Yes	FuelLNG
2023	LNG Erasmus	8,000	LNG	NWE	Yes	Shell
2023	Energy Stockholm	8,000	LNG	NWE	Yes	Shell
2024	Coral Evolution	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 Garbaldi	7,600	LNG	Panama	Yes	Seaspan ULC
2024	Paolina Cosulich	8,000	LNG	Mediterranean	Yes	Fratelli Cosulich
2024	Anhui Changjiang TBN	14,000	LNG	China	Yes	Anhui Changjiang LNG
2024	Keys Azalea	3,500	LNG	Japan	Yes	Keys Bunkering West Japan
2024	Seaspan Lions	7,600	LNG	Canada	Yes	Seaspan ULC
2024	Hai Yang Shi You 302	12,000	LNG	China	Yes	CETS (CNOOC)
2025	Axpo TBN	7,500	LNG	Italy	Yes	Axpo
2025	Seaspan TBN 3	7,600	LNG	Canada	Yes	Seaspan ULC
2026	Avenir TBN (option)	20,000	LNG	Worldwide	Yes	Avenir LNG
2027	Avenir TBN (option)	20,000	LNG	Worldwide	Yes	Avenir LNG
2026	ScaleGas TBN	12,500	LNG	Spain	Yes	ScaleGas

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