

LNG Shipping News

AN LNG JOURNAL TITLE ON LNG CARRIERS

10 June 2021

LNG demand to become more fragmented

During the next 10 years, LNG demand will shift to a more fragmented market, while supply will remain primarily in the hands of the 'big four' exporters.

Kristen Holmquist, Poten & Partners Forecasting Manager, explained in a presentation of the company's 10-year LNG supply and demand report, that the 'big four' suppliers were the US, Russia, Australia and Qatar. Mozambique could become the fifth, providing the three major projects planned reach fruition.

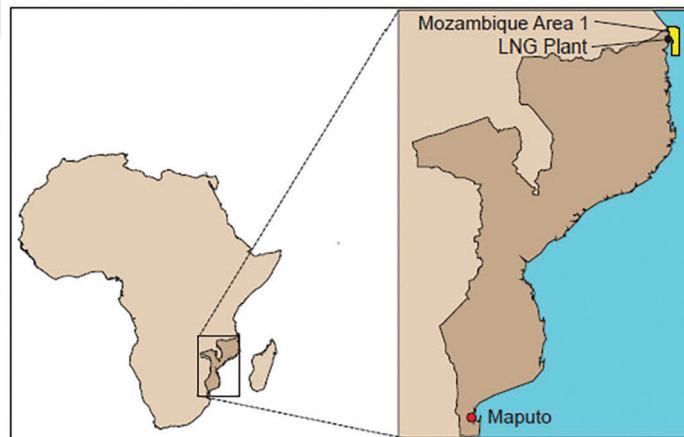
In total, demand stood at almost 350 mill tonnes worldwide in 2020. This will rise to 500 mill tonnes by 2031, she said, but will be split into two phases, due to price differentials - low demand in 2022 to the first part of 2024, on higher prices, rising in 2024-2026, as price levels drop.

She foresaw very little growth in Japan, South Korea and Taiwan (JKT) or Europe for the period, totalling less than 10 mill tonnes. However, China and India combined will account for a 40 mill tonnes increase to 2031. The rest of the world would see a 90 mill tonnes increase.

Southeast Asian growth

Key to Asian growth will be a 44% increase in southeast Asian demand from 15 mill tonnes in 2020 to nearly 50 mill tonnes by 2031.

Asian growth will be more rapid in the smaller importing countries. On a per tonne basis, China is expected to grow by 3% per annum and India by 6% per annum. Bangladesh and Pakistan will also see robust growth, while importers, such as the Philippines,



A question mark hangs over Mozambique. Credit- Tokyo Gas/Centrica

Vietnam and Myanmar and others, are forecast to grow by 20 mill tonnes in total.

However, a question mark still hangs over India as to whether the investment in infrastructure will keep up with demand, Holmquist warned.

European demand is projected to remain robust into the summer months on the back of inventory restocking. As it is considered to be more of a swing centre, demand is expected to flatten in 2023-2025. German growth looks increasingly uncertain, as the country looks for alternative energy sources.

Little growth was forecast for the Middle East during the period - only around 6 mill tonnes - as Kuwait and Bahrain are the only major players. The Saudis were said to be losing interest in LNG, while Jordan is more reliant on pipeline gas and solar projects. Egypt is today more of a mid-level exporter.

In the Americas, Brazil will dominate LNG demand, due to its gas-to-power projects. Argentina's interest will decline, while Mexico will increase its use of US pipeline gas.

Turning to global supply, in the

'big four', the US will continue to build export infrastructure, while Qatar is constructing new trains, as is Russia.

Mozambique remains the big question mark here, she said. If the three projects become operational, then the country will account for around 6% of the market by 2031, resulting in the so called 'big five' accounting for 74% of the world's supply by the end of the period.

Looking at the total number of planned projects, some 170.9 mill tonnes of LNG per annum was due to take FID soon. However, not all of these projects will come to fruition. Holmquist explained that about 91 mill tonnes was already under construction or had taken FID. However, serious doubts hang over the remaining 70-80 mill tonnes as to whether these projects would see the light of day.

Other LNG producers will see a continuing decline in output, including Trinidad, Malaysia, Indonesia and the UAE.

As various countries move to increase exports, such as North America, Qatar and Russia, this will lead to a shift in trade patterns, which will affect shipping's supply and demand balance, she said. ■

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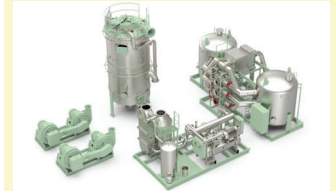
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Asia to drive LNG regasification capacity additions

Asia is expected to contribute about 74% of the total global LNG regasification capacity additions by 2025, according to GlobalData.

The company's report, 'Global Capacity and Capital Expenditure Outlook for LNG Regasification Terminals, 2021-2025 - Asia Dominates Global Regasification Capacity Additions and Capex Spending', claimed that Asia is expected to witness the highest capacity additions globally from newbuilding and expansion projects between 2021 and 2025 with 15.2 trillion cu ft.

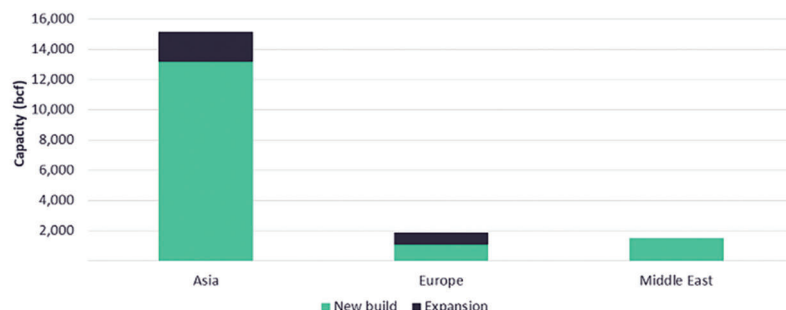
Bhargavi Gandham, GlobalData's Oil and Gas Analyst, commented: "China primarily drives the LNG regasification capacity additions in Asia by 2025. Among newbuild and expansion projects expected to start operations dur-

ing 2021 to 2025 in China, the Tangshan II terminal is expected to witness the highest capacity additions in the country with 584.4 billion cu ft by 2025."

Europe is expected to be the second highest contributor to global LNG regasification capacity additions, accounting for about 9% of the new capacity by 2025. Brunsbütel in Germany will drive the newbuild LNG regasification capacity in the region with 282.4 billion cu ft by 2025.



New Build and Expansion LNG Regasification Capacity Additions by Key Regions, 2021-2025 (bcf)



Source: Midstream Analytics, GlobalData Oil and Gas

GlobalData.

The Middle East comes in third contributing about 7% of world's LNG regasification capacity additions. Here, Kuwait's Al-Zour will

drive the newbuild regasification additions in the region with 1,155 billion cu ft by 2025, GlobalData said.

Höegh LNG analyses FSRU market

Taking a look at the FSRU market, Höegh LNG said in its recent results presentation that global LNG trade was flat year-on-year in the first quarter 2021.

This was mainly due to the impact of the pandemic, combined with a high level of supply outages.

One FSRU contract was awarded in 1Q21 - a conditional

contract from First Gen in the Philippines.

During the quarter, one FSRU came online, 'LNG Croatia' at the Croatian Krk terminal. Following the end of the quarter, 'Höegh

Giant' started operations in Jaigarh, India and the Indonesian 'Jawa Satu' FSRU received her first cargo.

Currently, 41 FSRUs are on the water (excluding four smaller barges), following the delivery of two more units in 1Q21. Of these, 31 are committed to FSRU contracts and the remaining 10 are available and/or trading as LNGCs.

The orderbook comprises two FSRU newbuildings and three conversions. The latter are committed under firm contracts.

Höegh LNG said that its main commercial focus going forward was to conclude firm long-term FSRU employment for the units currently working as LNGCs. De-

spite Covid-19 creating uncertainty, the LNG market is continuing to perform well, and business development activity was high in 1Q21.

Results for the second quarter will be positively affected by 'Höegh Giant' commencing operations in India. However, 'Höegh Esperanza' is expected to be operating as an LNGC for the full quarter. 'Arctic Princess' will be offhire for about a month in 2Q21, while drydocking for its 15th anniversary class renewal.

The costs of the drydocking will be passed onto the charterer, but offhire time will result in a loss of revenue to the company, Höegh LNG said.



The only FSRU to come on stream in 1Q21 was the 'LNG Croatia'

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Gastech switches to Dubai

Gastech will now take place in Dubai, having been switched from Singapore, due to health concerns.

It will be held live from 21st-23rd September, 2021, the event's organisers, dmg events, confirmed.

Gastech 2021 was due to be held in Singapore, which has an excellent record in managing COVID-19 and a strong reputation as a safe, innovative, and trusted destination for business and leisure events, the organisers explained.

However, recent COVID-19 outbreaks across Southeast Asia have created uncertainty around accessibility and travel, making it necessary to find an alternative venue for Gastech.

Gastech 2021 is supported by the UAE's Ministry of Energy and Infrastructure. HE Suhail Mohamed Al Mazrouei, Minister of Energy and Infrastructure, commented: "The UAE is delighted to be hosting Gastech, one of the world's leading events for the gas, LNG, hydrogen, and energy industry.

"Gastech comes at an important time for the energy industry

with a shared global mandate to lower carbon emissions and provide clean affordable energy for all. Gastech is a key enabler of conversations and connections that drive the energy transition agenda," he said.

Explaining the decision to move Gastech 2021, Christopher Hudson, dmg events President, said: "Singapore and its stakeholders have provided us with great support and commitment. However, the uncertainty created by the rising rate of infection across the region have made it challenging for our industry to plan its participation in Singapore, and we had to look for an alternative location. When the time is right, we look forward to returning to Singapore.

"Thanks to its robust, world-leading vaccination programme and well organised testing and travel measures, Dubai is one of the safest and most accessible places in the world to travel to. It is a world-class location with

a long and strong track record of successfully hosting major events, making it an ideal location for the global energy industry, partners, exhibitors and attendees to conduct business," he said.

dmg events claimed it had held multiple conversations with Gastech stakeholders, the Gastech Governing Body, and participating companies before the announcement. These underlined the need to meet face-to-face to address both the challenges and opportunities the energy industry faces, including the clear need for the industry to respond to the climate challenge, as well as the rapid acceleration of hydrogen as a possible clean source of future energy, and the adoption of CCUS technology as a de-carbonisation tool.

Gastech 2021 will be held at the Dubai World Trade Centre. It will be attended by more than 25,000 persons and over 400 exhibiting companies. ■

Pakistan reissues LNG cargo tender

Pakistan LNG has re-issued a tender and is now seeking two LNG cargoes for delivery in July, according to a document posted on the company website.

The company is seeking the cargoes for delivery to Port Qasim in Karachi on a DES basis for 8th -9th July and 12th -13th July, through a new tender that was due to close on 8th June and was valid for another day, according to the document.

It had previously sought nine cargoes for delivery from July to August, but only awarded seven, as the offer price for two of the cargoes were deemed too high and there was only one offer per cargo for them on the table, two industry sources said to newswires.

Pakistan LNG has added flexibilities such as for volume flexibility and increased gross calorific value (GCV) limit in the large tender to attract more offers, one of the sources said.

Pakistan's LNG demand typically rises in summer for power generation as temperatures soar.

Six companies had placed the lowest offers for the original nine 140,000 cu m cargoes to be delivered in July and August.

Vitol placed the lowest offer for three cargoes, while Qatar Petroleum Trading placed the lowest two cargoes, while Trafigura, ENI, BP Singapore and DXT Commodities placed the lowest offers for the other four cargoes.

The lowest prices offered ranged from \$10.2937 per mmBtu to \$11.7747 per mmBtu for the cargoes to be delivered in July, and \$10.51 to \$10.8312 per mmBtu for the cargoes to be delivered in August.

Other companies which participated in the tender were Total Gas & Power, POSCO International and PetroChina International. ■



This year's Gastech has been switched to Dubai

Gunvor and Vitol to offtake Driftwood LNG

Tellurian has signed a 10-year sale and purchase agreements (SPA) with commodity traders Vitol and Gunvor.

The LNG developer will supply three mill tonnes per annum of LNG to each company.

Each deal is worth about \$12 bill in revenue over the contract period and the LNG will be supplied from Tellurian's planned 27.6 mill tonnes per year Driftwood export project in Louisiana.

Tellurian Executive Chairman, Charif Souki said via a video link last week that the company remained "highly confident we will start construction this summer and issue notice to proceed to Bechtel

in the first quarter of next year."

Tellurian has already contracted Bechtel to build the liquefaction plant.

Both the Vitol and Gunvor deals were indexed to a combination of the Japan Korea Marker (JKM), which was trading near \$11 per mmbtu last week, and the Dutch Title Transfer Facility (TTF), which traded close to its highest since September, 2018.

Gunvor Singapore will take the LNG on a free on board (FOB) basis from Driftwood to be built near Lake Charles, Louisiana. ■



Driftwood is to supply LNG to two trading houses

NOVATEK signs Arctic LNG 2 supply agreements

PAO NOVATEK's wholly owned subsidiary, NOVATEK Gas & Power Asia and an affiliate of Glencore signed a Heads of Agreement (HoA) for long-term LNG supply from the Arctic LNG 2 project.

The HoA established the key commercial terms for the supply of in excess of 0.5 mill tonnes of LNG per annum. The LNG will be delivered to a number of locations in East Asia.

In addition, the NOVATEK subsidiary and Zhejiang Energy Gas Group, part of the Zhejiang Provincial Energy Group, also signed an HoA for the long-term supply of LNG from the same project.

This HoA builds on the MOU

signed by the parties in October, 2019 and establishes the key commercial terms for the annual supply of up to one 1 mill tonnes of LNG for 15 years.

The LNG will be delivered on a DES basis to Zhejiang Energy's Chinese LNG receiving terminals, including feedstock for the buyer's new gas-fired power generation facilities.

NOVATEK also signed a Share Purchase Agreement with TotalEnergies, formerly Total, for the sale of a 10% interest in Arctic Transshipment.

"The transshipment facilities will ensure the optimal utilisation of our ice tanker fleet and reduce the cost of transport to consuming markets for the company's existing and future LNG projects," explained Leonid Mikhelson, NOVATEK's Chairman of the Management Board. "The entry of our long-term partner TotalEnergies

into the LNG transshipment project will enhance the competitiveness of our joint projects and contribute to the successful development of our LNG logistics chain in accordance with best industry practices in environmental protection and climate change mitigation."

The three agreements were signed during last week's St. Petersburg International Economic Forum. ■

Stade to import Canadian LNG

German Hanseatic Energy Hub has signed a partnership agreement with LNG facility developer GNL Québec and the German logistics company Buss Group to import Canadian LNG.

To monitor and reduce greenhouse gases associated with each cargo, the participants will explore regulatory and technological solutions throughout the supply chain, including molecule tracing using blockchain technology.

Tony Le Verger, GNL Quebec President, said, "With this announcement, the Énergie Saguenay project has reached a new important milestone in its development and we are delighted to partner with shareholders of Hanseatic Energy Hub.

"Our companies share common missions, visions and values in accelerating the energy transition

and the fight against climate change," he said.

Manfred Schubert, Managing Director and shareholder of Hanseatic Energy Hub, added, "We are confident that this agreement supports the German/Canadian energy partnership concluded by our governments in March."

"Our long-term vision is to develop the Hanseatic Energy Hub into an important terminal that will supply carbon-neutral fuels, such as hydrogen, to our industry," he said.

LNG will be exported from GNL Québec's Énergie Saguenay LNG export terminal in Québec,

Canada to the planned German LNG regasification terminal in Stade, near Hamburg.

Located on the Elbe river within the Dow industrial park, the Stade terminal will have a 12 bill cu m per year capacity.

Besides offering send-out to the German gas grid and for local consumption, the facility will also enable transshipment to LNGCs, bunker river barges, road and rail trucks.

Hanseatic has said it planned to operate the facility by 2026, the same year as GNL Quebec expects to launch of the Énergie Saguenay LNG export terminal. ■

NEWS NUDGE

Sakhalin shuts production platform

Russian LNG producer Sakhalin Energy has halted the Piltun-Astokhskaia-B (PA-B) offshore oil and gas production platform for a month's planned annual maintenance.

The PA-B platform is the first to close this year for planned maintenance among Sakhalin-2's energy production assets, the company said.

Sakhalin Energy produced and shipped record LNG volumes in 2020 of more than 11.6 mill tonnes. The company supplies LNG to the Asia/Pacific region, with major customers in Japan, South Korea, Taiwan, and China. ■

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Höegh LNG reports marginal dip

FSRU and LNGC player, Höegh LNG Holdings and its subsidiaries reported total income of \$84 mill for the first quarter of 2021, in line with \$84.4 mill reported in the preceding quarter.

This small decrease mainly reflected 'Höegh Giant' being idle in connection with the start-up of the new contract with H-Energy in India and 'Höegh Galleon' commencing the extension of a Cheniere charter at a lower timecharter rate.

This was partly offset by 'Arc-tic Lady' operating for the full quarter and 'Höegh Esperanza' operating as an FSRU during the quarter.

Höegh LNG reported 1Q21 EBITDA of \$51.8 mill, down from \$55.2 mill in the preceding three months.

This decrease reflected income changes as described above, an increase in Opex for 'Höegh Giant', due to maintenance work conducted in connection with her class renewal and one-off SG&A costs related to the cost savings programme.

Höegh LNG suffered a net loss after tax of \$2.4 mill for 1Q21, down from a profit of \$0.8 mill in 4Q20, which mainly reflected the lower EBITDA reported for the first quarter.

Operating cash flows fell by

\$20.8 mill to \$33.6 mill, driven mainly by changes in working capital and the lower net result.

The net decrease in cash and cash equivalents during 1Q21 was \$15 mill. As at 31st March, 2021, Höegh LNG held \$127.5 mill in current unrestricted cash, compared to \$142.5 mill in 4Q20. Net interest-bearing debt, including lease liabilities, decreased in the period by \$6 mill to \$1.53 bill.

Höegh LNG said it was experiencing limited operational impacts from Covid-19 and no contractual effects. To support the industry-wide efforts for seafarers, the company has signed the Neptune Declaration on Seafarer Wellbeing and Crew Change in initiative.

While the group has been able to conduct full or partial crew changes on all the vessels in the fleet, the situation remains challenging for the maritime industry as a whole owing to travel restrictions and quarantine regulations.

The group's fleet consists of 10 modern FSRUs and two LNGCs. Five of the FSRUs are in Höegh LNG Partners' fleet, and the remainder in Höegh LNG Holdings'

fleet. A Höegh LNG Partners FSRU is on an internal charter to Höegh LNG Holdings, which had sublet the unit to a third party.

Following the execution of 'Höegh Esperanza's' 12-month interim LNGC charter from June, 2021, the group has 100% contract coverage for this year.

Höegh LNG claimed that it had a healthy pipeline of FSRU projects at various stages of development. The most important developments, since the previous quarterly report, related to the two Australian projects and a project in the Philippines.

In Australia, negotiations for the TCP with Australian Industrial Energy (AIE) for the Port Kembla project are in the final stages. The project is making good progress and Australian Energy Market Operator (AMEO) is now factoring the project into its projections for future energy capacity.

Crib Point cancelled

On 3rd May, 2021, AGL announced it will cease any further development of the proposed LNG import jetty at Crib Point in Australia.

This follows the Independent Advisory Committee (IAC) findings and the Victorian Planning Minister's determination on 30th March, 2021 that the project would have unacceptable environmental effects. As a result, the conditional contract entered into between Höegh LNG and AGL will terminate.

In April, 2021, First Gen awarded the conditional FSRU contract for the Batangas LNG project in the Philippines to a competitor of Höegh LNG - BW LNG.

Höegh LNG Holdings later announced that it had completed a NOK330 mill tap issue under the company's existing senior unsecured bonds with maturity date 30th January, 2025 and ISIN NO0010873755.

This issue was priced at 97% of par value and the total outstanding amount after the tap issue is NOK1,300 mill. The additional bonds will be issued under a temporary ISIN NO0011021966 until a listing prospectus for the additional bonds has been approved.

DNB Markets acted as manager on the tap issue placement. ■

'Exemplar' returns to Bahia Blanca

Excelsate Energy's FSRU 'Exemplar' recently began operations in Bahia Blanca, Argentina.

'Exemplar', with a storage capacity of 150,900 cu m, will deliver LNG for the 2021 Argentinian winter season.

"We are excited to return to Bahia Blanca and continue our partnership with IEASA and YPF to deliver an energy solution that is flexible, cost-effective, and environmentally-friendly during a critical period of peak demand," said Daniel Bustos, Excelsate's CCO. "We are confident the 'Exemplar' can perform again with our local Argentine crew to support the country's energy transition and post-COVID economic



Excelsate's FSRU 'Exemplar' is back at Bahia Blanca

recovery this winter."

Her return comes after Excelsate had earlier won an international tender to provide seasonal regasification service at Bahia Blanca.

Excelsate developed the Bahia Blanca GasPort, South America's first LNG import terminal, in 2008 and has also operated GNL Escobar, an LNG import terminal along the Paraná River, since 2011. ■

NEWS NUDGE

Svitzer to provide towage services at Batangas

Philippines energy developer First Gen Corp (FGEN) has signed a 10-year timecharter agreement with Maersk affiliate tug operator Svitzer.

The contract calls for towage and vessel support service for FGEN's interim offshore LNG terminal at Batangas City.

According to the company, Svitzer will provide four new-building Lloyd's Register classed 75-tonne bollard pull tugs to assist the BW LNG FSRU in berthing and unberthing operations, navigation assistance, and other services. ■

Engie reduces GTT shareholding

Engie has sold 3.7 mill GTT shares, representing 10% of the company's share capital, through an accelerated bookbuild process, at a price of €67 per share.

The French energy company also announced the simultaneous issue of an exchangeable bond into existing ordinary shares of GTT for a total nominal amount of €290 mill not bearing interest (zero coupon) and having a maturity of three years, with a premium exchange rate of 20%, compared with the placement price of the GTT shares sold.

At the same time, GTT bought back 185,392 shares at a unit price of €67. The settlement was expected to take place on or around 28th May, 2021.

This share buyback, amounting to €12.4 mill, was financed with GTT's available cash. It was carried out within the framework of the share buyback programme authorised by the 13th resolution voted at the General Meeting of Shareholders dated 2nd June, 2020.

It is intended to cover future allocations of the Group's performance shares, and more generally, any allocation or sale of shares, particularly within the framework of a Group savings plan.

Engie's stake in GTT's share capital now represents about 30%, of which around 10% corresponds to the exchangeable bond, compared with 40.4% previously.

The composition of the Board of Directors will be adjusted in order to comply with best practices and the recommendations of the AFEP-MEDEF code in matters of governance.

Philippe Berterottière, GTT Chairman and CEO, said: "I would like to pay tribute to our shareholder Engie, who has accompanied GTT's development for more than 50 years and has contributed to making it an undisputed leader

in its field.

"Following the sale by Engie of 10% of its stake, GTT's shareholder base is solid and balanced, and the free float is increasing significantly. We are proud to be supported by many leading institutional investors who will allow us to pursue our independent model.

"As a leading technology player, GTT is maintaining its trajectory of growth and innovation to meet the needs of its customers for their energy transition and the increased requirements they face," he said.

Last year, GTT group was ranked first in the French INPI's list of ETI patent applicants, for the second consecutive year, with 58 patents published in 2020.

In the ranking of the top 50 patent applicants in all categories, GTT was in 30th place. ■

SCF shares to be included in more indices

On 21st May, 2021, stock market indices provider, FTSE Russell, announced the inclusion of PAO Sovcomflot (SCF) shares in the mid-cap section of FTSE Global Equity Index.

All of the changes are to be effective on 21st June, 2021, SCF said.

FTSE global index is comprised of more than 10,000 large, medium and small cap company shares in developed and emerging markets worldwide.

In addition, another index provider, MSCI, recently announced that SCF's shares were included in MSCI Russia Small Cap index as of 27th May, 2021.

VTB Capital strategy team estimated the total inflow of funds into SCF shares at around \$20 mill following the two listings.

Currently, SCF shares are traded in the Moscow Exchange Small and Medium Cap Companies Index (MCXSM), Moscow Exchange Broad Market Index (MOEXBMI), Moscow Exchange Transportation Sector Companies Index (MOEXTN), RTS Small and Medium Cap Companies Index (RTSSM), RTS Broad Market Index (RUBMI) and RTS Transportation Sector Companies Index (RTSTN). ■

Beijing Gas seeks LNG for new terminal

Beijing Gas Singapore, the trading arm of Beijing Gas Group, has requested expressions of interest for the supply of LNG from 2023 to 2032.

According to a notice posted on the Shanghai Petroleum and Natural Gas Exchange, potential suppliers are required to submit their interest by 21st July.

The LNG will be delivered to the new 5 mill tonnes per annum receiving terminal being built by

Beijing Gas Group at Tianjin, an industry source told Reuters.

Beijing Gas confirmed to the newswire that it had issued an expression of interest.

The new receiving terminal was given the go ahead early last year and will comprise eight LNG

storage tanks of 220,000 cu m each and two of 200,000 cu m each.

It will also have a total gas storage capacity of up to 1 bill cu m and is expected to be operational by the end of 2022, according to the company's website. ■

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SCF and RS in strategic partnership

On 4th June 2021, Sovcomflot (SCF Group) and Russian Maritime Register of Shipping (RS) signed a strategic partnership agreement during the 24th St. Petersburg International Economic Forum.

This agreement is aimed at developing competencies and building competitive advantages related to the technical regulation of the construction and operation of modern energy transportation vessels, with a special focus on efficiency, sustainability and safety.

RS will use SCF's experience when drawing up technical regulations and standards for using new types of marine fuels to reduce emissions from vessels, for providing technical supervision of ice class commercial vessels when operating in the Arctic, including the

Northern Sea Route (NSR), and for developing and using vessel automated and remote control systems.

Both parties will also increasingly co-operate on the technical supervision of the construction of a new generation of SCF vessels at Zvezda Shipbuilding Complex in Russia.

Currently, SCF has 20 vessels on order at Zvezda, including five LNG-fuelled tankers and 15 Arctic LNGCs, with deliveries scheduled for 2022/2025. All of these vessels will operate under the Russian flag.

Igor Tonkovidov, SCF President and CEO, said: "We are happy to see the Russian classification society embracing SCF's experience and expertise in introducing marine transportation innovations to develop standardised approaches that will help make shipping more

sustainable in line with high international standards, unlock opportunities offered by the Northern Sea Route and overall grow Russia's own shipping competencies."

Konstantin Palnikov, RS Director General, added: "The synergy of the classification society's and industry leaders' combined expertise is essential for the development and implementation of standards that contribute to the efficient and safe operation of marine transport and environmental protection.

"We express our sincere gratitude to Sovcomflot for their trust and for our ongoing co-operation. I am confident that our productive dialogue will benefit the promotion of technical initiatives and advanced engineering solutions under the up-to-date maritime industry projects," he said. ■



SCF's head Igor Tonkovidov has signed a technical agreement with RS

LNG delivered using floating jettyless system

ECONNECT Energy conducted an offshore LNG delivery using its patented IQuay jettyless transfer system (previously known as UTS) in Norway on 25th May.

This delivery was undertaken in co-operation with Spanish utility company Naturgy Energy Group, and Finnish energy company Gasum.

The LNG cargo was delivered via floating transfer technology with minimal personnel for the aerial hose hookup to the LNGC and with remote monitoring of the asset onshore during the discharge operation.

In addition to the LNG import operation from Gasum-chartered LNGC, 'Coral Energy', to Herøya, the operation also measured the flow rate, friction and pressure of LNG in the floating flexible hoses.

This operation was an opportunity to further benchmark the operational performance of the system against traditional solutions, ECONNECT said.

In conjunction with customer, Naturgy and operator Gasum,

other partners in the LNG operation included SINTEF, Air Liquide, Trelleborg, Anthony Veder, Herøya Industrial Park, the Grenland Port Authority, the Norwegian Coastal Administration (Kystverket) together with support from Innovation Norway.

"The ship-to-shore LNG transfer with the floating IQuay was an opportunity to further prove the capabilities of the system. The cargo delivery of LNG and analysis verified the system process performance," claimed ECONNECT Energy Project Manager, Jørgen Agerup.

The floating nature of the IQuay system helped to accelerate the marine-based permitting process, due to the system's limited interaction with the local marine environment, the company said.

"We appreciate taking part in such an innovative operation with

our LNG feeder, 'Coral Energy'. The development of infrastructure increases the availability of cleaner energy when the access to shore is an issue. We think this will be increasingly important in the years to come," said Stig Sagevik, Gasum's Logistics Manager.

"We started this innovation journey with ECONNECT to facilitate the access to energy to many customers that need it. Today, it's been proven that IQuay is their solution. We are very proud to be part of this demonstration. Innovation is in Naturgy's DNA and innovation solves real problems as IQuay does," added Jose Miguel Moreno Blanes, Naturgy Head of Technical & Marine Assurance.

"Only in concert with our customers can we realise the commercialisation and track record of our floating jettyless terminal solutions. Together with Naturgy and

Gasum, among others, we have proven the utility of the IQuay," claimed ECONNECT CEO, Morten Christophersen. "It takes forward thinking organisations coming together to adopt new technology to address challenges in energy distribution."

The floating jettyless IQuay technology can be deployed in remote areas where installing marine jetties may be cost-prohibitive and harmful to the local environment.

IQuay has been connected to several vessel types - LNGCs, chemical carriers, offshore supply vessels, tugs - and has operated in three different locations.

In addition to LNG transfer, the IQuay technology can be applied to a wide range of vessels and terminals for the loading and unloading of ammonia, hydrogen, CO2 or any other fluid. ■

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Wärtsilä to supply equipment for six Arctic LNGCs

Wärtsilä has won a contract to supply Inert Gas Generator (IGG) systems, as well as radio and integrated navigation technology for six new SCF LNGCs.

These vessels are being built to serve NOVATEK's Arctic LNG 2 project.

The orders were placed with Wärtsilä by Daewoo Shipbuilding Marine Engineering (DSME) in April. There are options for an additional two, plus two vessels.

Wärtsilä Gas Solutions will deliver the IGS, while the contract with Wärtsilä Voyage includes the installation of a multifunction display system consisting of workstations with a full set of applications, including the Wärtsilä Navi-Sailor ECDIS, Navi-Radar, the Navi-Conning navigation information display system, a Bridge Alert Management System (BAMS), and the Wärtsilä Navi-Planner for route planning.

The order also includes an Iridium satellite communication systems. The workstations are fully integrated into a unified system, which allows the main operational functions to be duplicated, thereby improving the safety of ice navigation.

"These vessels will operate in severe climatic conditions, and it is essential that all on board systems are capable of safe and reliable performance under all conditions. We have worked closely with both DSME and SCF in the past, and are pleased to continue these relationships," said Jaechul Ha, Sales Manager, IGS, Gas Solutions.

"All the navigational systems to be installed come integration-ready with Wärtsilä Voyage's flagship Fleet Operations Solution — an industry-first cutting-edge technology that improves ship-to-shore synergies and operational efficiencies by integrating previously fragmented navigational services under one platform," added Alex Van Knotsenborg, Director Global Sales, Wärtsilä Voyage.

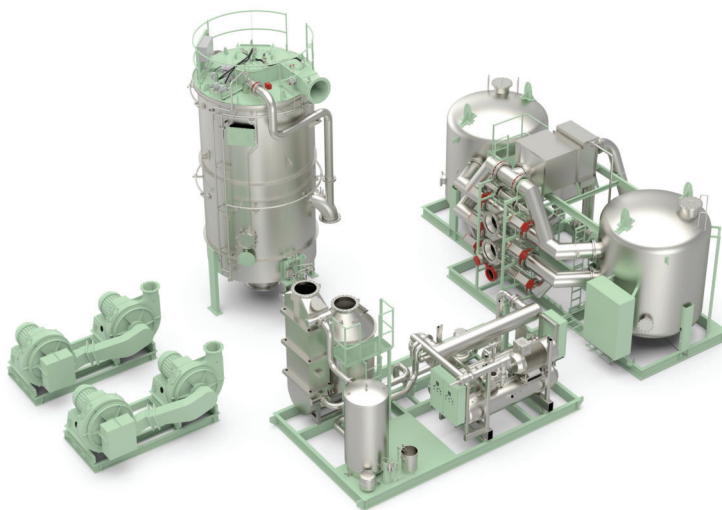
The 172,500 cu m capacity vessels will have a high ice class rating for year-round operations along the Northern Sea Route.

Wärtsilä's equipment is sched-

uled for delivery to the shipyard commencing in September of this year.

The company had earlier delivered both IGG and combined IGG/Gas Combustion Units to DSME, and has supplied SCF with IGS for its crude oil tanker fleet and Arctic LNGC series.

In January, 2021, Wärtsilä Marine Power announced a large order for 46 dual-fuel engines for the six LNGCs being built to serve the Arctic LNG 2 project.



■ Wärtsilä's IGS will be fitted on SCF's LNGCs



Black & Veatch to conduct LNG feasibility studies in Colombia

Black & Veatch is to conduct technical, engineering and commercial studies of the Andes Energy Terminal (AET) located in the Aguadulce Peninsula in Buenaventura, Colombia.

The study will compliment commercial and technical work previously completed and focus on the development of an LNG regasification facility and 400 MW natural gas-powered generation assets.

With economic growth returning in many sectors and robust GDP projections, Colombia is anticipated to experience power generation shortfalls in 2022 and consistent natural gas deficits by 2023, even as global LNG production soars.

As well as seeking to aid

Colombia's energy transition to more sustainable power sources and add reliability to an electric grid heavily reliant on hydro generation assets, AET will look to develop a hyperscale data centre and new facilities for storing liquid fuels, including infrastructure to meet the emerging opportunity in the hydrogen market.

"Our energy terminal reflects a forward-looking approach to solving Colombia's energy and data infrastructure needs," said Manuel Tenorio, AET Chairman. "By com-

binning fuel supply, efficient and sustainable power generation, storage and data infrastructure in one location, we can achieve significant efficiencies to reduce the overall environmental footprint of the project and provide a strong basis for much needed investment in the Southwest region of Colombia."

AET is located within the Bay of Buenaventura, which presents an opportunity to build a multi-purpose infrastructure project using a natural deepwater port.

Buenaventura is Colombia's main foreign trade port.

The feasibility studies, which are funded by a grant from the United States Trade and Development Agency (USTDA), will verify the proposed project site's suitability, define the project design requirements, and estimate capital and operating costs.

It also will assess the financial viability and define financing options while preparing a detailed implementation and construction plan. ■

NEWS NUDGE

Adams to take over Atlantic LNG

LNG producer Atlantic LNG has appointed a new CEO, Ronald Adams, effective 1st August.

The current CEO, Dr Philip Mshelbila, will return to his parent company, Shell, after a three-year stint at Atlantic.

Over the next two months, Dr Mshelbila will oversee the transition to Adams.

Adams is a senior energy sector executive with nearly 30 years of experience across the upstream, midstream and downstream sectors of the energy industry.

He has been with Shell Trinidad and Tobago Ltd since 2019, where most recently he was the General Manager Upstream Assets.

Newbuildings and deliveries

Daewoo Shipbuilding & Marine Engineering (DSME) confirmed last week that it had signed a Won216.9 bill LNGC newbuilding contract.

DSME will deliver the 174,000 cu m vessel to HMM spin-off Hyundai LNG Shipping by the fourth quarter of 2023, the shipbuilder said in a filing.

She will be operated by Repsol, broking sources said.

In addition, Samsung Heavy Industries also said in a regulatory filing last week that it had signed a Won417 bill contract to build two LNGCs.

Under the terms of the contract, believed to be with Maran Gas for two declared options, SHI will deliver the vessels by July, 2024.

In addition, Dynagas is believed to have increased its LNGC order at Hyundai to four by firming up two options held with the yard at around \$193 mill per vessel.

As for deliveries, on 31st May, the LNGC 'Diamond Gas Crystal' was delivered by Hyundai Samho.

She will ship LNG from the LNG Canada project in British Columbia, as well as from other locations worldwide, under an 18-year timecharter with Diamond Gas International, a wholly owned subsidiary of Mitsubishi Corp (MC), who also has a stake in the LNG Canada project.

'Diamond Gas Crystal' is owned by NYK, Asia LNG Transport Dua (ALT Dua), and MC through the joint venture Dia-

mond LNG Shipping 5 Pte Ltd. NYK will be responsible for ship-management.

The 174,000 cu m LNGC is fitted with a WinGD X-DF diesel engine that can operate on marine gas oil or boil-off gas stored in the cargo tank. The vessel will also feature a re-liquefaction system that can use re-liquefied excess boil-off gas and return it to the cargo tank.

At the end of last month, Flex LNG took delivery of its 13th and last newbuilding.

The 174,000 cu m 'Flex Vigilant' was delivered from Hyundai Samho Heavy Industries. The vessel is under a three-year timecharter with Cheniere.

She is believed to be the fourth Flex LNG vessel to be chartered to the US-based exporter and operator. ■

LNG rate assessments

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

Region	This week	Change*
East of Suez	\$52,000	-\$5,000
West of Suez	\$62,000	+\$5,000
12 mos T/C	\$78,000	+\$1,000

*Since last report (27/05/21)

Source: Fearnleys (09/06/21)

Monthly Large LNGC Values*

Newbuildings (174,000 cu m)	\$184.60 mill
Five years old (160,000 cu m)	\$141.16 mill
Total Fleet (516 ships)	\$56.30 bill
Orderbook (126 ships)	\$24.10 bill

Source: VesselsValue (25/05/21)

*The above is updated each month courtesy of VesselsValue

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 Innvation	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	Bilbao	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

For more information please visit <http://small-lng.com>

*Includes multi-gas, ethylene and LNG bunker ships with 40,000 cubic metres LNG cargo capacity or less

TBN = To Be Nominated indicates ships are still at construction/planning stage

** = project shelved † = Data to be verified Data last updated = 28th April 2021

Built	Name	CBM	Cargo Type	Trading area	Trading in LNG?	Ship Owner / Operator
2017	LNG-Gorskaya TBN	7,300	LNG	Russia	Yes	LNG-Gorskaya
2017	Green Zeebrugge	5,000	LNG	Northwest Europe	Yes	NYK
2017	Cardissa	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	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	ENN TBN	8,500	LNG	China	Yes	ENN
2020	FueLNG Bellina	7,500	LNG	Singapore	Yes	FueLNG
2020	SM Jeju LNG2	7,500	LNG	Korea	Yes	Korea Line
2020	Q-LNG 4000	4,000	LNG	US Coast	Yes	Q-LNG Transport/Harvey Gulf
2020	Flexfueller 002	1,480	LNG	Antwerp	Yes	Titan LNG
2021	Avenir Ascension	7,500	LNG		Yes	Avenir LNG
2021	Avenir Allegiance	20,000	LNG	Worldwide	Yes	Avenir LNG
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	TBN	18,600	LNG	Mediterranean	Yes	MOL
2021	TG TBN	500	LNG	Korea	Yes	Trans Gas
2022	Veder TBN	30,000	LNG	Worldwide	Yes	Anthony Veder
2022	Avenir Achievement	20,000	LNG	Worldwide	Yes	Avenir LNG
2022	Kuntsen TBN	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
2024	Avenir TBN (option)	20,000	LNG	Worldwide	Yes	Avenir LNG
2024	Avenir TBN (option)	20,000	LNG	Worldwide	Yes	Avenir LNG
2026	Avenir TBN (option)	20,000	LNG	Worldwide	Yes	Avenir LNG
2026	Avenir TBN (option)	20,000	LNG	Worldwide	Yes	Avenir LNG

For more information please visit <http://small-lng.com>

*Includes multi-gas, ethylene and LNG bunker ships with 40,000 cubic metres LNG cargo capacity or less

TBN = To Be Nominated indicates ships are still at construction/planning stage

** = project shelved † = Data to be verified Data last updated = 28th April 2021

WORLD LNG CARRIER ORDERBOOK

Name	Containment system	Propulsion	Yard	Delivery date	Capacity	Primary Owner
Bw Lesmes	GTT 96 GW	MEGI	DSME	01/03/2021	174000	BWGas
Marvel Swan	Unknown	XDF	Samsung	01/03/2021	173400	Navigare
Lngships Empress	GTT MK III Flex	XDF	Samsung	01/03/2021	174000	TMS Cardiff Gas
Hellas Diana	GTT MK III Flex	XDF	Hyundai	01/03/2021	174000	Latsco Shipping
Lngships Athena	GTT MK III Flex	XDF	Hyundai	01/03/2021	174000	TMS Cardiff Gas
Lng Adventure	GTT MK III Flex	XDF	Samsung	01/03/2021	174000	NYK
Lngship Manhattan	GTT MK III Flex	XDF	Hyundai	01/04/2021	174000	TMS Cardiff Gas
Celsius Charlotte	Unknown	XDF	Samsung	01/05/2021	180000	Celsius Shipping
Diamond Gas Crystal	GTT MK III Flex	XDF	Hyundai	01/05/2021	174000	NYK
Flex Vigilant	GTT MK III Flex	XDF	Hyundai	01/05/2021	174000	Flex LNG
Energy Integrity	GTT 96 GW	MEGI	DSME	01/05/2021	173400	Alpha Gas
Yiannis	GTT 96 GW	MEGI	DSME	01/06/2021	174000	Maran Gas Maritime
Mu Lan	GTT 96 L03+	XDF	Hudong-Zhonghua	01/06/2021	174000	CSSC
Bw Helios	GTT 96 GW	MEGI	DSME	01/06/2021	174000	BWGas
Energy Intelligence	GTT 96 GW	MEGI	DSME	01/06/2021	174000	Alpha Gas
Gaslog Wellington	GTT MK III Flex+	XDF	Samsung	01/06/2021	180000	GasLog
Isabella	GTT 96 GW	XDF	DSME	01/06/2021	174000	Maran Gas Maritime
Aristarchos	GTT MK III Flex	XDF	Hyundai	01/06/2021	174000	Capital Gas
Mol Hestia	Unknown	MEGI	DSME	01/07/2021	174000	MOL
Minerva Chios	GTT MK III Flex+	XDF	Samsung	01/07/2021	174000	Minerva Marine
Minerva Limnos	GTT 96 GW	MEGI	DSME	01/07/2021	173400	Minerva Marine
Adamastos	GTT MK III Flex	XDF	Hyundai	01/08/2021	174000	Capital Gas
Samsung 2314	Unknown	XDF	Samsung	01/08/2021	180000	Celsius Shipping
Gaslog Winchester	GTT MK III Flex+	XDF	Samsung	01/08/2021	180000	GasLog
Attalos	GTT MK III Flex	XDF	Hyundai	01/08/2021	174000	Capital Gas
Asklipios	GTT MK III Flex	XDF	Hyundai	01/09/2021	174000	Capital Gas
Daewoo 2504	GTT 96	XDF	DSME	01/09/2021	174000	Maran Gas Maritime
Global Sea Spirit	GTT 96 GW	XDF	DSME	01/09/2021	173400	Nakilat
Samsung 2306	GTT MK III Flex	XDF	Samsung	01/09/2021	174000	NYK
Diamond Gas Victoria	GTT MK III Flex	XDF	Hyundai	01/09/2021	174000	NYK
Hellas Athina	GTT MK III Flex	XDF	Hyundai	01/09/2021	174000	Latsco Shipping
Samsung 2355	GTT MK III Flex	XDF	Samsung	01/10/2021	174000	NYK
Daewoo 2507	GTT 96 GW	XDF	DSME	01/10/2021	174000	Maran Gas Maritime
Hyundai Ulsan 2939	GTT MK III Flex	XDF	Hyundai	01/10/2021	180000	SK Shipping
Daewoo 2506	GTT 96	MEGI	DSME	01/11/2021	174000	Maran Gas Maritime
Hyundai Samho 8025		XDF	Hyundai	01/12/2021	174000	H-Line
Tenergy	GTT MK III Flex	XDF	Hyundai	01/12/2021	174000	Tsakos Energy Navigation
Samsung 2336	GTT MK III Flex	XDF	Samsung	01/12/2021	174000	JP Morgan
Global Sealine	GTT 96 GW	XDF	DSME	01/12/2021	173400	Nakilat
Samsung 2307	GTT MK III Flex	XDF	Samsung	01/12/2021	174000	NYK
Hyundai Samho 8032	GTT MK III Flex	XDF	Hyundai	01/01/2022	174000	NYK

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 = 3rd March 2021

Name	Containment system	Propulsion	Yard	Delivery date	Capacity	Primary Owner
Gui Ying	GTT 96 L03+	XDF	Hudong-Zhonghua	01/01/2022	174000	CSSC
Daewoo 2508	Unknown	XDF	DSME	01/03/2022	174000	Maran Gas Maritime
Hudong-zhonghua H1829a	GTT 96 L03+	XDF	Hudong-Zhonghua	01/03/2022	170520	CSSC
Samsung 2319	GTT MK III Flex	XDF	Samsung	01/03/2022	174000	JP Morgan
Elisa Aquila	GTT MK III Flex	XDF	Hyundai	01/03/2022	174000	NYK
Clean Cajun	Unknown	XDF	Hyundai	01/04/2022	200000	Dynagas
Hyundai Samho 8033	GTT MK III Flex	XDF	Hyundai	01/06/2022	173000	NYK
Hyundai Samho 8026	GTT MK III Flex	XDF	Hyundai	01/06/2022	174000	H-Line
Hudong-zhonghua H1830a	GTT 96 L03+	XDF	Hudong-Zhonghua	01/06/2022	170520	CSSC
Samsung 2337	GTT MK III Flex	XDF	Samsung	01/07/2022	174000	JP Morgan
Clean Copano	Unknown	XDF	Hyundai	01/07/2022	200000	Dynagas
Hyundai Samho 8091	Unknown	XDF	Hyundai	01/08/2022	174000	Knutzen
Hyundai Ulsan 3185		XDF	Hyundai	01/08/2022	174000	Korea Line
Daewoo 2509	Unknown	MEGI	DSME	01/08/2022	174000	BWGas
Daewoo 2510	Unknown	MEGI	DSME	01/09/2022	174000	BWGas
Prism Diversity	Unknown	XDF	Hyundai	01/09/2022	180000	SK Shipping
United Prosperity	Not Applicable	XDF	Hudong-Zhonghua	01/10/2022	174000	China LNG Shipping
Hyundai Samho 8092	Unknown	XDF	Hyundai	01/10/2022	174000	Knutzen
Hyundai Ulsan 3186		XDF	Hyundai	01/10/2022	174000	Korea Line
Hyundai Ulsan 3187		XDF	Hyundai	01/11/2022	174000	JP Morgan
Hyundai Samho 8093	Unknown	XDF	Hyundai	01/11/2022	174000	Knutzen
Minerva Amorgos	GTT MK III Flex+	XDF	Samsung	01/11/2022	174000	Minerva Marine
Hyundai Ulsan 3243	Unknown	XDF	Hyundai	01/12/2022	174000	Knutzen
Daewoo 2514	Unknown	TFDE - Azipod	DSME	01/12/2022	172500	Sovcomflot
Hyundai Ulsan 3188		XDF	Hyundai	01/12/2022	174000	JP Morgan
Hyundai Samho 8094	Unknown	XDF	Hyundai	01/12/2022	174000	Knutzen
United Glory	Unknown	XDF	Hudong-Zhonghua	01/01/2023	174000	China LNG Shipping
Samsung 2364	GTT MK III Flex+	XDF	Samsung	01/01/2023	174000	MISC
Hyundai Ulsan 3111	GTT MK III Flex	XDF	Hyundai	01/01/2023	174000	Capital Gas
Hyundai Ulsan 3244	Unknown	XDF	Hyundai	01/02/2023	174000	Knutzen
Samsung 2365	GTT MK III Flex+	XDF	Samsung	01/02/2023	174000	MISC
Samsung 2426	Unknown	XDF	Samsung	01/03/2023	174000	Pan Ocean
Hyundai Ulsan 3189	Unknown	XDF	Hyundai	01/03/2023	174000	JP Morgan
Zvezda 041	GTT MK III	TFDE - Azipod	Zvezda SSK	01/03/2023	172600	Smart LNG
Daewoo 2515	Unknown	TFDE - Azipod	DSME	01/04/2023	172500	MOL
United Fortune	Unknown	XDF	Hudong-Zhonghua	01/04/2023	174000	China LNG Shipping
Hyundai Samho 8095	Unknown	XDF	Hyundai	01/05/2023	174000	Knutzen
Hyundai Ulsan 3190	Unknown	XDF	Hyundai	01/05/2023	174000	JP Morgan
Hyundai Samho 8096	Unknown	XDF	Hyundai	01/06/2023	174000	Knutzen
Samsung 2425	Unknown	XDF	Samsung	01/07/2023	174000	Maran Gas Maritime
Daewoo 2516	Unknown	TFDE - Azipod	DSME	01/07/2023	172500	Sovcomflot

Name	Containment system	Propulsion	Yard	Delivery date	Capacity	Primary Owner
Hyundai Samho 8105		XDF	Hyundai	01/08/2023	174000	Sovcomflot
Hyundai Ulsan 3191	Unknown	XDF	Hyundai	01/09/2023	174000	Korea Line
Daewoo 2517	Unknown	TFDE - Azipod	DSME	01/09/2023	172500	Sovcomflot
Zvezda 042	GTT MK III	TFDE - Azipod	Zvezda SSK	01/09/2023	172600	Smart LNG
Hyundai Ulsan 3198	Unknown	XDF	Hyundai	01/10/2023	174000	Korea Line
Daewoo 2518	Unknown	TFDE - Azipod	DSME	01/10/2023	172500	MOL
Zvezda 043	GTT MK III	TFDE - Azipod	Zvezda SSK	01/10/2023	172600	Smart LNG
Zvezda 044	GTT MK III	TFDE - Azipod	Zvezda SSK	01/11/2023	172600	Smart LNG
Daewoo 2519	Unknown	TFDE - Azipod	DSME	01/12/2023	172500	MOL
Zvezda 045	Unknown	TFDE - Azipod	Zvezda SSK	01/12/2023	172600	Smart LNG
Samsung 2393	Unknown	XDF	Samsung	01/01/2024	174000	NYK
Samsung 2394	Unknown	XDF	Samsung	01/02/2024	174000	NYK
SHI Maran 1	GTT MK III Flex	XDF	Samsung	15/02/2024	174000	Maran Gas Maritime
SHI Maran 2	GTT MK III Flex	XDF	Samsung	15/02/2024	174000	Maran Gas Maritime
SHI #1	GTT MK III Flex	XDF	Samsung	15/02/2024	174000	Maran Gas Maritime
SHI #2	GTT MK III Flex	XDF	Samsung	15/02/2024	174000	Maran Gas Maritime
Hyundai Ulsan 3221	Unknown	XDF	Hyundai	01/07/2024	174000	Pan Ocean
Hyundai Ulsan 3222	Unknown	XDF	Hyundai	01/08/2024	174000	Pan Ocean
Samsung 2395	Unknown	XDF	Samsung	01/08/2024	174000	NYK
Zvezda 046	Unknown	TFDE - Azipod	Zvezda SSK	01/08/2024	172600	Smart LNG
Samsung 2396	Unknown	XDF	Samsung	01/09/2024	174000	NYK
Zvezda 047	Unknown	TFDE - Azipod	Zvezda SSK	01/09/2024	172600	Smart LNG
HHI 2/9	GTT MK III Flex	XDF	Hyundai	15/09/2024	174000	MOL
HHI 3/9	GTT MK III Flex	XDF	Hyundai	15/09/2024	174000	MOL
HHI 4/9	GTT MK III Flex	XDF	Hyundai	15/09/2024	174000	MOL
HHI 5/9	GTT MK III Flex	XDF	Hyundai	15/09/2024	174000	MOL
HHI 6/9	GTT MK III Flex	XDF	Hyundai	15/09/2024	174000	K-Line
HHI 7/9	GTT MK III Flex	XDF	Hyundai	15/09/2024	174000	K-Line
HHI 8/9	GTT MK III Flex	XDF	Hyundai	15/09/2024	174000	K-Line
HHI 9/9	GTT MK III Flex	XDF	Hyundai	15/09/2024	174000	K-Line
HHI 1/9	GTT MK III Flex	XDF	Hyundai	15/09/2024	174000	MOL
Hyundai Ulsan 3223	Unknown	XDF	Hyundai	01/10/2024	174000	JP Morgan
Zvezda 048	Unknown	TFDE - Azipod	Zvezda SSK	01/10/2024	172600	Smart LNG
Hyundai Samho 8100	Unknown	XDF	Hyundai	01/11/2024	174000	Knutsen
Zvezda 049	Unknown	TFDE - Azipod	Zvezda SSK	01/11/2024	172600	Smart LNG
Zvezda 050	Unknown	TFDE - Azipod	Zvezda SSK	01/12/2024	172600	Smart LNG
Zvezda 051	Unknown	TFDE - Azipod	Zvezda SSK	01/08/2025	172600	Smart LNG
Zvezda 052	Unknown	TFDE - Azipod	Zvezda SSK	01/09/2025	172600	Smart LNG
Zvezda 053	Unknown	TFDE - Azipod	Zvezda SSK	01/10/2025	172600	Smart LNG
Zvezda 054	Unknown	TFDE - Azipod	Zvezda SSK	01/11/2025	172600	Smart LNG
Zvezda 055	Unknown	TFDE - Azipod	Zvezda SSK	01/12/2025	172600	Smart LNG

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 = Data last updated = 3rd March 2021