LNG Shipping News

AN LNG JOURNAL TITLE ON LNG CARRIERS | 14 April 2022

LNGC fleet growth to be sustained

For the past two years, the LNGC sector has been in a period of rapid growth, which is likely to continue for several years to come.

There have been very few ships sold for recycling recently but with older LNGCs built of high quality steel and especially if they have been substantially written down in the books, owners could gain a significant profit from the breaking yards, Howe Robinson's head of LNG, Debbie Turner, said.

Speaking at a Bureau Veritas LNG webinar, she said that the days of an LNGC operating for up to 40 years were gone, as the norm will be around 20-25 years.

There will be huge demand for shipyard newbuilding slots given that the 17 or so Mozambique newbuildings have still to be placed and only around 20 of Qatar's massive newbuilding LNGC project have been ordered - the first four have just been allocated to MOL.

She thought that there was only one slot left for 2024 delivery in the main Chinese and South Korean LNGC building yards and that 2025 was now also proving to be tight. She said that 2026 was "the go to year."

This year, both Dalian and Jiangnan were added to the Chinese LNGC capable shipyard by winning orders. As for the Japanese yards, they ceased building LNGCs in 2018, due to technical and price problems but could resurface.

On the back of demand, the fleet could grow by 40 ships per annum through 2030 with 2026 and 2027 even exceeding that figure. One problem is the availability of steel in the South Korean yards as there are other ship types vying for the same slots, especially containerships, Turner warned.

Most of the orders booked were not fleet replacements, she stressed, but rather contracted on the back of planned projects worldwide or long term charters. She thought that out of the modern gas injection fleet, there were less than 10, which were charter free and the first one to be delivered will be in the third quarter of next year.

Rates higher

As for the charter sector, the spot market between 2018 and 2022 saw the lower numbers become higher and the higher numbers also increasing. In 2021, it was noticed that there was more interest in sub-lets, as several players, traders, etc, took LNGCs for 12 months or longer.

She described the short term market as "volatile", while term business remained relatively firm, which is likely to continue. There have been production outages, most notably with Snohvit and Shell's 'Prelude' but both of these production terminals should come back on line soon, especially 'Prelude', which has already booked its first cargo.

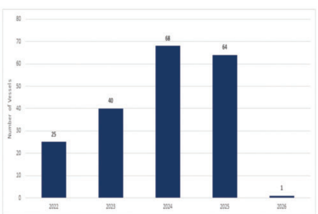
Delays in Panama Canal transits with some vessels waiting for up to 15 days if a slot had not been reserved in advance, hurricanes hitting production in the US Gulf, and the new IMO regulations coming in next year, have and could still affect the market. For example, the CII and EEXI regulations could lead to an average economic speed of 16.5 to 16.9 knots, instead of the 19 knots most vessels are designed for. This depends on the vessel's propulsion system.

Turner thought that the high gas prices were also here to stay and today's Geopolitics could see a dramatic change, as LNG cannot replace the 40% of Russian gas that could be lost due to the conflict in Ukraine. Turner also cast doubt on the US' ability to produce the volumes promised to the Europeans by the end of this year.

Most of the US projects' LNG is being offered on an FOB basis with the contractors looking for tonnage, while the offtakers were only committing to periods of around seven years, plus options. Here the finance picture has also changed to more commercial rather than project based.

FSRUs are not the immediate answer, as less than three of four are currently idle. It takes around 12-18 months to convert an LNGC to an FSRU, while all the necessary infrastructure needs to be in place before any LNG can be transferred, which could be costly. ■

Fleet growth

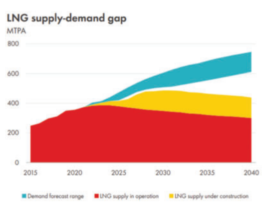


- 2024 will see the largest number of deliveries in a year
- Still awaiting additional orders from Qatar with options held
- Mozambique vessels on hold until year end but deliveries pushed into 2026 and 2027
- New orders now being considered for 2026

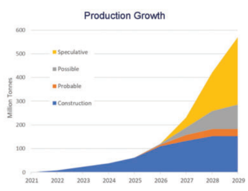
Source: HRP

Prospective projects vs. LNG demand

Project FIDs will be limited by magnitude of supply/demand gap: ~ 60-70 mpta by 2030?



Source: Shell LNG Outlook 2022



Source: HRP

SHIPPING NEWS AGENDA

US projects to capture demand surge

US LNG projects were already high on the list of new capacity being prepared for final investment decisions (FID) in 2022/2023 before Russia's invasion of Ukraine reinforced their need.

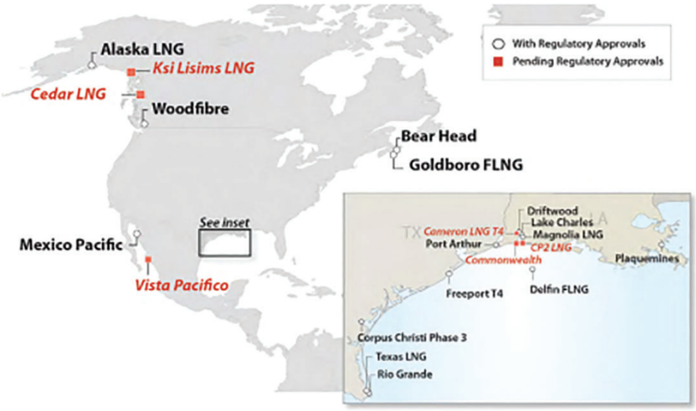
A tight window for buyers wanting to secure alternative energy supply to reduce reliance on Russian energy could tip the balance of power towards certain sellers, according to Poten and Partners' 'LNG in World Markets'.

Recent sanctions and the exit of some western companies have made it much harder to develop new liquefaction projects in Russia, while completion of NOVATEK's 19.8 mill tonnes per year Arctic LNG 2 project risks being delayed.

If sanctions are increased and international contractors withdraw their services, it is likely that Train 1 of the three-train project would still be built because much of the equipment needed is already in Russia.

While the outlook is more blurred for Trains 2 and 3, the modules are coming from China, which has not joined the rounds of sanctions imposed by the US, EU, and others.

There is a perceived 'war' risk premium even for non-Russian volumes that would be available from 2025. However, Venture Global's low-price strategy for 20-year contracts captured most of the US LNG sales and purchase agreements (SPAs) signed in the last five years, while several other US projects were put on hold or delayed as they could not compete against sub-$2 per MMBtu fixed fees on offer.



Source: Poten & Partners

Projects ranked

Buyers tend to rank projects with existing Federal Energy and Regulatory Commission (FERC) approvals, engineering, procurement, and construction (EPC) agreements and sufficient offtake agreements higher on their list. FERC's recent backtracking on greenhouse gas emissions policies for natural gas infrastructure following industry feedback, removed policy uncertainty for new export capacities, Poten said.

There is a long pipeline of fully US permitted projects. However, even if some could achieve FID this year, they wouldn't produce their first LNG until 2026-2027 onwards.

Politics aside, US LNG supply has increasingly become more valuable to buyers because of rising market volatility and high Brent prices. Therefore, there has been a bigger push to secure more US LNG volumes, as Henry Hub is perceived as a stable price benchmark and adds price diversification to a supply portfolio.

The US has pledged to work with global partners to supply an additional 15 bill cu m of LNG to the EU this year, as both sides look to shore up Europe's energy and gas supply security. The EU will also work towards an extra 50 bill cu m offtake per year of US LNG through 2030. ■

JERA to maximise LNG portfolio from Singapore

JERA LNG Portfolio Strategy (LPS) has been established by the Japanese energy giant.

Based in Singapore, LPS is described as a strategic base to maximise the value of JERA's LNG portfolio.

To achieve a stable supply of affordable energy, an optimal LNG portfolio will be built up that takes into account stability, economic efficiency, and flexibility, the company said.

About 50 years ago, Japan became the world's first country to start commercial use of LNG.

However, the LNG environment has changed drastically over the past 10 years, as LNG use has expanded, with increased complexity, due to more intense competition, diversification of contract terms and price indices, increased commoditisation, improved spot market liquidity and greater market price volatility.

In line with these trends, many global LNG players are moving into Singapore, which is now an emerging centre of LNG trading in Asia.

As market complexity increased, some terms and conditions in long-term LNG sales and purchase agreements (SPAs) that JERA concluded in the past are no longer in line with actual conditions for either party.

In addition, negotiating the revision of prices stipulated in long-term LNG SPAs requires the latest knowledge of and expertise in the LNG market, the company further explained.

To address these challenges, JERA LPS was established as a new company with expertise and experience in both LNG market analysis and the fields of commerce, law, and negotiation.

LPS will be responsible for negotiating revisions to terms and conditions and prices in JERA's existing long-term LNG SPAs, analysing the LNG market based on the latest information, and formulating JERA's LNG portfolio strategy. ■

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Cameron LNG Phase 2 advances

Sempra Infrastructure has signed a Heads of Agreement (HoA) to develop the Cameron LNG Phase 2 export project in Hackberry, Louisiana.

The HoA was agreed with with affiliates of TotalEnergies, Mitsui & Co and Japan LNG Investment - a company jointly owned by Mitsubishi Corp and NYK.

"We are excited to continue advancing Cameron LNG Phase 2 with our partners," said Justin Bird, Sempra Infrastructure CEO. "Today's announcement represents the shared focus of the Cameron LNG partners to increase the supply of cleaner US natural gas to global markets, while also facilitating the energy security of our allies."

This agreement provides the commercial framework to add a fourth LNG train and increase the production capacity of the three operating trains through de-bottlenecking activities.

It also includes the allocation of 50.2% of the projected fourth train production capacity and 25% of projected de-bottlenecking capacity to Sempra under tolling agreements.The remaining capacity will be allocated equally to the existing Cameron LNG Phase 1 customers.

Sempra plans to sell its LNG under long-term sale and purchase agreements (SPAs) prior to taking a final investment decision (FID).

FEED contracts

The developer also announced that Cameron LNG had awarded two front-end engineering design (FEED) contracts to Bechtel Energy and a joint venture between JGC America and Zachry Industrial. At the conclusion of this competitive FEED process, one company is expected to be chosen to conduct the engineering, procurement and construction (EPC) for the project.

The planned Cameron LNG Phase 2 project is expected to include a single LNG train with a maximum production capacity of 6.75 mill tonnes per annum of LNG, as well as the de-bottlenecking of the existing three trains.

This project is expected to include certain design enhancements resulting in a more cost-effective and efficient facility, while also reducing overall greenhouse gas emissions, Sempra said.

In another move, Sempra and Korea Gas Corp (KOGAS) have entered into a memorandum of understanding (MoU) to explore opportunities to co-operate in the energy transition to lower-carbon and zero-carbon fuels.

An earlier artist's rendition of Cameron LNG

The MOU covers the companies' joint collaboration around project development and offtake across multiple business areas, including LNG.

In addition, Sempra and TotalEnergies are to expand their North American alliance through a non-binding memorandum of understanding (MoU) for the proposed Vista Pacífico LNG export facility in Topolobompo, Mexico.

The MoU could lead to TotalEnergies contracting for around one-third of the LNG facility's long-term export production, as well as the French energy company's potential participation as a minority equity investor in the project. ■

NFE applies for US Gulf 'Fast LNG' solution

New Fortress Energy (NFE) has filed applications with the US Maritime Administration (MarAd), the US Coast Guard (USCG) and US Department of Energy (DoE) for permits and regulatory approvals to build and operate an offshore LNG liquefaction terminal off the Louisiana coast.

This project has a planned export capacity of about 145 bill cu ft of natural gas per year, equivalent to around 2.8 mill tonnes per annum of LNG.

"This announcement demonstrates the flexibility, efficiency and significance of our innovative 'Fast LNG' solution to bring more affordable, reliable and cleaner fuels to customers around the world," said Wes Edens, NFE Chairman and CEO. "This is a big step in the growth of our 'Fast LNG' portfolio, which will include both tolling liquefaction for high credit worthy partners like ENI, as well as market volumes from our merchant assets like these.

"With rapid deployment, this project can play a significant role in supporting our nation's commitment to our European allies and their energy security, as well as support our efforts to reduce emissions and energy poverty around the world," he said.

The plant will be located in US waters about 16 miles off the southeast coast of Grand Isle, Louisiana. It will access abundant US gas supplies by leveraging existing infrastructure.

Procurement of all the long-lead materials is complete and modular assembly of equipment is underway. Subject to the receipt of all required permits and approvals, NFE targets beginning operations in the first quarter of 2023.

NFE's 'Fast LNG' liquefaction design pairs the latest advancements in modular, midsize liquefaction technology with jack up rigs or similar offshore infrastructure to enable a much lower cost and faster deployment schedule than today's floating liquefaction vessels and onshore liquefaction terminals.

With the recent announcement by the US and European Commission to ensure additional LNG volumes for the EU, LNG production off the coast of Louisiana can support the European goal to end its dependence on Russian fossil fuels, as well as NFE's growing business of reducing emissions and pollution by providing a cleaner, affordable and reliable alternative to oil-based fuels worldwide, the company said. ■

Adriatic's 2022 open season unveiled

Adriatic LNG, operator of the largest LNG regasification terminal in Italy, will launch the 2022 Open Season at the end of May.

The company has published an information leaflet on its website relating to the allocation the LNG regasification capacity available from the end of 2022 to 2047.

This provides information on the LNG regasification capacity that will be offered through 'Open Season 2022' and the main provisions for access to services and capacity allocation, as well as details on the bidding phases and the evaluation and allocation methodology.

Given the nominal LNG regasification capacity of 9 bill cu m per year and the capacity already booked, Adriatic LNG will make available about 147 bill cu m for the next 25 years, the company said.

This year, the open season will be developed in two phases: an initial non-binding pre-qualification phase expected to take place in June, 2022 and a second binding phase the following month.

At the same time, Adriatic LNG intends to test the market on the possible development of regasification capacity for a further increase of 0.5 bill cu m per year of natural gas - and/or the development of a Wobbe index correction service in order to receive LNG from more supply sources.

When the first open season closed in December, 2021, Adriatic LNG allocated around 2 bill cu m capacity over a period of about three years.

Remaining in Italy, the country is considering to install another two FSRUs, as part of plans to cut the use of Russian gas.

The Italian Energy Transition Minister said last week that Snam was mandated to negotiate the purchase on one and the leasing of a second.

They will probably be located in the Tyrrhenian Sea and in the Adriatic. ■

New 'Open Season' announced

NEWS NUDGE

Golar sells NFE shares

Golar LNG Limited has sold around one third of the 18.6 mill New Fortress Energy (NFE) shares received upon completion of the sale of Hygo Energy Transition to NFE in April, 2021.

The sale is expected to raise net proceeds of about $250 mill, which Golar will seek to use for FLNG projects.

'Prelude' back online

Shell has resumed shipping LNG from FLNG 'Prelude' off northwest Australia after a four-month shutdown due to a major power failure.

A cargo completed loading and left the site on Sunday night, a Shell spokesperson told Reuters, declining to disclose the destination.

The 3.6 mill tonnes per year FLNG lost power on 2nd December. Shell was unable to restore reliable power supply after trying for three days.

Shell was allowed to resume operations last month after convincing the Australian National Offshore Petroleum Safety and Environmental Management Authority that the problems had been fixed and that the facility could be operated safely. ■

Pluto starts processing gas to LNG plant

Gas processing from the offshore Pluto fields has started ahead of schedule at the North West Shelf Project's (NWS) Karratha Gas Plant (KGP), operator Woodside claimed.

This accelerated production was enabled by the start-up of the Pluto-KGP Interconnector (Interconnector) a 3.2 km pipeline, which connects Pluto LNG with KGP.

The Interconnector start up also supports the accelerated production of gas from the first phase of Pluto's Pyxis Hub by enabling it to be processed at KGP. Ready for start-up was achieved for the first phase of Pyxis Hub in October, 2021.

KGP is expected to process around 2.5 mill tonnes of LNG, plus domestic gas from Pluto from 2022 to 2025.

Woodside CEO, Meg O'Neill explained; "The start-up of the Pluto-KGP Interconnector provides access to spare capacity at Karratha Gas Plant to process gas owned by other resource owners, both onshore and offshore Western Australia. The commencement of Pluto gas flowing through the Interconnector is the first example of this.

"The processing of gas from the offshore Pluto fields through Karratha Gas Plant enables Woodside to deliver additional LNG cargoes into the international gas market. The commercial agreements underpinning third-party gas processing at the North West Shelf reflect the commitment of Woodside and the North West Shelf Project to maximising value from the significant infrastructure on the Burrup Peninsula," she said.

The Pluto-KGP Interconnector pipeline was constructed and is operated by AGI Operations Pty Limited.

In addition, Woodside, as operator for and on behalf of the Scarborough Joint Venture, recently received key primary approvals from the Commonwealth-Western Australian Joint Authority to support the execution of the Scarborough Project.

This milestone follows a final investment decision (FID) made in November, 2021 to approve the $12 bill (100%, $6.9 bill Woodside share) Scarborough and Pluto Train 2 developments.

Scarborough gas processed through Pluto Train 2 will be one of the lowest carbon intensity sources of LNG delivered to customers in north Asia, with the first LNG cargo targeted for 2026. ■

NextDecade secures long term SPA

NextDecade Corp has agreed a 20-year sale and purchase agreement (SPA) with ENN LNG (Singapore), a wholly-owned subsidiary of ENN Natural Gas.

LNG supply will come from the first two trains of NextDecade's Brownsville, Texas Rio Grande LNG (RGLNG) export project. The first train is expected to come on line in 2026.

Under the SPA, ENN will purchase 1.5 mill tonnes per annum of LNG indexed to Henry Hub on a free-on-board (FOB) basis.

"We are pleased to announce this long-term LNG SPA with ENN, a premier Chinese energy company. As one of China's largest private companies, ENN is a major participant in China's energy market, and we look forward to a successful, long-term relationship with ENN," said Matt Schatzman, NextDecade's Chairman and CEO.

"This SPA underscores the strength of NextDecade's differentiated offering. The commercial momentum at RGLNG is accelerating and we believe the company is well placed to benefit from the strengthening LNG market," he said.

Zheng Hongtao, ENN Natural Gas Co Ltd President, added, "This agreement secures additional volume for our LNG portfolio and helps ensure we can meet the growing demand for secure, flexible, and cleaner energy for our customers in the future.

"The signing of this SPA reflects ENN's goal of promoting the global energy transition and is of significance given RGLNG's low GHG emissions profile relative to other LNG supply sources. We look forward to working with NextDecade in the years to come," he said.

Assuming further LNG contracting and access to financing, NextDecade anticipates making a positive final investment decision (FID) on a minimum of two trains in the second half of this year, with FIDs for its remaining three trains to follow. ■

NEWS NUDGE

Atlantic handles milestone LNG Cargo

Almost 23 years following the delivery of its first cargo, LNG production company Atlantic completed loading its 4,500th cargo on 8th April.

The cargo was loaded onto the 'Cool Discoverer' at the No2 Jetty at Point Fortin.

Atlantic CEO, Ron Adams praised the achievement as testimony to the company's commitment to safe and reliable operations and the crucial role Trinidad & Tobago continues to play in the global LNG business.

The first LNG cargo was lifted in April, 1999. ■

HEH submits Stade permit applications

The first of Germany's LNG schemes, Hanseatic Energy Hub (HEH) has submitted application documents meaning that the project is now able to officially start the permitting procedures for both the federal state's own zero-emission terminal and the public port.

To mark this key project milestone, on 12th April, Lower Saxony's Minister for the Environment, Olaf Lies, and his ministerial colleague Dr Bernd Althusmann, Minister for Economic Affairs, met in Stade with the project managers to discuss the next steps.

"The construction of the Hanseatic Energy Hub in Stade is a very important step on route to independence from Russian gas. At the same time, however, we're also taking a big step towards a climate-neutral future for Germany. Without green gas we will not be able to secure Germany's energy supply," said Minister Lies. "Together with the floating LNG import facility already planned for Wilhelmshaven for the winter of 2022, with another one earmarked for 2023, as well as the stationary LNG terminals in Stade and Wilhelmshaven, Lower Saxony will be 'green gas ready' and also prepared for the necessary energy imports."

Minister Althusmann added: "Lower Saxony's ports play a key role in Germany's future energy supply. The enormous energy needs of our national economy mean that we need the two sites in Stade and Wilhelmshaven, which will give us another piece of independence from Russian gas supplies. Given the current situation, time is the crucial factor.

As Chairman of the Supervisory Board, I'm delighted that the NPorts team have managed to compile the planning documents at short notice and that we've made great progress with the project as a result. The ports of Lower Saxony are sending out a clear signal to build up the LNG infrastructure quickly and in a future-proof manner," he said.

The approval process for the LNG, bio-LNG and synthetic methane terminal is being carried out in accordance with the Federal Immission Control Regulation (BImSchV) and is managed by the Lüneburg Trade Supervisory Office as the authority responsible for conducting proceedings.

In addition, port operator Niedersachsen Ports (NPorts) is planning to extend the public industrial port by two jetties that will not only enable LNGCs up to Q-Max size to berth, but will also provide bunker services. The application to obtain planning approval for the harbour construction was also submitted to the responsible authority, the NLWKN (Lower Saxony State Agency for Water Management, Coastal and Nature Conservation).

With HEH, a future-flexible energy import infrastructure is being created at Stade Industrial Park that, from 2026 at the latest, will be able to cover around 15% of Germany's gas demand with a total capacity of 13.3 bill cu m of natural gas.

Meanwhile, German energy company, EnBW has signed a memorandum of understanding (MoU) to purchase at least 3 bill cu m of natural gas per annum through Stade.

Dow takes stake

In addition, Dow has signed an agreement to take a minority stake in HEH.

The HEH consortium, which now includes Dow, Fluxys, Partners Group and Buss Group, is planning to build, own, and operate the terminal in Dow's Stade industrial park.

Dow is contributing the land for the construction of the terminal, as well as infrastructure services, off-gas heat, site services and mutual harbour usage rights.

The import terminal supports the Joint Statement between the European Commission and the US on European Energy Security by satisfying up to 15% of Germany's current natural gas demand.

This agreement would also allow the US to meet nearly 25% of its goal to export 50 bill cu m of LNG annually to Europe by 2030. In addition, the terminal will transfer off-gas heat at the Dow site for the carbon emissions-free regasification of the liquefied gas back to its gaseous state, the company said.

The project is still subject to a final investment decision (FID), which is expected by 2023. ■

CoolCo takes over all Golar LNGCs

Cool Company (CoolCo) completed the last two acquisitions of eight LNGCs from Golar LNG Limited on 6th April.

These completions covered all of the shares in the following single purpose companies, being the owners of the LNGCs:

Golar Hull M2048 Corp (owner of 'Golar Ice').

Golar LNG NB11 Corp (owner of 'Golar Kelvin').

Coolco's interim CEO Karl Fredrik Staubo

In acquiring the two single purposes companies, the company accepted that their existing lease financing arrangement will continue, supplemented by a new parent guarantee from CoolCo.

CoolCo paid for the shares in the subsidiaries in cash and by the issue of 3,125,000 new common shares of $1 par value in CoolCo to Golar. They have been fully paid and were issued under Bermuda law.

Following the issue, CoolCo has a paid in share capital $40,010,000 represented by the same number of common shares, each of which represents one vote at the company's general meeting.

Golar now owns 12,510,000 shares in the CoolCo, representing 31.2% of all the shares issued.

CoolCo and Golar also completed the transfer of all of the shares in Cool Pool Limited from Golar to CoolCo. Cool Pool is responsible for the marketing of the LNGCs acquired by CoolCo.

CoolCo and Golar will finalise the overall transaction announced in January this year by transferring Golar's organisation responsible for the LNGCs technical and commercial operation acquired from Golar to CoolCo. This is expected to be concluded by the second quarter of this year.

Interim CoolCo CEO, Karl Fredrik Staubo, commented "Completion of these final two vessel transfers coincides with an improving chartering environment. The market strengthening is driven by increased focus on energy security, low gas storage levels, new environmental regulations effective from 2023 disadvantaging less fuel-efficient tonnage, and rising yard prices for new orders with lead times into 2026.

"CoolCo recently chartered a vessel for 12 months at a rate of around $120,000 per day, 20% higher than the last 12-month charter agreed for a CoolCo vessel in October, 2021 and twice the actual rate the vessel earned on its prior 12-month charter. We are also seeing increased interest for multi-year charters driving stronger earnings and dividend potential," he said. ■

Estonia and Finland to jointly charter FSRU

Estonia and Finland are to co-operate to charter an FSRU.

They join France and Germany, among others, who are examining plans to place FSRUs in Le Havre and Hamburg, respectively.

Estonian Minister of Economic Affairs and Infrastructure, Taavi Aas, and Finnish Minister of Economic Affairs, Mika Lintilä, recently confirmed an agreement is in place to lease a floating terminal to guarantee the supply of gas to both countries.

"The supply of natural gas to both Estonia and Finland is highly reliant on Russia, and given the uncertain times we are facing, that means we have to cover our backs and make preparations to do without Russian gas altogether," Minister Aas explained. "We and our neighbours across the Gulf felt it made sense to join forces and shore up the supply of gas to both our countries by taking into use a shared LNG terminal, which we intend to do later this year."

Minister Lintilä said that the countries must prepare for disruptions in gas imports as a result of the war in Ukraine. "A floating LNG terminal is an effective way of ensuring gas supplies, including for industry," he explained. "My thanks go out to the Estonian government for their smooth co-operation on this issue."

Under the plan, Estonia and Finland will establish the infrastructure needed to service an FSRU before jointly leasing the unit, which will be able to be used by both countries on the northern and southern shores of the Gulf of Finland. Berths will be established at Paldiski in Estonia and at Inkoo in Finland.

The FSRU is planned to be in place by this autumn, alongside the first berth to be fully operational. Thereafter, the terminal's location will depend on the market needs and size. Both berths in the Gulf of Finland will boost the supply security for gas consumers in both countries and ensure the flexibility required for the FSRU's use.

Both countries will share the costs of the terminals, while the FSRU's charter hire will be shared according to how much gas each country uses. The Estonian and Finnish gas system administrators, Elering and Gasgrid, are working together to implement the plan, the Ministries said.

Since the Baltic States and Finland as a region are strongly tied to Russian gas supplies, almost six month's consumption would not be covered if the supply lines were cut. ■

Excelerate kicks off IPO

Following a road show, Excelerate Energy has priced its share offering at $24 each.

Last week, the company said its was going to market with an initial public offering (IPO) of 16 mill shares of its Class A common stock.

Excelerate also granted the underwriters a 30-day option to purchase up to an additional 2.4 mill shares of Class A common stock at the IPO price, less underwriting discounts and commissions.

Shares were due to begin trading on the New York Stock Exchange on 13th April, 2022, under the ticker symbol "EE." The offering is expected to close on 18th April, 2022, subject to customary closing conditions.

Excelerate also revealed that it expected to receive net proceeds of around $361.9 mill, after deducting underwriting discounts and commissions and excluding any exercise of the underwriters' option to purchase additional shares.

Barclays, JP Morgan, and Morgan Stanley served as joint lead book-running managers for the offering, while Wells Fargo Securities also acted as a book-running manager.

SMBC Nikko, Raymond James, Stephens Inc, Tudor, Pickering, Holt & Co, and BOK Financial Securities acted as co-managers for the offering. ■

Panama Canal transit costs to rise

The Panama Canal Authority is to adjust the toll structure for vessels transiting the canal, including LNGCs.

The changes are due to become effective 1st January, 2023, following a consultation period.

For LNGCs, the adjustments involve -

1) An introduction of a fixed tariff per transit, which will depend on the locks used and the vessel's size category (regular, super or Neopanamax).
2) The cubic meter is to be maintained as the capacity measurement unit for the calculation of tolls.
3) A capacity tariff is to be established according to the vessel size category, based on the cu m of capacity.
4) The tolls for vessel in ballast will be 90% of the laden toll and will apply to vessels, which transit with a maximum cargo of 10% of the total cu m of cargo capacity.
5) The special ballast tariff currently applied to a round trip will be scrapped.

It will cost more to transit the canal from next year

Taking a standard LNGC as an example, from 1st January, 2023, an 174,000 cu m LNGC will be charged a Neopanamax fixed tariff per cu m of $300,000, plus a capacity tariff per cu m at $1.35 per unit amounting to $234,900, giving a total of $534,900.

The new ballast fee will be $481,410.

In addition, the cu m unit fee is due to rise to $1.70 on 1st January, 2024 and to $2.05 at the beginning of 2025, the PCA said. ■

Chart to supply equipment for Plaquemines

Chart Industries has received an order to produce six brazed aluminium heat exchanger assemblies (BAHX) and cold boxes for Venture Global's Plaquemines Phase 2 LNG export terminal project.

The $45 mill contract awarded by Baker Hughes represents the first six BAHX assemblies and cold boxes of the anticipated 18 for the full Plaquemines Phase 2 facility. ■

NEWS NUDGE

Ships - Charters, orders, etc

In the charter market, Cheniere Marketing International has declared an option to employ a fifth Flex LNG LNGC.

'Flex Volunteer' will be the fourth ship under the timecharter agreement and she will be delivered to Cheniere during the middle of this month rather than in the third quarter of 2022, as originally agreed.

This timecharter with duration of 3.5 years has therefore been extended by about 2.5 months to facilitate the earlier delivery of the ship to Cheniere.

'Flex Aurora' will be the fifth ship to be delivered to Cheniere, and she will commence her 3.5-year timecharter during the third quarter of this year, according to the original agreement.

Last year, Cheniere took delivery of 'Flex Vigilant', 'Flex Endeavour' and 'Flex Ranger' for a minimum duration of between 3 and 3.8 years.

Poland's PGNiG Supply & Trading (PST), the trading arm of the PGNiG Group, has agreed long term charters for four more LNGCs.

Two will be delivered by affiliates of the Norwegian Knutsen Group and the other two by affiliates of Maran Gas Maritime, the LNG arm of Angelicoussis Group, the company confirmed.

Similar to the LNGCs previously ordered for PGNiG, each of the new vessels will be of 174,000 cu m capacity.

PST will charter the vessels for 10 years each on an exclusive basis, with extension options.

Adding to the previously chartered LNGCs, PST's LNG fleet will consist of eight vessels. The first two LNGCs will be delivered next year, the 'Lech Kaczyński' and the 'Grażyna Gęsicka', also ordered by Knutsen affiliates.

PGNiG has also chartered three in service 160,000 cu m LNGCs. Two of these vessels will be delivered to the Polish company by the end of the first half of this year, while the third is to be made available in the second half of the year, meaning that PGNiG will be able to purchase LNG under FOB contracts in 2022.

The latest Knutsen vessels were ordered recently at Hyundai Samho Heavy Industries for a price of around $224 mill each, according to broking sources.

Brokers also reported that Nigeria LNG had ordered two 174,000 cu m LNGCs from Hyundai Samho for 2025 deliveries for $223 mill per vessel.

China Merchants also contracted two, plus an option for another two, 175,000 cu m LNGCs from Dalian (DSIC) for 2025 deliveries.

Celsius was believed to have ordered one plus another optional 180,000 cu m LNGC at Samsung for 2025 delivery, bringing the Danish company's orderbook up to nine LNGCs.

The price was put at around $218 mill.

Hyundai Glovis has said that an LNGC ordered at Hyundai Samho for delivery in 2024 will be long term chartered to Woodside.

The charter is for 10 years, plus an option for another five years and is expected to start in the second half of 2024 when the $217 mill 174,000 cu m LNGC is delivered.

Brokers are also circulating for sale a 2002 Daewoo-built, Belgian flag, steam turbine 135,273 cu m LNGC.

She is being offered as delivery prompt and was at Malta when the circular was issued.

Due to the potential escalation of sanctions against Russian companies, Shell has reportedly laid up two LNGCs - 'SCF Barents' and 'SCF Timmerman'.

They were period chartered from Sovcomflot and have been idle off Singapore for several weeks, according to ship tracking data.

FSRU transfers first LNG in El Salvador

'BW Tatiana FSRU', has recently completed her first ship-to-ship LNG transfer operation.

The unit is deployed in El Salvador as a part of the Energía del Pacífico LNG-to-power project.

Joint owner, BW LNG said that the operation took place on 1st April, 2022 with LNGC 'Bilbao Knutsen'. Around 125,000 cu m of LNG was transferred. ■

WinGD X-DF2.0 engine test delivers fuel savings

Swiss engine designer, WinGD has confirmed that the performance of the X-DF2.0 engine technology has surpassed initial expectations in terms of fuel savings achieved.

Optimised engine settings on the X-DF2.0 second-generation dual-fuel engine platform have achieved fuel savings of up to 8% in gas mode and up to 6% in diesel mode during recent tests at CMD (CSSC-MES Diesel Co) in Shanghai, China.

Since its launch in 2013, WinGD's X-DF engine series has become the world's best-selling low-pressure 2-stroke dual-fuel engine with over 1.5 mill running hours to-date.

Building on the maturity of the original X-DF engine series, the second-generation X-DF2.0 unit was launched in 2020, with ambitious greenhouse gas (GHG) reduction targets in mind. Since then, more than 60 engines have been ordered.

WinGD's Intelligent Control by Exhaust Recycling (iCER) became the first technology to be introduced to the X-DF2.0 series to reduce fuel consumption and cut methane emissions. iCER further reduces methane slip by 50%, compared to the already record low level of the first generation X-DF and lowers fuel consumption in both diesel and gas mode.

The technology also enables Tier III NOX compliance in liquid fuel mode without the need of additional Selective Catalytic Reduction (SCR) NOx reduction technology being fitted.

The first X-DF2.0 engines are due to begin operations in 2023 on board two newbuilding pure car and truck carriers (PCTCs) running on LNG as fuel.

Volkmar Galke, WinGD's Director Sales,said; "We always knew that our X-DF technology offers the greatest optimisation potential for operators looking to reduce emissions. However, ongoing test results are proof of engine concept beyond expectations, which we believe puts our X-DF2.0 portfolio and holistic energy management solutions at the forefront of shipping's energy transition." ■

WinGD's Volkmar Galke

NEWS NUDGE

Management changes

A couple of major developer senior management changes have been announced.

First - Commonwealth LNG has brought in Farhad Ahrabi, former CEO of Cameron LNG, to serve as the new President and CEO.

Ahrabi joins Commonwealth following a seven-year stint at Cameron, during which he oversaw the development, construction and subsequent operations of the 14.5 mill tonnes per annum LNG facility in Hackberry, Louisiana.

Second - LNG Canada Development, a Shell/PETRONAS/PetroChina/Mitsubishi Corp/KOGAS joint venture has announced that CEO Peter Zebedee stepped down, effective 29th March, to pursue other opportunities.

Zebedee was appointed LNG Canada CEO in June, 2019, having served in various senior capacities with Shell in Alberta, Canada.

Steve Corbin, LNG Canada's Executive Project Director, is serving as interim CEO until a successor is announced.

GTT wins orders from Jiangnan and DSME

Last month, GTT received an order from the Chinese shipyard Jiangnan for the cargo containment and cargo handling systems design of two large capacity LNGCs.

As part of this order, GTT will provide the design and associated engineering services for the 175,000 cu m vessel's tanks.

Each tank will be fitted with the GTT Mark III Flex membrane containment system and the vessels are scheduled for delivery in the first and second quarters of 2025.

The Daewoo (DSME) order calls for the tank design of two new 174,000 cu m LNGCs.

Each tank will be fitted with the GTT NO96 GW membrane containment system.

Delivery of the vessels is scheduled during the fourth quarter of 2025. ■

Saipem to maintain 'Coral Sul'

Saipem has been awarded a contract to carry out maintenance services for the FLNG 'Coral Sul', offshore Mozambique.

'Coral Sul' FLNG is a floating facility built to produce natural gas from the Rovuma Basin, located about 250 km Northeast of Pemba and 50 km from the Mozambique coast.

It is the first FLNG to operate in ultra-deep waters, connected to an underwater system at a depth of around 2,000 m.

The contract is worth around $150 mill with a duration of about nine years, plus one optional year.

Saipem's activities cover maintenance of the whole FLNG and on board supervision, as well as the creation of an onshore logistical base. ■

Monthly Large LNGC Values*

Newbuildings (174,000 cu m)	$206.58 mill
Five years old (174,000 cu m)	$164.55 mill
Total Fleet (541 ships)	$65.99 bill
Orderbook (192 ships)	$41.48 bill

Source: VesselsValue (31/03/22)

**The above is updated each month courtesy of VesselsValue*

LNG rate assessments

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

Region	This week	Change*
East of Suez	$37,000	-
West of Suez	$45,000	-
12 mos T/C	$102,500	-

**Since last report (31/03/22)* *Source: Fearnleys (06/04/22)*

WORLD SMALL SCALE LNG FLEET*

Built	Name	CBM	Cargo Type	Trading area	Trading in LNG?	Ship Owner / Operator
1974	Seagas	187	LNG	Sweden	Yes	AGA
1988	Kayoh Maru	1,517	LNG	Japan	Yes	Daiichi
1993	Aman Bintulu	18,928	LNG	Malaysia - Japan	Yes	Perbadanan/NYK
1996	Surya Aki	19,475	LNG	Indonesia - Japan	Yes	MCGC
1997	Aman Sendai	18,928	LNG	Malaysia - Japan	Yes	Perbadanan/NYK
1998	Pelita Energy	18,800	LNG	Malaysia - Japan	Yes	Perbadanan/NYK
2000	Triputra	23,096	LNG	Indonesia - Japan	Yes	MCGC
2003	Pioneer Knutsen	1,100	LNG	Norway	Yes	Knutsen
2003	Shinju Maru No.1	2,540	LNG	Japan	Yes	Shinwa
2005	North Pioneer	2,500	LNG	Japan	Yes	Japan Liquid Gas
2007	Sun Arrows	19,531	LNG	Malaysia - Russia - Japan	Yes	Mitsui
2008	Kakurei Maru	2,536	LNG	Japan	Yes	Hogaki Zosen
2008	Shinju Maru No.2	2,540	LNG	Japan	Yes	Shinwa
2009	Coral Methane	7,551	LNG/LPG/Ethylene	Northwest Europe/Baltics	Yes, sometimes	Anthony Veder
2010	Coral Favia	10,000	LNG/LPG/Ethylene	Worldwide	No	Anthony Veder
2010	Coral Fraseri	10,000	LNG/LPG/Ethylene	Worldwide	No	Anthony Veder
2011	Coral Furcata	10,000	LNG/LPG/Ethylene	Worldwide	No	Anthony Veder
2011	Coral Fungia	10,000	LNG/LPG/Ethylene	Worldwide	No	Anthony Veder
2011	Akebono Maru	3,556	LNG	Japan	Yes	Chuo Kaiun
2011	Vision Spirit	12,000	LNG/LPG/Ethylene	Worldwide	No	Teekay
2011	Unikum Spirit	12,000	LNG/LPG/Ethylene	Worldwide	No	Teekay
2012	Coral Energy	15,600	LNG	Northwest Europe/Baltics	Yes	Anthony Veder
2013	Coral Anthelia	6,500	LNG/Ethylene			Anthony Veder
2013	JX Energy TBN	2,500	LNG	Japan	Yes	JX Energy
2013	Kakuyu Maru	2,500	LNG	Japan	Yes	Tsurumi Sunmarine
2015	JS Ineos Ingenuity	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2015	JS Ineos Insight	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2015	JS Ineos Intrepid	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2015	LNG Barge TBN	3,000	LNG	US Coast	Yes	LNG America
2015	PetroChina TBN	30,000	LNG	China		PetroChina
2016	Hai Yang Shi You 301	30,000	LNG	Bali FSU	Yes	CETS (CNOOC)
2016	Clean Jacksonville	2,200	LNG	US Coast	Yes	CME
2016	JS Ineos Indepence	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2016	JS Ineos Innvovation	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2016	JS Ineos Inspiration	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2016	LNG Prime	2,250	LNG	Northwest Europe	Yes	Veka Deen LNG
2017	Coralius	5,800	LNG	Northwest Europe/Baltics	Yes, for Skangas	Anthony Veder
2017	Coral EnergICE	18,000	LNG	Northwest Europe/Baltics	Yes	Anthony Veder
2017	Coral Encanto	30,000	LNG	China	Yes	Anthony Veder
2017	JS Ineos Invention	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2017	JS Ineos Intuition	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2017	Oizmendi	600	LNG	Spain	Yes	Itsas Gas
2017	LNG-Gorskaya TBN	7,300	LNG	Russia	Yes	LNG-Gorskaya
2017	LNG-Gorskaya TBN	7,300	LNG	Russia	Yes	LNG-Gorskaya
2017	LNG-Gorskaya TBN	7,300	LNG	Russia	Yes	LNG-Gorskaya
2017	Green Zeebrugge	5,000	LNG	Northwest Europe	Yes	NYK
2017	New Frontier 1	6,500	LNG	Northwest Europe	Yes	Shell
2018	Kairos	7,500	LNG	Baltic	Yes	Bernhard Schulte
2018	LNG London	3,000	LNG	Northwest Europe	Yes	Shell

Data last updated = 8th February 2022 | For more information please visit http://small-lng.com.

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Built	Name	CBM	Cargo Type	Trading area	Trading in LNG?	Ship Owner / Operator
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	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	Xin Ao Pu Tuo Hao	8,500	LNG	China	Yes	ENN
2021	Avenir Ascension	7,500	LNG		Yes	Avenir LNG
2021	Avenir Allegiance	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	PE TBN	12,000	LNG	Singapore	Yes	MOL
2021	Gas Vitality	18,600	LNG	Mediterranean	Yes	MOL
2021	TG TBN	500	LNG	Korea	Yes	Trans Gas
2021	Titan Hyperion	8,000	LNG	Benelux	Yes	Titan LNG
2022	Coral Nordic	30,000	LNG	Worldwide	Yes	Anthony Veder
2022	Avenir Achievement	20,000	LNG	Worldwide	Yes	Avenir LNG
2022	Haugesund Knutsen	5,000	LNG	Spain	Yes	Knutsen OAS
2022	Clean Cañaveral	5,400	LNG	USG	Yes	PNE
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	K Line TBN	18,000	LNG	Korea	Yes	K Line
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	???
2026	Avenir TBN (option)	20,000	LNG	Worldwide	Yes	Avenir LNG
2026	Avenir TBN (option)	20,000	LNG	Worldwide	Yes	Avenir LNG

Data last updated = 8th February 2022 | For more information please visit http://small-lng.com.

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WORLD LNG CARRIER ORDERBOOK

Name	Owners	Yard	Ordered	Capacity	Propulsion	Delivery
Minerva Amorgos	Minerva Marine	Samsung	1/1/2019	174,000	XDF	Q4, 2022
Clean Cajun	Dynagas	Hyundai Heavy	5/22/2019	200,000	XDF	Q2, 2022
Clean Copano	Dynagas	Hyundai Heavy	5/22/2019	200,000	XDF	Q3, 2022
Orion Star	JP Morgan	Samsung	6/1/2019	174,000	XDF	Q2, 2022
Orion Sun	JP Morgan	Samsung	6/1/2019	174,000	XDF	Q2, 2022
Prism Diversity	SK Shipping	Hyundai Heavy	6/29/2019	180,000	XDF	Q3, 2022
Asterix I	Capital Gas	Hyundai Heavy	8/1/2019	174,000	XDF	Q1, 2023
Hudong-zhonghua H1829a	CSSC	Hudong-Zhonghua	8/1/2019	174,000	XDF	Q1, 2024
Hudong-zhonghua H1830a	CSSC	Hudong-Zhonghua	8/1/2019	174,000	XDF	Q2, 2024
Alexey Kosygin	Smart LNG	Zvezda SSK	9/1/2019	172,600	TFDE - Azipod	Q1, 2023
Pyotr Stolypin	Smart LNG	Zvezda SSK	9/1/2019	172,600	TFDE - Azipod	Q3, 2023
Sergei Witte	Smart LNG	Zvezda SSK	9/1/2019	172,600	TFDE - Azipod	Q4, 2023
Zvezda 044	Smart LNG	Zvezda SSK	9/1/2019	172,600	TFDE - Azipod	Q4, 2023
Zvezda 045	Smart LNG	Zvezda SSK	9/1/2019	172,600	TFDE - Azipod	Q4, 2023
Bw Cassia	BWGas	DSME	10/1/2019	174,000	MEGI	Q3, 2022
Bw Iris	BWGas	DSME	10/1/2019	174,000	MEGI	Q3, 2022
Samsung 2364	MISC	Samsung	10/10/2019	174,000	XDF	Q1, 2023
Samsung 2365	MISC	Samsung	10/10/2019	174,000	XDF	Q1, 2023
Vivit Arabia Lng	H-Line	Hyundai Samho	12/1/2019	174,000	XDF	Q2, 2022
Alicante Knutsen	Knutsen	Hyundai Samho	12/18/2019	174,000	XDF	Q4, 2022
Huelva Knutsen	Knutsen	Hyundai Samho	12/18/2019	174,000	XDF	Q4, 2022
Malaga Knutsen	Knutsen	Hyundai Samho	12/18/2019	174,000	XDF	Q3, 2022
Santander Knutsen	Knutsen	Hyundai Samho	12/18/2019	174,000	XDF	Q2, 2022
Sm Albatross	Korea Line	Hyundai Heavy	12/18/2019	174,000	XDF	Q3, 2022
Sm Bluebird	Korea Line	Hyundai Heavy	12/18/2019	174,000	XDF	Q4, 2022
Lng Prosperity	JP Morgan	Hyundai Heavy	12/19/2019	174,000	XDF	Q4, 2022
Orion Song	JP Morgan	Hyundai Heavy	12/19/2019	174,000	XDF	Q4, 2022
Grace Freesia	NYK	Hyundai Samho	12/27/2019	173,000	XDF	Q2, 2022
Lagenda Serenity	K-Line	Hudong-Zhonghua	1/1/2020	79,960	XDF	Q2, 2022
Lagenda Suria	K-Line	Hudong-Zhonghua	1/1/2020	79,960	XDF	Q2, 2022
Hudong-zhonghua H1831a	ULT	Hudong-Zhonghua	6/30/2020	174,000	XDF	Q3, 2022
Hudong-zhonghua H1832a	ULT	Hudong-Zhonghua	6/30/2020	174,000	XDF	Q1, 2023
Hudong-zhonghua H1833a	ULT	Hudong-Zhonghua	6/30/2020	174,000	XDF	Q2, 2023
Lng Harmony	JP Morgan	Hyundai Heavy	7/20/2020	174,000	XDF	Q3, 2023
Orion Sage	JP Morgan	Hyundai Heavy	7/20/2020	174,000	XDF	Q3, 2023
El Ferrol Knutsen	Knutsen	Hyundai Samho	7/30/2020	174,000	XDF	Q4, 2022
Extremadura Knutsen	Knutsen	Hyundai Samho	7/30/2020	174,000	XDF	Q1, 2023
Daewoo 2514	Sovcomflot	DSME	8/1/2020	172,500	TFDE - Azipod	Q1, 2023
Daewoo 2515	Sovcomflot	DSME	8/1/2020	172,500	TFDE - Azipod	Q2, 2023
Daewoo 2516	Sovcomflot	DSME	8/1/2020	172,500	TFDE - Azipod	Q3, 2023
Daewoo 2517	MOL, COSCO	DSME	8/1/2020	172,500	TFDE - Azipod	Q3, 2023
Daewoo 2518	MOL, COSCO	DSME	8/1/2020	172,500	TFDE - Azipod	Q4, 2023
Daewoo 2519	MOL, COSCO	DSME	8/1/2020	172,500	TFDE - Azipod	Q4, 2023
Zvezda 046	Smart LNG	Zvezda SSK	8/1/2020	172,600	TFDE - Azipod	Q3, 2024
Zvezda 047	Smart LNG	Zvezda SSK	8/1/2020	172,600	TFDE - Azipod	Q3, 2024
Zvezda 048	Smart LNG	Zvezda SSK	8/1/2020	172,600	TFDE - Azipod	Q4, 2024
Zvezda 049	Smart LNG	Zvezda SSK	8/1/2020	172,600	TFDE - Azipod	Q4, 2024
Zvezda 050	Smart LNG	Zvezda SSK	8/1/2020	172,600	TFDE - Azipod	Q4, 2024

DFDE = dual fuel diesel engines, STRH = steam turbine reheat / ultra steam turbine, MEGI = marine electric gas injection, DRL = slow speed diesel, FSRU = vessel with regas capacity, FLNG = floating LNG production unit
Data last updated = 12th April 2022

Fearnley LNG

Name	Owners	Yard	Ordered	Capacity	Propulsion	Delivery
Zvezda 051	Smart LNG	Zvezda SSK	8/1/2020	172,600	TFDE - Azipod	Q3, 2025
Zvezda 052	Smart LNG	Zvezda SSK	8/1/2020	172,600	TFDE - Azipod	Q3, 2025
Zvezda 053	Smart LNG	Zvezda SSK	8/1/2020	172,600	TFDE - Azipod	Q4, 2025
Zvezda 054	Smart LNG	Zvezda SSK	8/1/2020	172,600	TFDE - Azipod	Q4, 2025
Zvezda 055	Smart LNG	Zvezda SSK	8/1/2020	172,600	TFDE - Azipod	Q4, 2025
Sm Golden Eagle	Korea Line	Hyundai Heavy	8/12/2020	174,000	XDF	Q3, 2023
Sm Kestrel	Korea Line	Hyundai Heavy	8/12/2020	174,000	XDF	Q4, 2023
Grazyna Gesicka	Knutsen	Hyundai Heavy	10/30/2020	174,000	XDF	Q2, 2023
Lech Kaczynski	Knutsen	Hyundai Heavy	10/30/2020	174,000	XDF	Q1, 2023
Samsung 2425	Maran Gas Maritime	Samsung	11/1/2020	174,000	XDF	Q3, 2023
Hyundai Samho 8100	Knutsen	Hyundai Samho	12/14/2020	174,000	XDF	Q3, 2024
Orion Sky	JP Morgan	Hyundai Heavy	12/14/2020	174,000	XDF	Q4, 2024
Hyundai Ulsan 3221	Pan Ocean	Hyundai Heavy	12/15/2020	174,000	XDF	Q3, 2024
Hyundai Ulsan 3222	Pan Ocean	Hyundai Heavy	12/15/2020	174,000	XDF	Q4, 2024
Samsung 2426	Pan Ocean	Samsung	1/1/2021	174,000	XDF	Q2, 2023
Jules Verne	Sovcomflot	Hyundai Samho	1/8/2021	174,000	XDF	Q2, 2023
Hudong-zhonghua H1837a	Shenzhen Gas	Hudong-Zhonghua	3/21/2021	79,960	XDF	Q1, 2023
Hyundai Ulsan 3294	Hyundai LNG Shipping	Hyundai Heavy	4/15/2021	174,000	XDF	Q1, 2024
Hyundai Ulsan 3295	Hyundai LNG Shipping	Hyundai Heavy	4/29/2021	174,000	XDF	Q2, 2024
Hyundai Ulsan 3296	Hyundai LNG Shipping	Hyundai Heavy	4/29/2021	174,000	XDF	Q3, 2024
Hyundai Samho 8139	Knutsen	Hyundai Samho	4/30/2021	174,000	XDF	Q4, 2023
Jiangnan H2637	Jovo Energy	Jiangnan	5/1/2021	79,800	XDF	Q4, 2023
Samsung 2473	Maran Gas Maritime	Samsung	5/1/2021	174,000	XDF	Q3, 2024
Samsung 2474	Maran Gas Maritime	Samsung	5/1/2021	174,000	XDF	Q3, 2024
Daewoo 2521	Hyundai LNG Shipping	DSME	5/28/2021	174,000	MEGI	Q3, 2023
Hyundai Ulsan 3290	Dynagas	Hyundai Heavy	5/31/2021	200,000	ME-GA	Q4, 2023
Hyundai Ulsan 3291	Dynagas	Hyundai Heavy	5/31/2021	200,000	ME-GA	Q4, 2023
Hyundai Ulsan 3292	Dynagas	Hyundai Heavy	5/31/2021	200,000	ME-GA	Q1, 2024
Hyundai Ulsan 3293	Dynagas	Hyundai Heavy	5/31/2021	200,000	ME-GA	Q3, 2023
Daewoo 2520	MOL	DSME	6/1/2021	174,000	MEGI	Q4, 2023
Amore Mio I	Capital Gas	Hyundai Heavy	6/18/2021	174,000	ME-GA	Q4, 2023
Axios II	Capital Gas	Hyundai Heavy	6/18/2021	174,000	ME-GA	Q4, 2023
Alexandre Dumas	Sovcomflot	Hyundai Samho	7/1/2021	170,520	XDF	Q1, 2024
Hyundai Samho 8147	H-Line	Hyundai Samho	7/1/2021	174,000	XDF	Q3, 2023
Samsung 2459	Celsius Shipping	Samsung	7/1/2021	180,000	ME-GA	Q2, 2023
Samsung 2460	Celsius Shipping	Samsung	7/1/2021	180,000	ME-GA	Q3, 2023
Samsung 2461	Celsius Shipping	Samsung	7/1/2021	180,000	ME-GA	Q4, 2023
Victor Hugo	Sovcomflot	Hyundai Samho	7/1/2021	170,520	XDF	Q3, 2024
Hyundai Samho 8101	Knutsen	Hyundai Samho	7/13/2021	174,000	XDF	Q4, 2023
Hyundai Samho 8102	Knutsen	Hyundai Samho	7/13/2021	174,000	ME-GA	Q3, 2025
Hyundai Ulsan 3320	JP Morgan	Hyundai Heavy	7/13/2021	174,000	ME-GA	Q3, 2025
Hyundai Ulsan 3321	JP Morgan	Hyundai Heavy	7/13/2021	174,000	ME-GA	Q3, 2025
Hyundai Ulsan 3224	Pan Ocean	Hyundai Heavy	7/14/2021	174,000	ME-GA	Q4, 2024
Hyundai Ulsan 3225	Pan Ocean	Hyundai Heavy	7/14/2021	174,000	ME-GA	Q4, 2024
Daewoo 2522	Hyundai LNG Shipping	DSME	7/15/2021	174,000	MEGI	Q2, 2024
Hyundai Samho 8148	Knutsen	Hyundai Samho	7/22/2021	174,000	XDF	Q1, 2024
Hyundai Samho 8149	Knutsen	Hyundai Samho	7/22/2021	174,000	ME-GA	Q1, 2024
Hyundai Ulsan 3297	Hyundai LNG Shipping	Hyundai Heavy	7/22/2021	174,000	XDF	Q2, 2024
Hyundai Ulsan 3298	Hyundai LNG Shipping	Hyundai Heavy	7/22/2021	174,000	XDF	Q4, 2024
Hyundai Ulsan 3299	Hyundai LNG Shipping	Hyundai Heavy	7/22/2021	174,000	XDF	Q1, 2025

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Name	Owners	Yard	Ordered	Capacity	Propulsion	Delivery
Samsung 2579	Celsius Shipping	Samsung	7/26/2021	180,000	ME-GA	Q1, 2024
Samsung 2584	Celsius Shipping	Samsung	8/1/2021	180,000	ME-GA	Q3, 2024
Samsung 2585	Celsius Shipping	Samsung	8/1/2021	180,000	ME-GA	Q3, 2024
Hudong-zhonghua H1838a	K-Line	Hudong-Zhonghua	9/1/2021	79,960	XDF	Q3, 2023
Hyundai Samho 8140	Capital Gas	Hyundai Samho	9/1/2021	174,000	ME-GA	Q3, 2024
Daewoo 2523	MOL	DSME	9/14/2021	174,000	ME-GA	Q1, 2024
Daewoo 2524	MOL	DSME	9/14/2021	174,000	ME-GA	Q2, 2024
Daewoo 2525	MOL	DSME	9/14/2021	174,000	ME-GA	Q3, 2024
Daewoo 2526	MOL	DSME	9/14/2021	174,000	ME-GA	Q4, 2024
Daewoo 2527	MOL	DSME	10/1/2021	174,000	ME-GA	Q3, 2024
Hudong-Zhonghua QP #1	Qatar Petroleum	Hudong-Zhonghua	10/1/2021	175,000	XDF	Q3, 2024
Hudong-Zhonghua QP #2	Qatar Petroleum	Hudong-Zhonghua	10/1/2021	175,000	XDF	Q1, 2024
Hudong-Zhonghua QP #3	Qatar Petroleum	Hudong-Zhonghua	10/1/2021	175,000	XDF	Q4, 2024
Hudong-Zhonghua QP #4	Qatar Petroleum	Hudong-Zhonghua	10/1/2021	175,000	XDF	Q1, 2025
MOL 23	MOL	DSME	10/1/2021	174,000	ME-GA	Q3, 2023
MOL 25	MOL	DSME	10/1/2021	174,000	ME-GA	Q3, 2025
MOL 26	MOL	DSME	10/1/2021	174,000	ME-GA	Q3, 2026
Samsung 2580	NYK	Samsung	10/1/2021	174,000	XDF	Q3, 2023
Samsung 2581	NYK	Samsung	10/1/2021	174,000	XDF	Q4, 2023
Samsung 2582	NYK	Samsung	10/1/2021	174,000	XDF	Q4, 2023
Samsung 2583	NYK	Samsung	10/1/2021	174,000	XDF	Q1, 2024
Samsung 2592	JP Morgan	Samsung	10/1/2021	174,000		Q2, 2024
Samsung 2593	JP Morgan	Samsung	10/1/2021	174,000		Q3, 2024
Samsung 2594	JP Morgan	Samsung	10/1/2021	174,000		Q4, 2024
Samsung 2595	JP Morgan	Samsung	10/1/2021	174,000		Q1, 2025
Hyundai Ulsan 3341	Capital Gas	Hyundai Heavy	11/4/2021	174,000	ME-GA	Q2, 2024
Hyundai Ulsan 3342	Capital Gas	Hyundai Heavy	11/4/2021	174,000	ME-GA	Q2, 2024
Qatar DSME 1/4	Qatar Petroleum	DSME	11/7/2021	174,000	MEGI	Q1, 2025
Qatar DSME 2/4	Qatar Petroleum	DSME	11/7/2021	174,000	MEGI	Q3, 2025
Qatar DSME 3/4	Qatar Petroleum	DSME	11/7/2021	174,000	MEGI	Q2, 2025
Qatar DSME 4/4	Qatar Petroleum	DSME	11/7/2021	174,000	MEGI	Q4, 2025
Qatar SHI 1/2	Qatar Petroleum	Samsung	11/7/2021	174,000	ME-GA	Q1, 2025
Qatar SHI 2/2	Qatar Petroleum	Samsung	11/7/2021	174,000	ME-GA	Q1, 2025
Daewoo 2528	Maran Gas Maritime	DSME	11/10/2021	174,000	MEGI	Q3, 2024
Daewoo 2529	Maran Gas Maritime	DSME	11/10/2021	174,000	MEGI	Q4, 2024
Daewoo 2530	BWGas	DSME	11/25/2021	174,000	MEGI	Q1, 2025
Daewoo 2531	BWGas	DSME	11/25/2021	174,000	MEGI	Q2, 2025
Qatar HHI 1	Qatar Petroleum	Hyundai Heavy	11/29/2021	174,000		Q1, 2025
Qatar HHI 2	Qatar Petroleum	Hyundai Heavy	11/29/2021	174,000		Q1, 2025
Qatar HHI 3	Qatar Petroleum	Hyundai Heavy	11/29/2021	174,000		Q2, 2025
Qatar HHI 4	Qatar Petroleum	Hyundai Heavy	11/29/2021	174,000		Q3, 2025
Samsung 2600	JP Morgan	Samsung	12/1/2021	174,000		Q3, 2024
Samsung 2601	JP Morgan	Samsung	12/1/2021	174,000		Q1, 2025
Samsung 2598	Celsius Shipping	Samsung	12/7/2021	180,000	ME-GA	Q1, 2025
Samsung 2599	Celsius Shipping	Samsung	12/7/2021	180,000	ME-GA	Q2, 2025
Hudong-zhonghua H1834a	ULT	Hudong-Zhonghua	12/8/2021	174,000	XDF	Q3, 2024
Hudong-zhonghua H1835a	ULT	Hudong-Zhonghua	12/8/2021	174,000	XDF	Q4, 2024
Hudong-zhonghua H1836a	ULT	Hudong-Zhonghua	12/8/2021	174,000	XDF	Q1, 2025
Samsung 2604	NYK	Samsung	12/27/2021	174,000	XDF	Q4, 2024
Daewoo 2532	GasLog	DSME	1/1/2022	174,000	MEGI	Q2, 2024

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Name	Owners	Yard	Ordered	Capacity	Propulsion	Delivery
Daewoo 2533	GasLog	DSME	1/1/2022	174,000	MEGI	Q3, 2024
Daewoo 2534	GasLog	DSME	1/1/2022	174,000	MEGI	Q2, 2025
Daewoo 2535	GasLog	DSME	1/1/2022	174,000	MEGI	Q3, 2025
NYK 2	NYK	Hyundai Samho	1/1/2022	174,000	XDF	Q1, 2025
Qatar SHI 3	Qatar Petroleum	Samsung	1/1/2022	174,000	ME-GA	Q1, 2025
Qatar SHI 4	Qatar Petroleum	Samsung	1/1/2022	174,000	ME-GA	Q2, 2025
Hyundai Samho 8173	SK Shipping	Hyundai Samho	1/4/2022	174,000	ME-GA	Q3, 2024
Daewoo 2537	Maran Gas Maritime	DSME	1/6/2022	174,000	MEGI	Q3, 2025
Daewoo 2538	Maran Gas Maritime	DSME	1/6/2022	174,000	MEGI	Q4, 2025
Hudong-zhonghua H1880a	MOL	Hudong-Zhonghua	1/7/2022	174,000	XDF	Q4, 2024
Hudong-zhonghua H1881a	MOL	Hudong-Zhonghua	1/7/2022	174,000	XDF	Q3, 2025
Hudong-zhonghua H1882a	MOL	Hudong-Zhonghua	1/7/2022	174,000	XDF	Q4, 2025
Hudong-zhonghua H1883a	MOL	Hudong-Zhonghua	1/7/2022	174,000	XDF	Q1, 2026
Hudong-zhonghua H1884a	MOL	Hudong-Zhonghua	1/7/2022	174,000	XDF	Q2, 2026
Hudong-zhonghua H1885a	MOL	Hudong-Zhonghua	1/7/2022	174,000	XDF	Q3, 2026
Samho Jan		Hyundai Samho	1/10/2022	174,000	ME-GA	Q1, 2025
Daewoo	MOL	DSME	1/17/2022	174,000	ME-GA	Q4, 2024
Daewoo 2539	Maran Gas Maritime	DSME	2/7/2022	174,000	MEGI	Q4, 2025
Daewoo 2540	Maran Gas Maritime	DSME	2/7/2022	174,000	MEGI	Q4, 2025
Bono Samho 1	Bono Energy	Hyundai Samho	2/10/2022	174,000	ME-GA	Q1, 2025
Bono Samho 2	Bono Energy	Hyundai Samho	2/10/2022	174,000	ME-GA	Q1, 2025
Qatar DSME 5	Qatar Petroleum	DSME	2/15/2022	174,000	MEGI	Q2, 2025
Qatar HHI 5	Qatar Petroleum	Hyundai Heavy	2/15/2022	174,000		Q3, 2025
Qatar HHI 6	Qatar Petroleum	Hyundai Heavy	2/15/2022	174,000		Q4, 2025
Qatar SHI 5	Qatar Petroleum	Samsung	2/15/2022	174,000	ME-GA	Q2, 2025
HL 1	H-Line	Samsung	2/16/2022	174,000		Q1, 2025
HL 2	H-Line	Samsung	2/16/2022	174,000		Q2, 2025
HL 3	H-Line	Samsung	2/16/2022	174,000		Q3, 2025
HL 4	H-Line	Samsung	2/16/2022	174,000		Q3, 2025
Glovis Samho	Hyundai Glovis	Hyundai Samho	2/21/2022	174,000		Q4, 2024
Samsung 1		Samsung	2/24/2022	174,000		Q2, 2025
Samsung 2		Samsung	2/24/2022	174,000		Q2, 2025
Samsung 3		Samsung	2/24/2022	174,000		Q3, 2025
Samsung 4		Samsung	2/24/2022	174,000		Q3, 2025
Jiangnan ADNOC 1	ADNOC	Jiangnan	3/1/2022	175,000	XDF	Q1, 2025
Jiangnan ADNOC 2	ADNOC	Jiangnan	3/1/2022	175,000	XDF	Q2, 2025
HHI 1	Dynagas	Hyundai Heavy	3/3/2022	200,000	ME-GA	Q1, 2025
HHI 2	Dynagas	Hyundai Heavy	3/3/2022	200,000	ME-GA	Q2, 2025
HHI 3	Dynagas	Hyundai Heavy	3/3/2022	200,000	ME-GA	Q4, 2025
BW DSME 3	BWGas	DSME	3/18/2022	174,000	MEGI	Q4, 2025
BW DSME 4	BWGas	DSME	3/18/2022	174,000	MEGI	Q4, 2025
VG DSME 1	Venture Global LNG	DSME	3/24/2022	200,000		Q3, 2025
VG DSME 2	Venture Global LNG	DSME	3/24/2022	200,000		Q4, 2025
VG DSME 3	Venture Global LNG	DSME	3/24/2022	200,000		Q4, 2025
Dalian Merchant 1	China Merchant	Dalian Shipbuilding	3/31/2022	175,000	XDF	Q3, 2025
Dalian Merchant 2	China Merchant	Dalian Shipbuilding	3/31/2022	175,000	XDF	Q2, 2026
Samho 1	Knutsen	Hyundai Samho	3/31/2022	174,000	ME-GA	Q1, 2026
Samho 2	Knutsen	Hyundai Samho	3/31/2022	174,000	ME-GA	Q2, 2025
Samsung Apr	Celsius Shipping	Samsung	3/31/2022	180,000	ME-GA	Q4, 2025

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