

LNG Shipping News

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25 November 2021

GIIGNL addresses carbon neutral cargoes

The International Group of Liquefied Natural Gas Importers (GIIGNL) has unveiled a framework with which to declare greenhouse gas neutral LNG cargoes.

This comes at a time when the practice of declaring LNG cargoes 'carbon neutral' is increasing, the organisation said.

The Monitoring, Reporting, and Verification (MRV) and GHG (Greenhouse Gas) Neutral Framework is part of an industry movement to account for and reduce GHG emissions associated with LNG. Players at every stage of the LNG life cycle can use the framework to assess their LNG cargoes' GHG footprints.

This framework promotes verified and consistent quantification of GHG emissions across the whole value chain, from extraction of natural gas, liquefaction, shipping, regasification to final consumption.

Significantly, it creates a transparent practice to declare GHG neutral cargoes through an independently verified 'Cargo

Statement', which sets out both emissions and offsets, GIIGNL explained.

GIIGNL claimed that emissions are avoided and reduced where possible and if offsetting is used, it can compensate for residual emissions that cannot otherwise be reduced or avoided.

Emissions accounting

"To fulfil the LNG industry's critical and unique role in supporting the global economy to transition to net-zero emissions, it is imperative that our sector consistently and collaboratively accounts for emissions across the entire value chain," said GIIGNL President, Jean Abiteboul.

"Alongside reducing and offsetting overall emissions, it is our intention that the Framework assists the industry in demonstrating greater transparency," he said.

Steve Hill, Shell Energy Executive Vice President and GIIGNL Regional Vice President for Americas, added: "The Framework provides organisations across the industry with a best-practice approach specifically designed to enhance transparency and accuracy in quantifying, reporting, and offsetting emissions associated with LNG cargoes.

"We are keen to start the groundwork on applying this framework to deliver a test 'GHG neutral' LNG cargo as defined by the Framework," he said.

Michiaki Hirose, Tokyo Gas Chair and GIIGNL Regional Vice President for Asia, commented: "While corporate strategies to reach GHG neutrality may differ from one company to another, the industry expects to achieve GHG reductions throughout the LNG value chain."

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LNG cargo GHG measurement methodology introduced

Pavilion Energy Trading & Supply, QatarEnergy, and Chevron USA (Singapore office) have jointly introduced a quantification and reporting methodology (SGE Methodology) for a statement of greenhouse gas emissions (GHG) for delivered LNG cargoes.

This is the first published methodology that will be applied to sales and purchase agreements (SPAs), specifically SPAs executed by Pavilion Energy with QatarEnergy and Chevron, Pavilion said.

Intended for wide adoption, the methodology provides a GHG calculation and reporting framework from wellhead-to-discharge terminal, based on industry standards.

SGE Methodology was developed by a team of technical specialists representing the three companies, supported by global sustainability consultancy, Environmental Resources Management (ERM).

The aim is to create a common standard for GHG emissions measurement, reporting and verification associated with producing and delivering an LNG cargo to drive

greater transparency and enable stronger action on GHG reduction measures.

Independent academic experts, commercial institutions and verification bodies have all reviewed the methodology. It complements other industry efforts being developed in parallel, specifically GIIGNL's Monitoring, Reporting, Verification (MRV) and GHG Neutral Framework (see page 1).

"We share a common and decisive vision with QatarEnergy and Chevron to advocate for transparency and accuracy of GHG emissions associated with delivered LNG cargoes," said Alan Heng, Pavilion Energy Interim Group CEO, "The SGE Methodology sets a strong tone for increased accountability of emissions along the LNG

value chain, paving the way for more de-carbonisation strategies towards a lower carbon future."

Ahmad Saeed Al-Amoodi, QatarEnergy's Executive Vice President of Surface Development and Sustainability, added; "This joint effort to develop a greenhouse gas quantification and reporting methodology is part of a series of projects and initiatives that reflect QatarEnergy's commitment to reduce GHG emissions and to de-carbonise the LNG value chain. We are proud to join hands with our partners Pavilion Energy and Chevron in this landmark project."

"We jointly developed this LNG carbon-footprinting methodology for delivered cargoes to help advance a standard for GHG product-level accounting," commented



Pavilion's interim CEO Alan Heng

Bruce Niemeyer, Chevron's Vice President of Strategy and Sustainability. "This methodology is expected to enhance transparency, improve accuracy and build stakeholder confidence in data reliability to help advance net zero ambitions."

Dearth of spot ships leads to rate boom

The current high gas prices are to remain for the rest of this year and beyond.

If the winter is cold as forecast, then a knock-on effect into 2022 will be seen, particularly in the term market, said broker Simpson Spence Young (SSY) in its November report.

This month's spot market was active. During the middle of the month, nearly 10 spot fixtures were reported in a few days and freight rates rose to even higher levels.

For example, Asia/Pacific LNG shipping rates surged to an all-time high of around \$300,000 per day during the middle of the month for a standard LNGC, as vessel demand outpaced tight ship supply in the region, ahead of peak winter season, S&P Global Platts reported.

Atlantic LNG shipping rates also surged to around \$245,000 per day last week.

High offers

Charterers who have LNG shipping requirements for end-December loading in the Pacific received offers above \$300,000 per day with a ballast bonus covering the fuel and hire cost of the vessel to be redelivered to its next load port. The offers came from trading houses.

In mid-October, the volume of LNG cargoes on the water had hit a new record high, above the five-year average level, due to a steep contango in LNG price structure that saw the October/November

JKM spread at nearly \$14 per MMBtu.

This led traders to book more vessels and will likely lead to a surge in demand for LNGCs that are due to return to the spot market, Platts said.

The lack of ships is compounded by the Panama Canal delays where the waiting time for vessels with unreserved slots has risen to around 10-15 days, according to brokers.

What became increasingly clear by the end of the month was how tight the shipping market had become, SSY added.

A handful of relets remained available but most disappeared,

due to the increasing urgency to conclude a charter, as December cargoes were covered for the winter.

The overall tightness even resulted in a charterer re-tendering for an early/mid-December US Gulf lifting requirement.

Constant market volatility, with Russian commitments to increase gas supplies to Europe, despite problems with Nord Stream 2 and politics playing its part, continued to see TTF and JKM see-saw.

The LNG market will have about 22 mill tonnes per annum of new capacity volume coming online next year, with only 25 new ships being delivered, SSY said. ■

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Mozambique more stable - TotalEnergies

Mozambique's security situation is improving, according to TotalEnergies.

"We are looking at the situation and, so far, the steps taken by the Mozambique Government are going in the right direction," Henri-Max Ndong Nzue, TotalEnergies' Senior vice President for Africa told S&P Global Platts at the recent Africa Oil Week Conference.

Last April, the French energy major declared *force majeure* on the Mozambique LNG project and evacuated its staff from the site after Islamist militants attacked the nearby town of Palma killing many people.

This situation delayed the planned production startup to at

least 2025 from 2024 with full production of 13.1 mill tonnes per annum forecast for a year later.

Nzue said that since the attack, military forces had secured the province in the north of the country, not only for the LNG project.

The country's problems have impacted not only Mozambique LNG but also on ExxonMobil's planned 15.2 mill tonnes Rovuma project.

TotalEnergies is Mozambique LNG's operator and holds a 26.5% stake in the project since taking over in September, 2019, as part of a deal with Occidental to buy

assets that the company had acquired through its purchase of Anadarko.

Mozambique LNG has long term offtake agreements in place totalling more than 11 mill tonnes per year with importers, such as Shell, EDF, CNOOC, a joint venture between Centrica and Tokyo Gas and another joint venture between JERA and CPC Corp.

The initial two train project could be expanded to as much as 43 mill tonnes per year, the company said, Platts reported.

FLNG sails

Meanwhile, the FLNG 'Coral Sul' sailed for Mozambique from Samsung's Goeje shipyard on 16th November.

At 432 m long and 66 m beam, she is the world's second largest FLNG and will be capable of producing 3.4 mill tonnes of LNG per year.

Speaking at the naming ceremony the day before, Mozambique's President Filipe Nyusi, who was on a three-day visit to South Korea, said that Mozambique hopes to order a second unit.

"The 'Coral Sul' will produce and ship 3.4 mill tonnes of LNG annually in waters off Cabo Delgado. When LNG production gets under full swing, Mozambique's

economic growth is expected at over 10% each year, while there's also expected to be simultaneous growth in the infrastructure and manufacturing sectors," President Nyusi said.

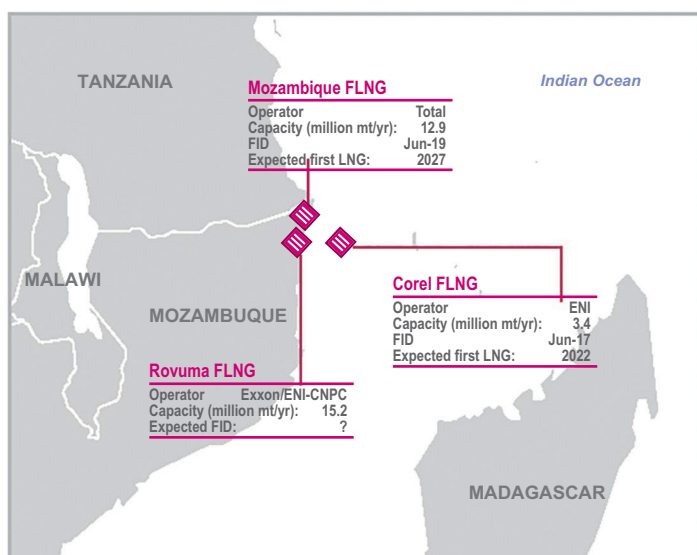
'Coral Sul' will be located at the Coral gas field in Area 4 in Mozambique and start LNG production next year. The field is considered to be the largest natural gas field found in this century. Its reserves are estimated at 85 trill cu ft.

It is believed that South Korean shipbuilders are likely to win more LNGC orders if production increases further thanks to the development of the Area 4 gas field. KOGAS holds a 10% stake in Area 4.

Samsung reported last week that it had demonstrated its gas liquefaction technology to sharpen its competitive edge to gain FLNG orders.

With the successful demonstration of the gas liquefaction technology named SENSE IV, SHI will be better positioned to win orders for FLNGs, reported Yonhap.

The demonstration was attended by officials from Italy's ENI, Norway's Equinor and the UK's Golar LNG, plus ship quality assurance and risk management companies, such as ABS and Bureau Veritas.



Source: S&P Global Platts

Mozambique's LNG Projects

New Brazilian import terminal on the cards

Brazilian energy developer Eneva and local energy investment company Servtec Investimentos e Participacoes have signed a co-operation agreement to build an LNG terminal at Sao Luis in Maranhao state.

A final investment decision (FID) will be made after concluding the evaluations and obtaining the required licenses and authorisations to implement the project, Eneva said.

This co-operation agreement adds to the growing list of potential LNG projects under construction or being evaluated by oil and natural gas producers, power com-

panies, investors and other players, as Brazil implements more liberal regulations after the New Gas Market regime was signed into law earlier in 2021, S&P Global Platts explained.

Brazil expects natural gas production to more than double to 260 mill cu m per day by 2030, Mines and Energy Minister, Bento Albuquerque said last week.

The number of Brazilian terminals is expected to rise to eight over the next few years from the five currently in service. Brazil expects LNG imports to increase over the next two to three years amid rising demand. However, the country will switch to an LNG exporter in the next five to eight years, according to the Minister.

Under the terms of the deal

with Servtec, Eneva will have exclusive rights to the project until 30th December, 2022, which will then be followed by a right-of-first refusal until the end of 2023, the company said.

Should the deal advance, the two companies will form a joint venture to develop the project, with Eneva holding 51% and Servtec 49%.

Woodside approves FIDS - BHP merger nears

Australian LNG producer, Woodside has taken final investment decisions (FIDs) to approve the Scarborough and Pluto Train 2 developments.

These also include new domestic gas facilities and modifications to Pluto Train 1.

The \$12 billion LNG development is expected to deliver significant cash flow and enduring value to shareholders.

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 first LNG cargo targeted for 2026, Woodside said.

With the sell-down of 49% of Pluto Train 2 announced last week, the expected investment metrics for the integrated development are:

- An internal rate of return (IRR) of above 13.5%.
 - An all-in cost of supply for LNG delivered to north Asia of around \$5.8 per MMBtu.
 - A payback period of six years.
- Woodside CEO, Meg O'Neill, said; "Today's decisions set Woodside on a transformative path. Scarborough will be a significant contributor to Woodside's cash flows, the funding of future developments and new energy products, and shareholder returns.

"This capital efficient development leverages Woodside's existing infrastructure and our proven expertise in project execution. The contracting model, development concept and execution strategy have been designed to reduce cost risk and protect shareholder value.

"The Scarborough reservoir contains only around 0.1% carbon dioxide, and Scarborough gas processed through the efficient and expanded Pluto LNG facility sup-

ports the de-carbonisation goals of our customers in Asia.

"The final investment decision is underpinned by quality customer support with approximately 60% of Scarborough capacity contracted, including domestic gas for the proposed Perdaman urea project.

"Developing Scarborough delivers value for Woodside shareholders and significant long-term benefits locally and nationally, including thousands of jobs, taxation revenue and the supply of gas to export and domestic markets for decades to come," she said.

Services agreement

The Scarborough and Pluto Train 2 joint ventures have executed a fully termed processing and services agreement (PSA) for the processing of the gas through the Pluto LNG facilities.

This PSA provides for the Scarborough Joint Venture to access LNG and domestic gas processing services at a rate of up to 8 million tonnes per annum of LNG and up to 225 terajoules per day of domestic gas for an initial period of 20 years, with options to extend.

The agreement is subject to certain conditions precedent including relevant regulatory approvals, and the execution of the Domestic Gas Commitment Agreement and associated infrastructure and development agreements with the Western Australia Government.

Pluto LNG is an onshore LNG processing facility located near Karratha in the northwest of Western Australia. The first cargo from the single-train facility was delivered in 2012.

Construction of its first 1 million tonnes per year import terminal is well under way, the company claimed.

PV Gas began construction of the terminal at Ba Ria-Vung Tau province in October, 2019. Currently, 90% of the work has been completed. The company added



Woodside's Meg O'Neill is overseeing the FIDs and BHP merger

Expansion will include the construction of Pluto Train 2, associated domestic gas processing facilities, supporting infrastructure and modifications to Pluto Train 1 to allow it to process Scarborough gas.

Bechtel has been selected as the EPC contractor for Pluto Train 2 and its integration into existing Pluto LNG facilities.

At the same time, BHP Group (BHP) and Woodside Petroleum signed a binding share sale agreement (SSA) for the earlier announced merger of BHP's oil and gas portfolio with Woodside.

Woodside will acquire the entire share capital of BHP Petroleum International Pty Ltd in exchange for new Woodside shares.

The combined company will have long life LNG and oil assets.

BHP CEO, Mike Henry, said: "Merging our petroleum business with Woodside creates a large, more resilient company, better able to navigate the energy transition and grow value while doing so."

Completion is targeted for the second quarter of the 2022, while the effective date of the merger will be 1st July, 2021.

A Woodside shareholder meeting to approve the merger is targeted for the second quarter of the 2022 calendar year. ■

that it intends to start operations at the terminal by the third quarter of 2022.

Associated projects are also in progress, PV Gas said.

PV Gas said that it had signed six LNG master sale and purchase agreements (SPAs) with foreign suppliers, without providing details. ■

Engie to off-take Corpus Christi LNG

During the summer, Cheniere Energy signed a medium-term supply deal with French utility Engie.

This supply deal was tied to the Corpus Christi Liquefaction terminal in Texas, according to a recently released letter sent to the US Department of Energy (DoE) that was previously filed under seal, Global S&P Platts reported.

Under the terms of the 11-year sale and purchase agreement (SPA), a range of between 0.4-1.2 million tonnes per year of LNG will be delivered to Engie on a free on board (FOB) basis from Cheniere's Corpus Christi terminal.

This transaction was signed on 23rd June, according to the letter, which was dated 23rd July. The terms of the contract, beyond its length, volume and delivery basis, were not disclosed. The contract was to begin in year, though the letter did not give a date.

In addition, Engie has not publicly announced the deal, Platts said.

This year, Cheniere has announced the signing of supply deals with Canada's Tourmaline, a subsidiary of Swiss commodity trader Glencore; China's Sinochem and an affiliate of China's ENN Natural Gas.

In 2015, Cheniere said that its marketing unit had signed a five-year deal with Engie for the delivery of LNG cargoes on an ex-ship basis, primarily to the Montoir de Bretagne LNG regasification terminal in France.

That SPA covered the delivery of up to 12 cargoes per year from 2018 to 2023, with the volumes linked to Northern European indices, Platts said. ■

NEWS NUDGE

PV Gas - first LNG cargo next year

Vietnam's state-controlled PV Gas plans to import its first LNG cargo in 2022.

JERA invests in Freeport LNG

Japanese energy major, JERA, is to invest in Freeport LNG Development (FLNG), through its subsidiary JERA Americas.

FLNG operates the US Freeport LNG project and has concluded a securities purchase agreement with infrastructure fund Global Infrastructure Partners (GIP) to acquire around 25.7% interest in FLNG held by its subsidiaries.

The \$2.5 bill acquisition is expected to be completed after the necessary approval and authorisation procedures. JERA Americas has appointed Goldman Sachs as its exclusive financial advisor and Sidley Austin as its legal advisor.

JERA said that together with FLNG, it has contributed to the stable operation of the Freeport LNG project's Train 1 through its participation in FLIQ 1 Holdings.

As a result of the deal, JERA will not only be involved in the entire existing Freeport LNG project (three trains with an annual production capacity of about 15.45 mill tonnes per annum) but will also join FLNG to advance new LNG projects, including a production capacity expansion and the

development of Train 4.

Stable supply

As evidenced by the current gas price hikes worldwide, securing a stable supply of competitive LNG is becoming increasingly important, JERA stressed.

FLNG's new LNG projects were claimed to have extremely low development risks, due to the use of the existing Freeport LNG project, which enables the company to flexibly expand production capacity in response to increased global LNG demand.

In addition, since there are no LNG resale or destination restrictions exported from the project, JERA believed it will be possible to supply LNG to Japan when supply is tight and to otherwise respond flexibly to the LNG supply and demand situation in the Asian region.

Almost simultaneously, GIP agreed to buy a 49% stake in Woodside's Pluto LNG Train 2 (see page 4).



Japanese energy major JERA has taken a stake in Freeport LNG

In addition to its 49% share of capital expenditure, the joint venture arrangements require GIP to fund additional capital expenditure of about \$835 mill. Woodside's joint venture capital contributions will be reduced accordingly.

If the total capital expenditure incurred is less than \$5.6 bill, GIP will pay Woodside an additional amount equal to 49% of the underspend. In the event of a cost overrun, Woodside will fund up to \$835

mill in respect of a 49% share of any overrun.

The effective date of this transaction is 1st October, 2021 and completion is expected in January, 2022.

The purchasing interest is Sharon Acquirer Trust, an investment entity owned by funds managed or advised by GIP. Woodside's financial advisers are Morgan Stanley Australia and Rothschild & Co, and its legal adviser is Ashurst. GIP's legal adviser is Allens. ■

NEWS NUDGE

GTT orders keep coming

GTT has received yet another order from Daewoo Shipbuilding & Marine Engineering (DSME) for the tank design of a new LNGC building on behalf of an Asian shipowner.

The company will provide the design and associated engineering services for the 174,000 cu m vessel's tanks, which will be fitted with a NO96 GW membrane containment system.

The vessel will be delivered in the second half of 2024.

GTT has also been chosen by Hyundai Samho Heavy Industries (HSHI) to equip two LNG fuelled container vessels with its membrane containment technology.

The two 15,600 TEU vessels will be fitted with LNG tanks,

each holding up to 12,800 cu m of LNG as fuel. Each tank will be fitted with the Mark III Flex membrane containment technology.

GTT will also assist the operator through each step of the first LNG-fuelled project: commissioning of the LNG tank, first LNG bunkering operations, as well as further specific LNG operations and maintenance of the vessels.

Crew training will be provided, supported by GTT's proprietary G-Sim training simulator, which replicates the future LNG operations of the vessels. GTT will also offer its patented HEARS emergency response service with 24/7 technical assistance.

In addition, GTT will install its GTT Digital platform, a 'smart shipping' solution to monitor and optimise the operational performance of the vessels and further reduce their energy consumption

and environmental footprint.

Vessels deliveries are scheduled for between the fourth quarter of 2023 and the second quarter of 2024.

McDermott wins Woodfibre contract

McDermott International has been awarded the engineering, procurement, fabrication, and construction (EPFC) contract for Woodfibre LNG's planned export facility.

This contract is an important step in producing detailed engineering and construction scheduling work in advance of the British Columbia LNG developer issuing a notice to proceed, the company said.

By harnessing the low-carbon gas resources of British Columbia's Montney region to replace Asian coal-fired energy sources, Woodfibre LNG will re-

duce global emissions by 3.5 mill tonnes CO2e per annum.

Woodfibre has already signed two offtake agreements with BP, which means that over 70% of its annual throughput has been sold.

McDermott's NetZero Modular LNG strategy was fully utilized during the development of the onshore gas processing and liquefaction facility with floating storage capacity to be located near Squamish, British Columbia, Canada.

In addition to the EPFC work, McDermott will be responsible for commissioning and start-up services. Pre-installation work for the project is planned for early 2022 and will gradually ramp up to September, 2023, when major construction is targeted to begin. Major works will continue through to substantial completion, expected in 3Q27. ■

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Höegh narrows losses - FSRU dispute rumbles on

Embattled Höegh LNG Holdings reported total income of \$86.1 mill for the third quarter of 2021, compared with \$87 mill in the preceding quarter.

EBITDA was \$56.1 mill, compared to \$52.7 mill for the second quarter.

This increase mainly reflected that 'Höegh Giant' was operating for a full quarter under its charter agreement with H-Energy and that 'Arctic Princess' did not incur any off-hire days during the quarter after completing her drydocking and class renewal in the second quarter.

EBITDA was also positively affected by lower vessels' operating expenses.

The group recorded a net loss after tax of \$3.1 mill for 3Q21, from a loss of \$19.4 mill in the preceding quarter. This loss reduction was mainly down to the increase in EBITDA, one off financing costs in 2Q21 not being repeated in this quarter, including a substantially lower provision for tax

uncertainty related to Indonesia, compared to 2Q21.

As of 30th September, 2021, Höegh LNG held \$110 mill in current unrestricted cash, compared with \$122.2 mill in 2Q21.

Net interest-bearing debt, including lease liabilities, decreased during the quarter by \$22 mill to \$1,502 mill (\$1,524 mill).

During the third quarter, Höegh LNG Partners entered into a 10-year contract with subsidiaries of New Fortress Energy for the 'Höegh Gallant'. She is expected to be delivered next month.

After the end of the quarter, Höegh entered into a binding Heads-of-Agreement with a large utility customer to charter another of its FSRUs.

As for the ongoing 'PGN FSRU Lampung' dispute, on 27th Octo-



The Lampung dispute now involves shareholder class actions

ber, 2021 and 3rd November, 2021, two unit holders filed a class action securities fraud lawsuit in the US District Court for the District of New Jersey against Höegh LNG Partners and certain of its current and former officers, alleging violations of the US Securities Exchange Act of 1934.

Last August, the charterer served a notice of arbitration (NOA) to declare the LOM contract null and void, and/or to terminate it, and/or seek damages against

the company and its officers.

Owning company, PT Höegh LNG Lampung (PT HLNG) said the claims were baseless and without legal merit and has served a counter claim against the charterer for multiple breaches of the LOM.

Despite the NOA, both parties have continued to perform their respective obligations under the LOM. No assurance can be given as to the outcome of the dispute with the charterer, Höegh said. ■

Firm market boosts Flex LNG

Flex LNG has reported an increase in revenues to \$81.8 mill for the third quarter 2021, compared to \$65.8 mill for the previous quarter.

Net income was \$32.8 mill and earnings per share \$0.62 for 3Q21, compared to \$12.7 mill and \$0.24, respectively for the second quarter.

The average timecharter equivalent (TCE) rate was \$68,341 per day for 3Q21, compared to \$57,780 per day for 2Q21, while adjusted EBITDA was \$64.5 mill against \$46.8 mill for the second quarter.

Adjusted net income of \$32 mill for 3Q21, compared to \$15.7 mill for the second quarter.

The company said that it had secured attractive long-term timecharters with a mixed portfolio of market rate and fixed rate contracts and when the report was issued, the fleet had an aggregate of 33 years firm periods and with charterer's options, this could extend to over 69 years, if declared.

Flex LNG declared a 3Q21 dividend of \$0.75.

Flex LNG Management CEO, Øystein Kalleklev, commented: "We are pleased to announce an-

other strong quarterly report with revenues for the third quarter of \$82 mill in line with our guidance of approximately \$80 mill.

"In the fourth quarter, we will also be handsomely rewarded for maintaining a 30% exposure to the spot market, as the spot market is currently at all time highs. Hence, we are consequently lifting our revenue estimate for the fourth quarter from previously guided \$85 to \$100 mill to about \$110 mill, thus further improving earnings in the near term.

"We have also recently secured another two attractive timecharters, which will further add to our growing backlog while de-risking our portfolio. Since April, we have secured long term fixed hire employment for eight of our ships, with charterers option for a ninth vessel next year, in line with our communicated strategy of securing high margin revenue backlog once the market has improved.

"Our firm contract backlog is now about 33 years with a further 36 years of optional backlog. This highlights the attractiveness of owning and operating highly efficient ships with significantly lower carbon footprint than the older generation ships.

"Given our healthy earnings, positive outlook and super-strong financial position the Board has therefore decided to lift our quarterly dividend level from \$0.40 per share to \$0.75 per share, which provides our shareholders with a compelling yield of approximately 14%," he concluded.

Long term charters

During the second and third quarters of this year, Flex LNG agreed long term charters for six vessels. In the second quarter, 'Flex Endeavour' and 'Flex Vigilant' commenced their charters with Cheniere Marketing International with firm periods of 3.8 and three

years, respectively and 'Flex Constellation' commenced her charter with international trading house for a firm period of three years.

In 3Q21, 'Flex Ranger' commenced her long term charter with Cheniere with a firm period of 3.6 years. In addition, the company had options declared on 'Flex Aurora' and 'Flex Resolute', which extended their fixed rate timecharters by an additional six months on each charter at attractive rates. The option periods commenced in this quarter.

This month, the company entered into fixed rate timecharter agreements with minimum firm periods of three years with an international energy major for the 'Flex Resolute' and 'Flex Courageous'. Both vessels will be delivered during the first quarter 2022 in direct continuation of their existing timecharters. Included in the agreements are options to extend each vessel by up to four years in two-year periods. ■

Dynagas enjoys net income increase

Dynagas LNG Partners has reported a 13% increase in net income for the third quarter of this year of \$11.3 mill, compared to \$10 mill in 3Q20.

This increase was mainly attributable to the rise in voyage revenues, as well as to the decrease in finance costs, partially offset by the increase in loss on an interest rate swap transaction entered into in May, 2020.

Adjusted net income for 3Q21 was \$11.6 mill, compared to \$10.2 mill in the corresponding period in 2020, representing a net increase of 13.7%.

Daily hire gross of commissions of around \$62,800 per day per vessel in the three-month period, compared to about \$62,500 per day per vessel in 3Q20. During both three-month periods, the Partnership's vessels operated at 100% utilisation.

Vessel operating expenses were \$7 mill, which corresponds to daily

operating costs per vessel of \$12,641 in 3Q21, compared to \$13,074 in 3Q20. This drop was mainly attributable to lower technical maintenance costs, compared to 3Q20.

Adjusted EBITDA for 3Q21 was \$24.8 mill, compared to \$24.2 mill for 3Q20, a rise of 2.5%. This was mainly due to the increase in voyage revenues and the decrease in operating expenses, compared to the 2020 period.

For the first nine months of this year, Dynagas' net income was \$36.3 mill, compared to \$23.4 mill in the same period of 2020, while Adjusted net income was \$32.5 mill, compared to \$27.2 mill.

On 15th September, 'Arctic Aurora' was delivered to Equinor for a new timecharter immedi-

ately upon expiration of the previous charter party with Equinor, resulting in no time lapse between the previous and the current timecharters.

All six LNGCs are operating under their respective long-term charters with international gas producers with an average remaining contract term of 7.2 years. As of 18th November, 2021, the estimated contracted revenue backlog was \$1.06 bill.

Going forward, Dynagas said that it intended to continue its strategy of using cash flow generation to deleverage the balance sheet and reinforce liquidity to



Equinor has taken the 'Arctic Aurora' in direct continuation

build equity value over time and enhance the ability to pursue future growth initiatives.

As of 30th September, 2021, the Partnership reported total cash of \$91.3 mill (including \$50 mill of restricted cash). The outstanding debt under the \$675 mill credit facility amounted to \$579 mill, gross of unamortised deferred loan fees and including \$48 mill, which was repayable within a year. ■

SCF wins industrial business contracts

For the first nine months of this year, PAO Sovcomflot (SCF) increased its fixed income industrial business portfolio with nine new contracts.

Seven of the new contracts were for LNGC newbuildings, while the other two concerned shuttle tankers.

SCF's contract backlog rose by further \$1.3 bill over the period and the total contract backlog stood at \$24 bill as of 30th September, 2021.

However, the nine month revenue showed a drop of 22.4% year-on-year to \$829.7 mill.

Third quarter EBITDA was \$170.1 mill (a 6.2% decrease on the previous quarter), while the nine month EBITDA fell 32.2% year-on-year to \$507.3 mill.

The 3Q21 net income adjusted for impairment provisions, foreign exchange gains and losses and gains and losses related to the revaluation of financial assets was \$28.4 mill (a 21.4% drop compared with 2Q21). The nine month adjusted net income was \$87.4 mill.

SCF's industrial business portfolio, comprising LNG and LPG carriers and harsh environment offshore services (ice class shuttle tankers and icebreaking supply

and standby vessels) accounted for 66% of SCF's TCE revenue during the nine month period and continued to provide a long-term fixed income revenue stream.

New LNGC input

Industrial business segments contributed \$544.3 mill to the TCE revenue, delivering 8.6% year-on-year growth, due to the input from three new LNGCs delivered in 2020 and 2021, which are employed under long-term contracts with Shell and TotalEnergies.

The 3Q21 revenue for the industrial segment of \$180.9 mill remained unchanged, compared to the previous quarter.

Commenting on the results, Igor Tonkovidov, SCF President and CEO, said: "Our industrial business segment performed strongly, consistently and in line with previous guidance. New additions to SCF's contract backlog will further strengthen our industrial business, giving us confidence in the long-

term visibility, stability and growth of cash flow from infrastructure projects.

"With the addition of new timecharter contracts with TotalEnergies and NOVATEK for LNG carriers and with Sakhalin Energy for shuttle tankers, the cumulative increase in our contract backlog in the first nine months of 2021 came at \$1.3 bill. Following these new additions, our total contract backlog stood at \$24 bill as of the reporting date.

"We continue to grow our business, considering all available innovative technologies to reinforcement of our fleet's safety and efficiency, whilst reducing vessel emissions, as we have done with our recent orders, all of which will use LNG as their primary fuel - the most efficient fuel type currently available.

"We are also pleased to note that our assumptions of a recovery in the tanker market are starting to materialise. The combination of a rebound in demand and tighten-

ing supply should lead to an improvement in freight rates," he concluded.

Nikolay Kolesnikov, Executive Vice President and CFO, added: "The recent completion of a \$110 mill credit facility with three international banks allows us to address in full the Group's funding requirements for 2022 new vessel deliveries.

"Earlier in the year, we accomplished a partial refinancing of bonds with 2023 maturity through a new unsecured \$430 mill 2028 bond issue. The company is well capitalised with a net debt to EBITDA ratio of 3.5 times, as at the end of the reporting period and has no imminent financing or refinancing needs.

"On the first anniversary for Sovcomflot's IPO, on 7th October, 2021, with the support of the Moscow Exchange, we hosted the company's first Capital Markets Day, which was well attended by the investment community," he said. ■

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Fendercare's new system aids LNG STS transfers

Fendercare Marine recently undertook three back-to-back ship-to-ship (STS) LNG transfers off the coast of Malaysia, using the company's new system.

This system includes specialist composite hoses, a hydraulic power unit, emergency release couplings and hose saddles.

It was used to load a 173,000 cu m membrane LNGC from three separate same size vessels.

Conducting LNG STS operations is highly complex, as the vessels are pressurised. LNG is transferred at about -161 deg C and the boil-off gas (BoG) needs to be carefully managed between the vessels involved, the company explained.

All the pre-operation due diligence was carefully conducted, including risk assessments, dynamic mooring studies and com-

patibility assessments.

The equipment was mobilised offshore with an expert team including a Person in Overall Advisory Control (POAC) and LNG superintendents, who oversaw the STS and cargo transfer.

The offshore team was supported ashore by operation and technical marine teams and it was due to the efficiency and professionalism of all parties that the operations were a success, with effective management of the BoG and time alongside being kept to a minimum, Fendercare said.

Each STS operation was also conducted under local regulations

and the STS Transfer Guide.

The wholly-owned LNG transfer system enables Fendercare Marine to quickly respond to demand from customers, which is forecast to increase in future, the company said.

Elizabeth Skinner, Fendercare managing director, said: "We would like to thank everyone involved who helped to ensure these operations were conducted safely and efficiently. As world leaders, we pride ourselves on providing solutions to our customers and this is another fantastic example. We look forward to continually supporting the growth



Fendercare Marine has conducted three LNG STS transfers recently

of the LNG market and the transition to cleaner fuels and deliver many more successful LNG STS transfers to our customers."

SHI's LNGC design receives BV AiP

Samsung Heavy Industries (SHI) has become the first shipbuilder to receive an Approval in Principle (AiP) under Bureau Veritas' (BV) Cyber Managed Prepared notation.

SHI's LNGC design was the recipient of the AiP. It was awarded for its SVESSEL smart ship solution, which focuses on complete digitalisation of the ship and its applications to efficiently and safely assist operations.

BV's Cyber Managed Prepared notation confirms the design's compliance with the industry's best practices and IMO 2021 requirements in terms of cyber security, the class society said.

SHI's cyber security technology has already been deployed on a number of ships built by the company.

Hyun Joe Kim, SHI Vice President, said, "Strong cyber security is key to enable shipping to move on to the next level of digitalised and connected ships. For years, SHI has been at the forefront of innovative design and equipment, helping our clients address the risk of cyber attacks, while complying with the current rules and regulations.

"All the efforts and good col-

laboration with BV's expertise led to the issuance of this Approval in Principle. We look forward to continuing our collaborative research with BV, so we can keep leading the way and support shipping's evolution towards increased autonomy," he said.

Laurent Leblanc, BV Marine and Offshore's Senior Vice President Technical & Operations, added, "Bureau Veritas is proud to see the successful completion of this AiP with Samsung Heavy Industries upon the development of this design of a LNG carrier with BV Cyber Managed Prepared notation.

"This announcement demonstrates it is a viable solution that will support the journey towards smart and autonomous ship technology and cyber security. We are also excited to see this co-operation pave the way for further successes for both SHI and BV in the development of technologies for smart and autonomous shipping and cyber security," he said. ■

NEWS NUDGE

Supply disruptions

Chevron has closed one of its three trains, at the Gorgon LNG plant off Western Australia after discovering a minor gas leak last week.

"Train 1 was shut down due to a small gas leak," a Chevron spokesperson told newswires, adding that it was too early to tell how long the unit would be down. "We are preparing plans for investigation and repairs."

The leak was detected on piping associated with the dehydration unit on Train 1 and the unit was shut down as a precautionary measure, he said.

Trains 2 and 3 at the plant are operating normally, Chevron said.

Chevron's other Australian LNG operation, the 8.9 mill tonnes per year Wheatstone plant, recently completed maintenance and has both of its trains back in operation.

Also reported to be suffering problems are the Indonesian terminals at Tangguh and Bontang.

According to local sources, supply disruptions are occurring, due to upstream issues and de-

clining feedgas for both the BP-operated Tangguh LNG in the Papua province and national oil company Pertamina's Bontang LNG in East Kalimantan province.

Most of the LNG cargoes impacted are from Bontang LNG, estimated at around two to three cargoes for the remainder of 2021 and up to seven in the first half of 2022, while around three Tangguh cargoes are at risk of deferrals for 2021, sources said.

Repsol completes Canaport acquisition

Spanish energy group Repsol has completed the acquisition of 100% ownership of the Canaport LNG terminal from Irving Oil.

Repsol has been operating the terminal, to be renamed Saint John LNG, since the facility opened in 2009.

The terminal will continue to serve Repsol's customers in Atlantic Canada and the US Northeast, while seeking future developments aligned with its strategy to achieve zero net emissions by 2050, the company said. ■

Light Structures to deliver LNGC ice load monitoring systems

Light Structures, a supplier of fibre optic condition monitoring systems, has been contracted by Samsung Heavy Industries (SHI) to deliver ice load monitoring systems for 10 Arctic LNGCs to be operated by Sovcomflot (SCF).

The first of SCF's newbuilding Ice Class ships will be delivered before the end of this year, with six more due in 2022 and the final three arriving in 2023.

Using LNG for primary fuel,

the vessels will produce 45 MW of power, which is comparable to that of a nuclear icebreaker, enabling the safe transport of LNG while breaking ice up to 2.1 m thick in temperatures

of minus 52 deg C.

Operating in such extreme conditions, the LNGCs will be subject to powerful dynamic forces that could potentially impact hull integrity and operational safety, but with the Light Structures patented SENSFIB system providing uninterrupted real-time ice load monitoring and alerting, the Master and navigators can make informed decisions based on live structural stress data, the company claimed.

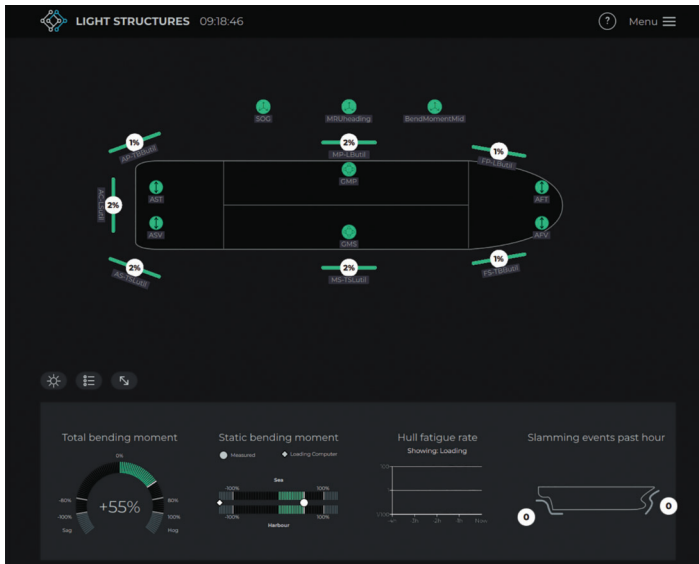
SENSFIB has already proven invaluable on Arctic routes, following its installation on the first Arc7, 'Christophe de Margerie', Ice Structures said.

The fibre optics technology is based on Fiber Bragg Grating (FBG), which delivers more accurate data while reducing costs and complexity when compared to less resilient electro-mechanical systems.

Uniquely, its sensors are installed using an adhesive, negating the need for welding, and with no moving parts, users can save the cost of annual recalibration required by electro-mechanical systems.

This solution is also EX and ATEX approved, making it suited to hazardous environments, such as those on gas carriers.

"We're delighted to receive such an extensive order for our SENSFIB ice load monitoring technology, especially as it reflects the long-standing and positive working partnership we have with SHI," said Niklas Hallgren, Light Structures CEO. "The contract also shows that leading shipyards and owners are willing to invest in precision structural stress monitoring due to safety and operational advantages, despite the lack of any regulations forcing the use of such technology."



Light Structures is to fit ice load monitoring sensors on 10 new Arc7s

NEWS NUDGE

Ships - New orders and deliveries

Daewoo Shipbuilding (DSME) has signed a Won486.7 bill contract to build two LNGCs, plus two options.

Both 174,000 cu m vessels will be delivered to Maran Gas Maritime (MGM), part of the Angelicoussis Group, in 2024, the shipbuilder confirmed.

Elsewhere, holding company Purus Marine is acquire two 180,000 cu m LNGCs.

They are due to be delivered in the third quarter of 2024 and go directly on charter to an energy major.

The vessels were acquired in a partnership with Celsius, who will provide technical and commercial services for the vessels.

Celsius Tankers had ordered the the two LNGCs from Samsung Heavy Industries (SHI).

Celsius claimed that the new vessels' highly efficient design will minimise CO2 emissions and methane slip from the installation of air lubrication technology, hull shape optimisation and the

use of an efficient coatings system to reduce the vessels' friction in water.

They will be built to Lloyds' Register class notation 'EEDI-3' meeting IMO requirements for ships built after 2025 for 30% more energy efficiency and will be fitted with ME-GA propulsion units.

Hudong-Zhonghua has reportedly delivered its second FSRU to Dynagas.

'FSRU Transgas Force' joined her sister 'FSRU Transgas Power'.

The ABS classed vessels have a capacity of 174,000 cu m each.

Capital Product Partners (CPLP) has announced the deliveries of the LNGCs 'Attalos' and 'Asklipios'.

Acting on the exercising of an option to acquire three LNGCs from CGC Operating Corp announced on 4th November, 2021, on 18th November, CPLP took delivery of the 174,000 cu m, X-DF fitted LNGCs built this year at Hyundai Heavy Industries.

They were acquired for a total of \$403 mill, comprised of \$107.1 mill of cash at hand and the assumption of \$295.9 mill of debt.

Monthly Large LNGC Values*

Newbuildings (174,000 cu m)	\$197.45 mill
Five years old (160,000 cu m)	\$150.11 mill
Total Fleet (536 ships)	\$63.75 bill
Orderbook (137 ships)	\$28.70 bill

*Source: VesselsValue (22/10/21)

*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	\$260,000	+\$60,000
West of Suez	\$200,000	+\$10,000
12 mos T/C	\$102,000	+\$2,000

*Since last report (11/11/21)

Source: Fearnleys (24/11/21)

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	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

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 = 1st September 2021

Built	Name	CBM	Cargo Type	Trading area	Trading in LNG?	Ship Owner / Operator
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	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	Veder TBN	30,000	LNG	Worldwide	Yes	Anthony Veder
2022	Avenir Achievement	20,000	LNG	Worldwide	Yes	Avenir LNG
2022	Knutsen 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	Knutsen TBN	12,500	LNG	Spain	Yes	Knutsen OAS
2023	SM Jeju LNG3	7,500	LNG	Korea	Yes	Korea Line
2023	Pan Ocean TBN	18,000	LNG	USG	Yes	Pan Ocean Co
2023	Krios	4,200	LNG	Benelux	Yes	Titan LNG
2023	Fratelli Cosulich TBN	8,000	LNG	Mediterranean	Yes	Fratelli Cosulich
2023	Kanfer TBN	6,000	LNG	Worldwide	Yes	Kanfer Shipping
2023	Kanfer TBN	6,000	LNG	Worldwide	Yes	Kanfer Shipping
2023	K Line TBN	18,000	LNG	Korea	Yes	K Line
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 ?
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 = 1st September 2021

WORLD LNG CARRIER ORDERBOOK

Name	Containment system	Propulsion	Yard	Delivery date	Capacity	Primary Owner
Energy Intelligence	GTT 96 GW	MEGI	DSME	01/06/2021	174000	Alpha Gas
Minerva Limnos	GTT 96 GW	MEGI	DSME	01/06/2021	173400	Minerva Marine
Mu Lan	GTT 96 L03+	XDF	Hudong-Zhonghua	01/06/2021	174000	CSSC
Yiannis	GTT 96 GW	MEGI	DSME	01/06/2021	174000	Maran Gas Maritime
Maran Gas Isabella	GTT 96 GW	XDF	DSME	01/07/2021	174000	Maran Gas Maritime
Minerva Chios	GTT MK III Flex+	XDF	Samsung	01/07/2021	174000	Minerva Marine
Mol Hestia	Unknown	MEGI	DSME	01/07/2021	174000	MOL
Adamastos	GTT MK III Flex	XDF	Hyundai	01/08/2021	174000	Capital Gas
Attalos	GTT MK III Flex	XDF	Hyundai	01/08/2021	174000	Capital Gas
Celsius Carolina	Unknown	XDF	Samsung	01/08/2021	180000	Celsius Shipping
Gaslog Winchester	GTT MK III Flex+	XDF	Samsung	01/08/2021	180000	GasLog
Asklipios	GTT MK III Flex	XDF	Hyundai	01/09/2021	174000	Capital Gas
Diamond Gas Victoria	GTT MK III Flex	XDF	Hyundai	01/09/2021	174000	NYK
Global Sea Spirit	GTT 96 GW	XDF	DSME	01/09/2021	173400	Nakilat
Hellas Athina	GTT MK III Flex	XDF	Hyundai	01/09/2021	174000	Latsco Shipping
Lng Enterprise	GTT MK III Flex	XDF	Samsung	01/09/2021	174000	NYK
Maran Gas Kalymnos	GTT 96	XDF	DSME	01/09/2021	174000	Maran Gas Maritime
Hyundai Ulsan 2939	GTT MK III Flex	XDF	Hyundai	01/10/2021	180000	SK Shipping
Lng Endeavour	GTT MK III Flex	XDF	Samsung	01/10/2021	174000	NYK
Maran Gas Ithaca	GTT 96 GW	XDF	DSME	01/10/2021	174000	Maran Gas Maritime
Daewoo 2506	GTT 96	MEGI	DSME	01/11/2021	174000	Maran Gas Maritime
Global Sealine	GTT 96 GW	XDF	DSME	01/12/2021	173400	Nakilat
Lng Endurance	GTT MK III Flex	XDF	Samsung	01/12/2021	174000	NYK
Samsung 2336	GTT MK III Flex	XDF	Samsung	01/12/2021	174000	JP Morgan
Tenergy	GTT MK III Flex	XDF	Hyundai	01/12/2021	174000	Tsakos Energy Navigation
Vivit City Lng	GTT MK III Flex	XDF	Hyundai	01/12/2021	174000	H-Line
Grace Emilia	GTT MK III Flex	XDF	Hyundai	01/01/2022	174000	NYK
Gui Ying	GTT 96 L03+	XDF	Hudong-Zhonghua	01/01/2022	174000	CSSC
Elisa Aquila	GTT MK III Flex	XDF	Hyundai	01/03/2022	174000	NYK
Hudong-zhonghua H1829a	GTT 96 L03+	XDF	Hudong-Zhonghua	01/03/2022	170520	CSSC
Maran Gas Kythira	Unknown	XDF	DSME	01/03/2022	174000	Maran Gas Maritime
Samsung 2319	GTT MK III Flex	XDF	Samsung	01/03/2022	174000	JP Morgan
Clean Cajun	Unknown	XDF	Hyundai	01/04/2022	200000	Dynagas
Hudong-zhonghua H1788a	GTT 96	XDF	Hudong-Zhonghua	01/04/2022	79960	K-Line
Hudong-zhonghua H1789a	GTT 96	XDF	Hudong-Zhonghua	01/05/2022	79960	K-Line
Grace Freesia	GTT MK III Flex	XDF	Hyundai	01/06/2022	173000	NYK
Hudong-zhonghua H1830a	GTT 96 L03+	XDF	Hudong-Zhonghua	01/06/2022	170520	CSSC
Vivit Arabia Lng	GTT MK III Flex	XDF	Hyundai	01/06/2022	174000	H-Line
Clean Copano	Unknown	XDF	Hyundai	01/07/2022	200000	Dynagas
Samsung 2337	GTT MK III Flex	XDF	Samsung	01/07/2022	174000	JP Morgan
Bw Iris	GTT 96 GW	MEGI	DSME	01/08/2022	174000	BWGas

DFDE = dual fuel diesel engines, STRH = steam turbine reheat / ultra steam turbine, MEGI = marine electric gas injection, DRL = slow speed diesel, FSRU = vessel with regas capacity, FLNG = floating LNG production unit
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Name	Containment system	Propulsion	Yard	Delivery date	Capacity	Primary Owner
Santander Knutsen	Unknown	XDF	Hyundai	01/08/2022	174000	Knutsen
Sm Albatross		XDF	Hyundai	01/08/2022	174000	Korea Line
Bw Cassia	GTT 96 GW	MEGI	DSME	01/09/2022	174000	BWGas
Prism Diversity	Unknown	XDF	Hyundai	01/09/2022	180000	SK Shipping
Malaga Knutsen	Unknown	XDF	Hyundai	01/10/2022	174000	Knutsen
Sm Bluebird		XDF	Hyundai	01/10/2022	174000	Korea Line
United Prosperity	Not Applicable	XDF	Hudong-Zhonghua	01/10/2022	174000	China LNG Shipping
Alicante Knutsen	Unknown	XDF	Hyundai	01/11/2022	174000	Knutsen
Minerva Amorgos	GTT MK III Flex+	XDF	Samsung	01/11/2022	174000	Minerva Marine
Orion Song		XDF	Hyundai	01/11/2022	174000	JP Morgan
Daewoo 2514	Unknown	TFDE - Azipod	DSME	01/12/2022	172500	Sovcomflot
Huelva Knutsen	Unknown	XDF	Hyundai	01/12/2022	174000	Knutsen
Hyundai Ulsan 3243	Unknown	XDF	Hyundai	01/12/2022	174000	Knutsen
Orion Sage		XDF	Hyundai	01/12/2022	174000	JP Morgan
Asterix I	GTT MK III Flex	XDF	Hyundai	01/01/2023	174000	Capital Gas
Hudong-zhonghua H1837a	GTT 96 L03+	XDF	Hudong-Zhonghua	01/01/2023	79960	Shenzhen Gas
Samsung 2364	GTT MK III Flex+	XDF	Samsung	01/01/2023	174000	MISC
United Glory	Unknown	XDF	Hudong-Zhonghua	01/01/2023	174000	China LNG Shipping
Hyundai Repsol	GTT MK III Flex	XDF	Hyundai	15/01/2023	174000	Hyundai LNG Shipping
Samsung 2365	GTT MK III Flex+	XDF	Samsung	01/02/2023	174000	MISC
Samsung 2426	Unknown	XDF	Samsung	01/03/2023	174000	Pan Ocean
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
Hudong-zhonghua H1833a	Unknown	XDF	Hudong-Zhonghua	01/04/2023	174000	China LNG Shipping
El Ferrol Knutsen	Unknown	XDF	Hyundai	01/05/2023	174000	Knutsen
Extremadura Knutsen	Unknown	XDF	Hyundai	01/06/2023	174000	Knutsen
Hyundai Ulsan 3244	Unknown	XDF	Hyundai	01/06/2023	174000	Knutsen
FSRU now LNGC	GTT NO 96	MEGI	DSME	15/06/2023	174000	MOL
Daewoo 2516	Unknown	TFDE - Azipod	DSME	01/07/2023	172500	Sovcomflot
Hyundai Ulsan 3189	Unknown	XDF	Hyundai	01/07/2023	174000	JP Morgan
Samsung 2425	Unknown	XDF	Samsung	01/07/2023	174000	Maran Gas Maritime
Hyundai Samho 8105	GTT MK III Flex	XDF	Hyundai	01/08/2023	174000	Sovcomflot
Hyundai Ulsan 3190	Unknown	XDF	Hyundai	01/08/2023	174000	JP Morgan
Daewoo 2517	Unknown	TFDE - Azipod	DSME	01/09/2023	172500	Sovcomflot
Sm Golden Eagle	Unknown	XDF	Hyundai	01/09/2023	174000	Korea Line
Zvezda 042	GTT MK III	TFDE - Azipod	Zvezda SSK	01/09/2023	172600	Smart LNG
Daewoo 2518	Unknown	TFDE - Azipod	DSME	01/10/2023	172500	MOL
Sm Kestrel	Unknown	XDF	Hyundai	01/10/2023	174000	Korea Line
Zvezda 043	GTT MK III	TFDE - Azipod	Zvezda SSK	01/10/2023	172600	Smart LNG
Greek owner 1/4		ME-GA	Hyundai	15/10/2023	200000	Dynagas
HLS	GTT NO 96	MEGI	DSME	15/10/2023	174000	Hyundai LNG Shipping

Name	Containment system	Propulsion	Yard	Delivery date	Capacity	Primary Owner
Hyundai European Owner	GTT MK III Flex	XDF	Hyundai	15/10/2023	174000	
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
Jiangnan H2637	GTT MK III Flex	XDF	Jiangnan	01/12/2023	79800	Jovo Energy
Zvezda 045	Unknown	TFDE - Azipod	Zvezda SSK	01/12/2023	172600	Smart LNG
Greek owner 2/4		ME-GA	Hyundai	15/12/2023	200000	Dynagas
Hyundai Ulsan 3294	Unknown	XDF	Hyundai Inds - Ulsan	01/01/2024	174000	Hyundai LNG Shipping
Greek owner 3/4		ME-GA	Hyundai	15/03/2024	200000	Dynagas
Hyundai Ulsan 3295	Unknown	XDF	Hyundai Inds - Ulsan	01/04/2024	174000	Hyundai LNG Shipping
Hyundai Ulsan 3296	Unknown	XDF	Hyundai Inds - Ulsan	01/06/2024	174000	Hyundai LNG Shipping
Greek owner 4/4		ME-GA	Hyundai	15/06/2024	200000	Dynagas
Zvezda 046	Unknown	TFDE - Azipod	Zvezda SSK	01/08/2024	172600	Smart LNG
Hyundai Ulsan 3221	Unknown	XDF	Hyundai	01/09/2024	174000	Pan Ocean
Maran 1	GTT MK III Flex	XDF	Samsung	01/09/2024	174000	Maran Gas Maritime
Maran 2	GTT MK III Flex	XDF	Samsung	01/09/2024	174000	Maran Gas Maritime
Zvezda 047	Unknown	TFDE - Azipod	Zvezda SSK	01/09/2024	172600	Smart LNG
Hyundai Ulsan 3222	Unknown	XDF	Hyundai	01/10/2024	174000	Pan Ocean
Zvezda 048	Unknown	TFDE - Azipod	Zvezda SSK	01/10/2024	172600	Smart LNG
Hyundai Samho 8100	Unknown	XDF	Hyundai	01/11/2024	174000	Knutsen
Hyundai Ulsan 3223	Unknown	XDF	Hyundai	01/11/2024	174000	JP Morgan
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

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