

LNG Shipping News

AN LNG JOURNAL TITLE ON LNG CARRIERS

21 January 2021

Spot rates hit the roof

By the end of the first full week of January, LNG carrier spot rates had hit an all-time high of \$200,000 per day, with one fixture reported at \$350,000 a day.

This was believed to have related to BP's charter of the 174,000 cu m 'LNG Abalamabie' for a Bonny to Europe trip in early February.

This spike was mainly due to a shortage of tonnage on the spot market and very cold weather hitting the main importing Asian countries.

The US dominated exports, a situation which is likely to continue. Much of the LNG is destined for Asia, thus increasing tonne/mile ratios, which helps to keep the ships sailing and out of the market.

European storage saw significant withdrawals at the end of last year, which continued into 2021 with inventories now reported to be low.

Due to the tight Asian market, the JKM for prompt deals exploded to \$30 per mmBtu and the forward curve strongly favoured continued flows to Asia throughout this year, Kristen Holmquist, Poten & Partners short term forecasting manager said.

LNG global demand should increase this year by 6 mill tonnes, which is slightly lower than 2020. However, 2022 is expected to see strong growth again once the world returns to normal following the pandemic.

Northeast Asian demand is expected to be higher this year with Japan, South Korea and Taiwan imports forecast to be on a par with 2019. China should see an increase of 2 mill tonnes, however, rising pipeline gas imports from Siberia are expected to account for some of this, as could domestic gas production going forward.



LNGC spot rates have hit the heights. Picture credit Flex LNG

India should also see an increase of 2 mill tonnes but this will depend on the shoreside infrastructure, she said. Southeast Asian countries demand was also forecast to grow, including exporters Indonesia and Malaysia taking imports.

European drop

Europe is expected to see a drop in imports this year and next giving room for an additional storage build up equating to around 120 LNG cargoes by the Autumn, as inventories fall.

As for US exports, they are expected to grow by 10-11 mill tonnes. Growth is also forecast for Malaysia and Australia but Indonesia, Algeria and Norway will see an export decline.

Cold weather, especially in China, is the key driver for the current price hike and this is being heightened by ongoing Panama Canal delays (see page 2), Simpson Spence and Young

(SSY) said.

If a cold February and March is seen, then the shipping market could see an overall positive first quarter. However, the market will probably soften during March, when there is a large amount of LNG newbuildings due for delivery.

Added to this, the start of the 'shoulder months,' where there is lower trading in the period between winter and summer, will affect the market.

Newbuildings will continue to deliver throughout the second and third quarter of 2021 and ships will also come off timecharter during this period, SSY warned.

This month's recently published US Energy Information Administration (EIA) outlook was also bullish on domestic LNG exports.

The agency forecast that US LNG exports will rise to 8.5 bill cu ft per day in 2021 and 9.2 bill cu ft in 2022. ■

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Canal congestion to last

Panama Canal congestion, which is delaying LNGC transits, is expected to last through the peak demand winter months.

According to brokers Simpson Spence and Young (SSY), the canal is experiencing significant congestion during the busiest period of the year, leading to waiting times of up to seven to 10 days or more for LNGCs.

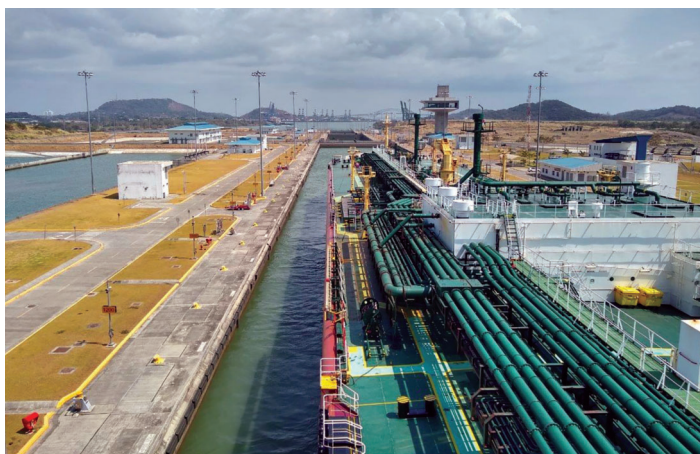
However, the Panama Canal Authority (ACP) claimed it had made efforts to speed up transits.

Ships carrying US produced LNG bound for Asia waited for up to two weeks in December to transit the canal. The ACP told Reuters that the delay had now halved to one week.

It said it had changed its transit reservation system on 4th January to allow LNGCs to reserve two slots ahead of transit, rather than just one.

The authority has also introduced an auction system to sell off slots that becomes available within two to three days before a transit, due to last-minute cancellations.

By the end of last week, five



Panama is adding to the rate hike with canal transit delays.
Photo credit Nakilat

auctions had been conducted and four slots were awarded to LNGCs, the authority said.

"Currently, there are only two slots available for LNG. Ideally, there would be a lot more than that," said Ross Wyeno, lead LNG analyst for the Americas at S&P Global Platts.

"High spot prices in Asia are creating a morning rush hour sce-

nario for US LNG producers, with cargoes moving in the same direction at the same time," Schreiner Parker, vice-president for Latin America at Rystad Energy told Reuters.

Research company, Energy Aspects calculated that around one third of LNGCs loaded with US gas sailed to Asia via the Cape of Good Hope last month. ■

GTT's Korean fate goes to Appeal Court

On 6th January, 2021, the Seoul High Court granted GTT's motion to suspend the effect of the Korea Fair Trade Commission (KFTC) accusations of flying in the face of its competition laws.

GTT appealed on 31st December last year, requesting a suspension of the decision not to allow the banning of its services to certain South Korean shipyards, to the Seoul High Court.

KFTC alleged that some of the company's commercial practices had not complied with South Korean competition regulations since 2016, and requested that GTT allow those domestic ship-

yards, which had requested, to perform all or part of the technical assistance services currently included in the technology license.

This decision included an administrative fine of around €9.5 mill.

GTT said that the decision is currently being reviewed by the Supreme Court of Korea, as in turn, KFTC appealed against the

ruling on 14th January, 2020.

Meanwhile, GTT has received an order from Samsung Heavy Industries (SHI) for the tank design of a new 174,000 cu m LNGC ordered by Pan Ocean.

GTT will design the tank, which will be fitted with the Mark III Flex membrane containment system.

Her delivery is scheduled for the second quarter of 2023.

This order is the first of the

'Prelude' up and running again

Shell Australia's giant FLNG 'Prelude' has restarted LNG production, following nearly a year idle due to technical problems.

Moored in the Browse basin offshore Western Australia, 'Prelude' ceased production in early February last year on the back of several technical faults.

The FLNG came back on-stream earlier this month following the delivery of a cool down cargo late last year.

The first commercial LNG cargo left the FLNG for Hiroshima, Japan on 9th January on board the 145,300 cu m LNGC 'Symphonic Breeze' where she is due around 15th January, according to ship tracking data.

'Prelude' has the nominal capacity to produce 3.6 mill tonnes per year of LNG, 1.3 mill tonnes of condensate, plus 400,000 tonnes per year of LPG.

Shell has a 67.5% interest in the project with partners Inpex Corp (17.5%), Kogas (10%), and CPC Corp (5%).

The energy major has not taken up options at shipyards for further FLNGs, mainly due to the low gas price and the costs of building and operating them. ■

year for GTT and follows 29 LNGC orders received in the second half of 2020.

GTT said that all of these orders, except for one, will be delivered over a longer period than usual, spreading between 2023 to 2025. ■

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Commonwealth solicits LNG bids

Commonwealth LNG has launched a formal process to solicit bids to reserve offtake from its planned 8.4 mill tonnes per annum LNG facility in Cameron, Louisiana.

Initiated in association with trading house Gunvor, it is claimed to be the first tender process in which prospective LNG buyers can secure future term supply at volumes, pricing and durations of their choosing through competitive bidding.

LNG can be supplied under tolling, free on board (FOB) or delivered at place (DAP) offtake agreements to match customer preferences. Commonwealth explained that a different approach

is warranted following changes in the energy market resulting from the global pandemic.

Commonwealth founder and CEO, Paul Varello said: "We believe this process offers a mutually advantageous, low-risk solution for buyers to address their long-term needs, while allowing Commonwealth to advance our project expeditiously to meet market demand."

Gunvor and Commonwealth LNG have a strategic agreement

under which Gunvor will support the company in securing binding LNG offtake and gas supply agreements for the facility.

Gunvor has also committed to take up to 3 mill tonnes per annum of LNG offtake from the project. In addition, as part of the tender, Gunvor will enable the offering of DAP basis to customers desiring this option.

Furthermore, the utilisation of Gunvor's LNG portfolio will allow the tender to provide firm LNG supply obligations, which will mitigate greenfield project supply risk and/or allow deliveries of LNG prior to the start-up of the project to buyers who require earlier supplies.

"The tender process further builds on the momentum generated between Commonwealth and Gunvor under the strategic agreement executed in 2019," said Kalpesh Patel, Gunvor's Co-Head of LNG Trading. "The flexibility Gunvor can offer both in terms of

early bridging volumes and firm DES/DAP contracts differentiates Commonwealth from other developing LNG projects."

Commonwealth has appointed Poten & Partners to manage the tender process, which was launched on 18th January. Confirmations of interest are required by mid-February and submission of bids by early April, 2021.

The company said that it will evaluate each bid based on the requested volume, price, contract tenor and credit. Contracts are due to be awarded by June of this year.

The Louisiana export terminal project should achieve FID in the first quarter of 2022, with the first cargo expected in 2Q25.

Commonwealth is implementing an accelerated construction schedule that will allow the project to be built in three years using a predominantly modular approach with major components being fabricated offsite. ■



Commonwealth is seeking offtake deals together with Gunvor

Reganosa to look after Ghana's LNG terminal

Spanish gas company, Reganosa has been awarded a contract to operate and maintain an LNG regasification terminal in Tema, Ghana.

Currently under construction, both the storage (FSU) and re-gasification (FRU) units will be floating.

Tema LNG Terminal Co (TLTC) awarded Reganosa the contract to operate and maintain both the FSU and the FRU, as well as the associated 6 km gas pipeline and a pressure reduction and metering station connected to the existing pipeline network, which will be located in Tema's power and industrial enclave.

From pre-feasibility phases to commercial operations, over the last three years Reganosa has provided services of various kinds in 14 countries on four continents. Since 2016, it has doubled the number of employees.

Tema LNG's 28,000 cu m FRU

'Torman' arrived in Ghana on 7th January, 2021, allowing TLTC to start delivering LNG to customers through the energy terminal in the first quarter of 2021.

Tema LNG, backed by Helios Investment Partners and Africa Infrastructure Investment Managers (AIIM), is the first offshore LNG receiving terminal in sub-Saharan Africa.

FRU and LNGC

The terminal will employ the combination of the FRU twinned with an existing LNGC to receive, store and regasify LNG. This system provides Ghana with all the functionality of a large scale FRU terminal, but with added flexibility, allowing it to respond to rapidly increasing

domestic gas demand with a cleaner and more affordable energy solution, the company claimed.

Edmund Agyeman-Duah, TLTC Project Manager, said: "The Tema LNG terminal aims to meet Ghana's growing energy demand through an innovative yet cost-efficient, reliable supply. "Once operational, this FRU will allow the Tema LNG facility to receive, regasify, store and deliver roughly 1.7 mill tonnes of LNG a year - 30% of Ghana's general capacity.

"Tema LNG's year-round supply of gas will enable the Ghana National Petroleum Corporation (GNPC) to supply reliable and cost-effective gas into the Tema power and industrial enclave,

while strengthening West Africa's energy security," he said.

'Torman', which was built by Jiangnan Shipbuilding, a subsidiary of China State Shipbuilding Corp, left the Jiangnan shipyard at the end of November on a heavy lift vessel.

She will be moored in the Tema Port, where TLTC has constructed additional marine infrastructure that will allow for cost-efficient LNG loading and regasification without affecting maritime and port traffic in the Gulf of Guinea.

LNG will be supplied under a long-term contract with Shell. The onshore reception facilities will receive the gas from the FRU via subsea pipelines, before delivering natural gas to the GNPC and its customers. ■

Woodside doubles SPA with Uniper

Woodside Energy Trading Singapore Pte Ltd (Woodside) and Uniper Global Commodities (Uniper) have agreed to double the binding long-term sale and purchase agreement (SPA) announced in December, 2019.

The initial LNG supply, commencing this year, will now be up to 1 mill tonnes per annum, increasing to around 2 mill tonnes from 2026.

Much of the LNG supply from 2025 is on condition that a final investment decision (FID) is taken on the development of the Scarborough gas resource offshore Western Australia.

The SPA's term of 13 years is unchanged.

Woodside and Uniper have also agreed to collaborate on potential carbon-neutral LNG, including enhanced carbon accounting, and future hydrogen opportunities.

Woodside CEO, Peter Coleman

said: "Scarborough is a globally competitive, capital efficient LNG development, which supports the de-carbonisation ambitions of our customers. We expect the timing to be right for final investment decisions on Scarborough and Pluto Train 2 in the second half of this year.

"This agreement with Uniper highlights the strong market demand we are seeing for Scarborough LNG as customers consider their energy requirements from the second half of this decade. We have now secured long-term customers for over 40% of our expected Scarborough equity production.

"Woodside and Uniper share a commitment to innovatively deliver a lower-carbon future. Our agreement with Uniper strengthens our common goal of supplying affordable, clean energy to customers in Asia and beyond," he said.

Uniper CEO, Andreas Schierenbeck, added: "With this agreement, Uniper continues its path to implement its strategy of growth in Asia, trading in cleaner fuels and de-carbonisation. We are also pleased to strengthen our great relationship with Woodside with the additional volume agreed for this contract." ■

Tellurian targets construction this summer

Tellurian hopes to begin construction of its \$16.8 bill Driftwood LNG export project by this summer.

"I hope that we will be in construction this summer," said Charif Souki, Tellurian co-founder and Executive Chairman to media outlets. "There is a strong need for additional liquefaction capacity and we're probably the project that is the closest to starting construction.

"The level of (customer) interest has increased pretty dramatically over the past month," Souki added.

During the past couple of years, several projects slated for groundbreaking in North America, including Driftwood, were delayed as potential clients were unwilling to sign long-term deals needed to finance the projects on the back of a natural gas price slump, mainly caused by COVID-19.

"The system is stressed," Souki said, adding that global LNG demand is on track to increase by around 200 mill tonnes over the next seven years. In 2020, global LNG demand hit a record of 360 mill tonnes.

The first phase of Driftwood is due to start operations in 2025 and will produce about 16.5 mill tonnes per annum of LNG. ■

Taiwanese cargo first

Taiwan's state-owned CPC Corp has received its first LNG cargo from Cheniere Energy under a 25 year sales and purchase agreement (SPA) signed with the US company in 2018.

CPC will receive around 2 mill tonnes per annum, equating to about 30 shipments, annually.

The energy company said that the 'Fuji LNG' had arrived in Taichung from Cheniere's Corpus Christi, Texas, LNG export facility.

Under the agreement, signed shortly before Taiwan President Tsai Ing-wen visited the US in August, 2018, the island state will receive about 30 shipments a year until 2045.

Elsewhere, Indian Oil Corp (IOC) is seeking an LNG cargo for February delivery, according to industry sources.

The refiner requires the cargo for delivery on 13th February on a delivered ex-ship (DES) basis in a tender that closed on 13th January.

IOC last bought a cargo for 21st February delivery at above \$13 per mmBtu but did not award another planned cargo for 8th

February delivery.

Dubai-based Emirates National Oil Co (ENOC) was believed to have cancelled an LNG cargo booked for Pakistan.

ENOC said that it had won the cargo due to be delivered on 23rd-24th February with the lowest bid equating to around \$11.7 per mmBtu.

However, the company reportedly told Pakistan LNG Ltd (PLL) that it is now unable to deliver the cargo.

PLL had confirmed the loss of the cargo to local media, however, insisted that it would not cause a problem to Pakistan's gas crisis as around eight cargoes had been arranged for February deliveries.

SOCAR had also committed to deliver a gas cargo to PLL on 15th-16th February, while Vitol was said to have delivered a part cargo in December instead of a full cargo.

It was later announced that Eni and Vitol Bahrain had offered the lowest prices to supply three LNG cargoes to PLL for delivery

in March.

Eni offered a cargo for delivery between 9th-10th March at a percentage of the Brent crude oil futures price, known as a slope rate, of 22.2421%.

Vitol offered a slope rate of 17.8131% for a cargo for 16th to 17th March delivery and a slope rate of 17.1917% for a cargo for 22nd and 23rd March delivery. ■



Taichung has received its first LNG cargo from Cheniere on board the 'Fuji LNG'

Irish FSRU plans shelved

Plans to install an FSRU at Cork in Ireland have been shelved after a preliminary deal signed in 2017 with US LNG developer NextDecade expired.

The FSRU was originally planned to cater for up to 3 mill tonnes per year of LNG from NextDecade's proposed Rio Grande LNG export terminal in Texas.

When the memorandum of understanding was signed with the Irish port, NextDecade said it was in discussions with European energy companies to enter into long-term purchase contracts to deliver LNG to Cork.

Since then, NextDecade has pushed Rio Grande LNG's schedule back several times amid the challenges of securing long-term supply contracts, most recently in May, 2020 when it said a final investment decision (FID) would occur in 2021.

Then, in November, 2020, France's Engie stopped talks over a potential long-term supply agreement with NextDecade, amid pressure not to import LNG produced from shale gas.

NextDecade claimed that its commercial efforts are being boosted by the recent price strength in international markets and as a result, the developer maintained its current 2021 FID target.

"Selling the gas is still the biggest variable," said Michael Webber, Managing Partner of investment research firm, Webber

Research & Advisory, talking with S&P Platts. "Maybe Cork could have topped off the commercialisation process, but it was never going to be an anchor. They still need to build the book. Cork would have been icing on the cake."

On 14th January, Ireland's Environment Minister, Eamon Ryan, said the Port of Cork had ruled out pursuing the LNG import terminal.

"Due to the increased uncertainty in Ireland's evolving policies regarding the importation of LNG, NextDecade has elected to suspend development activities related to the Inisfree FSRU project in the Port of Cork," Patrick Hughes, NextDecade's Senior Vice President of Strategy and Business Development, told S&P Global Platts when asked.

Opposed imports

The move is the latest setback for the prospect of LNG supplies to Ireland after the new Irish government last year opposed the import of LNG based on fracked natural gas from the US.

In response to a parliamentary question on the status of the project - one of three planned LNG import facilities in Ireland - Ryan said: "The Port of Cork has advised

that the MOU expired on 31st December and that they have no intention to renew it."

NextDecade said it continued to focus its activities on the Rio Grande LNG project.

"The price strength we are seeing in the global LNG market from Asia to Europe confirms our long-standing views that the market is tightening and with only approximately 8 mill tonnes per annum of additional LNG capacity to be added annually from 2021 and 2024, we expect the market to further tighten," Hughes added. "The world needs substantially more LNG and NextDecade's Rio Grande LNG project is well-positioned to help solve this growing problem."

In addition to the Cork FSRU project, there are currently two other proposed LNG import projects in Ireland, Platts said.

The planned 5 bill cu m per year Shannon LNG terminal also suffered a major setback in November when the Irish High Court ruled to cancel all development consents for the project.

The final project under development is UK-listed Predator Oil & Gas' plans for an FSRU, which the company has claimed would "not use shale gas as an LNG feedstock." ■

NEWS NUDGE

Three Arc7s transit the NSR this month

The Arc7 LNGC 'Christophe de Margerie', chartered by the Yamal LNG project, successfully completed an independent passage along the Eastbound part of the Northern Sea Route (NSR) on the 16th January.

She reached the Bering Strait in 11 days with an average speed of 9.6 knots.

'Christophe de Margerie' was followed by another Arc7 'Nikolay Yevgenov', which is currently completing her independent passage along the NSR.

Both LNGCs will deliver around 140,000 tonnes of LNG produced at Yamal LNG to Asia/Pacific destinations.

Simultaneously, another Arc7 'Nikolay Zubov', sailing in the opposite direction bound for Sabetta after offloading her LNG cargo, entered the West-bound ice route along the NSR on the 6th January and subsequently reached Ob Bay on the 17th January.

According to NOVATEK, all three Arc7s transited the ice covered part of the NSR, without icebreaker support, along the navigational routes recommended by the Russian State Research Centre, Arctic and Antarctic Research Institute and Atomflot's marine operations headquarters. ■

US streamlines LNG export approvals

The US Department of Energy (DOE) has announced that it is to remove the requirement for long-term LNG export authorisation holders to seek separate short-term mandates to export the same volumes approved for long-term exports.

By consolidating this into a single authorisation without any increase in total approved export volumes, DOE said it believed this action would streamline its regulatory process.

"This policy is a sensible and concrete way DOE can remove unnecessary regulatory burdens for LNG exporters. Those exports bring benefits to our economy, while also helping to reduce global emissions," said US Secretary of Energy, Dan Brouillette.

This measure will also lead to administrative efficiency. It will remove a duplicated requirement for LNG exports to have DOE authorisation for the short-term market, where the authorisation holder already has long-term export authority.

Concurrently, the DOE said it was amending several long-term LNG export orders to add short-term export authority to those orders.

"We are increasingly seeing more sales of LNG on the spot

market, and this action by DOE is allowing more flexibility for US LNG exporters. With this policy, US LNG exporters can let the market—not our regulatory process—determine which LNG cargoes will be exported under long-term or short-term agreements on the spot market," added US Deputy Secretary of Energy, Mark Menezes.

"We want to have a sensible regulatory system that takes current market realities into account, and this policy statement does

just that," said Acting US Under Secretary of Energy and Assistant Secretary for Fossil Energy, Steven Winberg.

Under the terms of this new policy, long-term LNG export authorisation holders will no longer need to apply for separate authorisation to export the same volumes on a short-term basis. It also provide for LNG exporters' pre-commercial or commissioning cargoes to be authorised under their long-term export orders on a non-additive basis. ■

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New Fortress Energy to acquire Golar assets

New Fortress Energy (NFE) has agreed to acquire Hygo Energy Transition and Golar LNG Partners in a deal valued at \$5 bill.

Hygo Energy is a 50-50 joint venture between Golar LNG Limited and Stonepeak Infrastructure Fund II Cayman.

"With a strong presence in Brazil and a world-class LNG shipping business, Hygo and GMLP are excellent additions to our efforts to accelerate the world's energy transition," said Wes Edens, NFE



New Fortress' Wes Edens has overseen the purchase of Golar assets

Chairman and CEO. "The addition of Hygo will quickly expand our footprint in South America with three gas-to-power projects in Brazil's large and fast-growing market. With GMLP, we gain LNG ships and world-class operators that are an ideal fit to support our existing terminals and robust pipeline."

With the acquisition of Hygo, NFE will acquire an operating FSRU terminal and a 50% interest in a 1,500 MW power plant in Sergipe, Brazil, as well as two other FSRU terminals with 1,200 MW of power in advanced stages in Brazil.

Hygo's fleet consists of a new-building FSRU and two operating LNGCs.

The addition of GMLP's fleet of six FSRUs, four LNGCs and a 50% interest in Trains 1 and 2 of the FLNG 'Hilli', is expected to support both NFE's existing facilities and international project pipeline.

Cash and shares

Under the Hygo agreement, NFE will acquire all of the outstanding shares for 31.4 mill shares of NFE Class A common stock and \$580 mill in cash.

The transaction is valued at a \$3.1 bill enterprise value and \$2.18 bill equity value. Pursuant to the transaction, GLNG will receive 18.6 mill shares of NFE Class A common stock and \$50 mill in cash and Stonepeak will receive 12.7 mill shares of NFE Class A common stock and \$530 mill in cash.

Hygo's Board, together with GLNG and Stonepeak, have unanimously approved the proposed transaction.

Its closing is subject to the receipt of certain regulatory approvals and third party consents and other customary closing conditions, and is expected to occur in the first half of 2021.

Under the agreement with GMLP, NFE has agreed to acquire all of the outstanding common units of GMLP for \$3.55 per common unit in cash.

NFE has also agreed to acquire GMLP's general partner for equivalent consideration based on the general partner's economic interest in GMLP. The preferred units of GMLP will remain outstanding.

The transaction is valued at a \$1.9 bill enterprise value and \$251 mill common equity value.

GMLP's Board, acting upon the recommendation of a special committee of independent directors of GMLP, unanimously approved the proposed transaction.

Later, Golar LNG Partners announced that it has established a record date of 25th January, 2021 for a special meeting of its unitholders currently planned to take place on 24th February, 2021.

At this meeting, GMLP's common unit holders will vote on the proposed merger of GMLP and an indirect subsidiary of NFE.

Skadden, Arps, Slate, Meagher & Flom, Conyers Dill & Pearman and Watson Farley and Williams are acting as NFE's legal advisors in the transaction, while Goldman Sachs & Co. and Citi are acting as financial advisors to Hygo and Vinson & Elkins LLP is acting as Hygo's legal advisor.

Deutsche Bank Securities is acting as financial advisor to the special committee of GMLP, Akin Gump Strauss Hauer & Feld is acting as the special committee's legal advisor, and Baker Botts is acting as GMLP's legal advisor. Finally, Simpson, Thacher, & Bartlett is acting as legal advisors to Stonepeak.

Qatargas in first Q-Flex STS

Qatargas has completed the first commercial LNG ship-to-ship (STS) transfer involving a Q-Flex LNGC.

The STS was undertaken at Subic Bay, Philippines.

A full cargo of 212,000 cu m on board the Qatargas-chartered Q-Flex 'Mesaimeer' was loaded at Ras Laffan on 18th December, 2020 and delivered as two separate part cargo discharges.

One parcel was delivered by STS in Subic Bay on 6th January, 2021 and the second was shipped to Jiangsu LNG terminal, China.

PetroChina was the owner of both cargoes.

Khalid bin Khalifa Al Thani, Qatargas' CEO, said: "We are

delighted to announce this shipping breakthrough, as it is for the first time that one of the largest LNG vessels, a Q-Flex, is involved in a commercial STS operation.

"This achievement will enable us to transport considerable volumes as efficiently as possible into key markets. Moreover, this will be an attractive option for our potential customers with limited shipping capacity and for those who are looking for smaller or irregular sized cargo parcels.

"STS transfers, such as this one, will optimise our shipping



Subic Bay recently saw its first Q-Flex STS transfer

capabilities by using our most efficient LNG vessels to shift volumes into key high-value markets. I would like to thank PetroChina, who are one of our long-term partners in the LNG industry, for

their support and co-operation," he said.

'Mesaimeer' is on a long-term charter to Qatargas and operated by NSQL - Nakilat Shipping (Qatar) Limited.

Innovation in the LNGC sector

A continuous stream of LNGC design and operations innovations have been seen in the past decade, said Patrick Janssens, ABS Vice President, Global Gas Solutions, talking with *LNG Shipping News*.

Vessel designs have continuously evolved to meet changing trade demands and this evolution is set to continue.

"An owner ordering a vessel 15 years ago would have had very little choice in what they could specify," Janssens said. "LNG carriers were almost all large ships of around 140-145,000 cu m with standard designs featuring steam propulsion and little choice of containment systems."

Today, the drive for higher performance vessels has seen a choice of propulsion and containment systems come onto the market. The need to respond to changing trading patterns has also meant that it is becoming more common for new vessels to include a reliquefaction system.

With the emergence of something akin to an LNGC spot market, ships may load for different destinations, depending on the state of

the market and the season, potentially spending more time on the water, so requiring greater use of reliquefaction.

"These changes in demand have also seen the emergence of mid-scale and small-scale LNG shipping, with new trades requiring discharge flexibility to parcel level where a large LNG carrier may discharge to the shore or other vessels for final delivery to small, draft-restricted ports," Janssens explained.

This has driven further innovation in new vessel design with concepts such as the LNT- A-Box, which can serve the small and mid-size cargo demand directly. Its simplified design also means it can be constructed at shipyards that otherwise would not be able to compete for LNGCs.

It is not uncommon for new designs to take time to gain commercial acceptance. For example, in

2013, ABS granted an Approval in Principle (AiP) to Lattice Technology for its Lattice Pressure Vessel (LPV) tank, which features a flexible, space-saving shape for carrying fuel or cargo. It took until 2017 for Lattice Technology to secure its first order, for a 15 cu m LNG fuel tank installed on board a South Korean port clean-up vessel.

Mid-scale LNGCs

One of the major future trends is likely to be more mid-scale LNGCs for energy supply and LNG bunkering. Their development has only scratched the surface and the designs will continue to adapt to the need for greater market flexibility.

"All innovation creates technologies with different levels of success. The class society AiP process is designed to encourage innovation and to recognise technology that can be applied



ABS' Patrick Janssens sees a growth in innovation

safely and sustainably," he said.

Not all concepts come to fruition, as not all prove commercially acceptable to owners, but AiPs demonstrate to buyers that creative minds are trying to find new solutions and the best will survive the process of natural selection.

"The AiP process will continue to give owners confidence across a range of options from which to select the technologies appropriate for the next generation of vessels," he concluded. ■

NEWS NUDGE

SCF takes delivery of Shell LNGC

On 15th January 2021, PAO Sovcomflot (SCF) took delivery of 'SCF Timmerman', a new 174,000 cu m LNGC.

On the same day, the vessel sailed on her maiden voyage under a long-term time charter

to Shell, which will provide SCF with an additional \$165 mill of contract backlog.

She is the third vessel in a series of Atlanticmaxes ordered by SCF in 2018.

NOVATEK also announced that a steel cutting ceremony took place at the Zvezda Shipbuilding Complex for a new Arc7 to be built to ship LNG from NOVATEK's Arctic LNG 2 project.

The Arc7 was ordered by SMART LNG, a joint venture between NOVATEK and SCF.

Arctic LNG 2 and SMART LNG had previously signed charter agreements for 14 similar Arc7s to be built at Zvezda.

In a brief statement on its social media channels, Flex LNG said that it will bring forward the delivery of the 174,000 cu m LNGC 'Flex Volunteer'.

She was originally scheduled for delivery at the end of February, 2021, but due to the strength of the charter market, the company has decided to bring the date forward to the second half of January.

COSCO Shipping Energy Transportation (CSET) was said to have ordered three 174,000 cu m LNGCs at Hudong-Zhonghua shipyard.

The LNGCs were said to be valued at around \$185 mill.

In the charter market, as well

as the record daily rate paid for an LNGC (see page 1), Awilco LNG has won a timecharter for the 2013-built 156,000 cu m 'WilPride'.

Due to start in the first half of February, the charter is for between two and three months, and will generate revenues of \$10.3 mill to \$14.3 mill.

With an estimated breakeven of \$58,000 per day, Awilco said the contract is estimated to generate liquidity of between \$6.2 mill and \$8.6 mill.

Gas prices and spot LNG shipping rates have recently increased dramatically for several reasons, including cold weather, various production disruptions and fleet inefficiencies. Forward gas prices for the remainder of 2021 have recovered together with the predicted shipping rates.

Awilco's 2021 financial results are expected to improve on 2020, the company said. ■



SCF has taken delivery of a third Atlanticmax - 'SCF Timmerman'

NYK joins PNG FSRP project

NYK is to participate in the design, development and engineering of a floating LNG storage and regasification power generation unit (FSRP).

FSRP is to be located near Lae, the capital of Morobe province in Papua New Guinea (PNG).

It will be developed in partnership with the Chiyoda Corp and Norwegian engineering company Moss Maritime.

The design, development and engineering work contract was received by Chiyoda from Kumul Petroleum Holdings, a PNG national oil company.

This project is an important step toward meeting the supply and demand requirement set out in the PNG Development Strategic Plan 2010- 2030, which has set a goal of connecting 70% of the PNG popula-

tion to secure electricity by 2030.

The FSRP will have the capacity to generate 75 MW of power to be exported to the local transmission grid, in addition to being able to load and store 140,000 cu m of

LNG that can be offloaded to small-scale vessels and redistributed to local areas. In addition, the LNG can be regasified and exported as gas via a pipeline to local areas. ■

LNG rate assessments Spot market (155,000-165,000 cu m)

Region	This week	Change*
East of Suez	\$130,000	-\$20,000
West of Suez	\$150,000	-\$10,000
12 mos T/C	\$49,000	+\$ 2,000

*Since last report (07/01/21)

Source: Fearnleys (20/01/21)

NEWS NUDGE

For DNV GL read DNV

DNV GL, an assurance and risk management company with an interests in LNGCs, will change its name to DNV on 1st March, 2021.

This move comes after a comprehensive review of the company's strategy as it positions itself for a world in which many of DNV's markets are undergoing fundamental change.

The current name has been in place since the 2013 merger between DNV (Det Norske Veritas) and GL (Germanischer Lloyd).

LNGCs bridge windows protected

UK South Shields based Solar Solve has supplied its SOLASAFE roller sunscreens, to a series of eight LNGCs, built by Hyundai Heavy Industries (HHI).

All of the 174,000 cu m vessels were constructed to exactly the same design and destined for Greek shipowners/managers Capital.

SOLASAFE roller sunscreens are type approved by the four major class societies and they are guaranteed for seven years.

They are installed on the navigation bridge windows as a safety aid.

When in use they will reject up to 87% of the infra-red light (heat), 99% of the UV light and 93% of the glare that passes through the windows into the enclosed space, significantly improving the working environment for the personnel inside.

Solar Solve supplied 192 x 845 SOLASAFE screens to HHI during 2020. They were installed at the wheelhouse windows of the eight LNGCs. Another 653 screens were installed on a further 33 vessels of various types. ■



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WORLD LNG CARRIER ORDERBOOK

Name	Containment system	Propulsion	Yard	Delivery date	Capacity	Primary Owner
Hyundai Ulsan 3243	Unknown	XDF	Hyundai	01/11/2022	174000	Knutsen OAS Shipping
AS						
Hyundai Ulsan 3244	Unknown	XDF	Hyundai	01/05/2023	174000	Knutsen OAS Shipping
AS						
Hyundai Ulsan 3191	Unknown	XDF	Hyundai	01/06/2023	174000	Korea Line
Hyundai Ulsan 3198	Unknown	XDF	Hyundai	01/08/2023	174000	Korea Line
Daewoo 2514	Unknown	TFDE - Azipod	DSME	01/12/2022	175000	Sovcomflot
Daewoo 2515	Unknown	TFDE - Azipod	DSME	01/04/2023	175000	MOL
Daewoo 2516	Unknown	TFDE - Azipod	DSME	01/07/2023	175000	Sovcomflot
Daewoo 2517	Unknown	TFDE - Azipod	DSME	01/09/2023	175000	Sovcomflot
Daewoo 2518	Unknown	TFDE - Azipod	DSME	01/10/2023	175000	MOL
Daewoo 2519	Unknown	TFDE - Azipod	DSME	01/12/2023	175000	MOL
Zvezda 046	Unknown	TFDE - Azipod	Zvezda SSK	01/08/2024	172600	Smart LNG
Zvezda 047	Unknown	TFDE - Azipod	Zvezda SSK	01/09/2024	172600	Smart LNG
Zvezda 048	Unknown	TFDE - Azipod	Zvezda SSK	01/10/2024	172600	Smart LNG
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
Hyundai Samho 8095	Unknown	XDF	Hyundai	01/05/2023	174000	Knutsen
Hyundai Samho 8096	Unknown	XDF	Hyundai	01/06/2023	174000	Knutsen
Hyundai Ulsan 3189	Unknown	XDF	Hyundai	01/03/2023	174000	ICBC Leasing
Hyundai Ulsan 3190	Unknown	XDF	Hyundai	01/05/2023	174000	ICBC Leasing
United Fortune	Unknown	XDF	Hudong-Zhonghua	01/04/2023	174000	China LNG Shipping
United Glory	Unknown	XDF	Hudong-Zhonghua	01/01/2023	174000	China LNG Shipping
United Prosperity	Not Applicable	XDF	Hudong-Zhonghua	01/10/2022	174000	China LNG Shipping
Hyundai Samho 8033	GTT MK III Flex	XDF	Hyundai	01/06/2022	173000	NYK
Hyundai Ulsan 3187		XDF	Hyundai	01/11/2022	174000	JP Morgan
Hyundai Ulsan 3188		XDF	Hyundai	01/12/2022	174000	JP Morgan
Hyundai Samho 8091	Unknown	XDF	Hyundai	01/08/2022	174000	Knutsen
Hyundai Samho 8092	Unknown	XDF	Hyundai	01/10/2022	174000	Knutsen
Hyundai Samho 8093	Unknown	XDF	Hyundai	01/11/2022	174000	Knutsen
Hyundai Samho 8094	Unknown	XDF	Hyundai	01/12/2022	174000	Knutsen
Hyundai Ulsan 3185		XDF	Hyundai	01/08/2022	174000	Korea Line
Hyundai Ulsan 3186		XDF	Hyundai	01/10/2022	174000	Korea Line
Daewoo 2508	Unknown	XDF	DSME	01/01/2022	174000	Maran Gas Maritime
Hyundai Samho 8026	GTT MK III Flex	XDF	Hyundai	01/06/2022	174000	H-Line
Samsung 2315	Unknown	XDF	Samsung	01/06/2022	173400	SinoKor
Samsung 2316	Unknown	XDF	Samsung	01/09/2022	173400	SinoKor
Samsung 2317	Unknown	XDF	Samsung	01/12/2022	173400	SinoKor

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 = 25th November 2020

Name	Containment system	Propulsion	Yard	Delivery date	Capacity	Primary Owner
Samsung 2318	Unknown	XDF	Samsung	01/03/2023	173400	SinoKor
Samsung 2364	GTT MK III Flex+	XDF	Samsung	01/01/2023	174000	MISC
Samsung 2365	GTT MK III Flex+	XDF	Samsung	01/02/2023	174000	MISC
Daewoo 2509	Unknown	MEGI	DSME	01/08/2022	174000	BWGas
Daewoo 2510	Unknown	MEGI	DSME	01/09/2022	174000	BWGas
Hyundai Samho 8025		XDF	Hyundai	01/12/2021	174000	H-Line
Samsung 2355	GTT MK III Flex	XDF	Samsung	01/10/2021	174000	NYK
Zvezda 041	GTT MK III	TFDE - Azipod	Zvezda SSK	01/03/2023	172600	Smart LNG
Zvezda 042	GTT MK III	TFDE - Azipod	Zvezda SSK	01/09/2023	172600	Smart LNG
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
Zvezda 045	Unknown	TFDE - Azipod	Zvezda SSK	01/12/2023	172600	Smart LNG
Daewoo 2507	GTT 96 GW	XDF	DSME	01/10/2021	174000	Maran Gas Maritime
Hudong-zhonghua H1829a	GTT 96 L03+	XDF	Hudong-Zhonghua	01/03/2022	170520	CSSC
Hudong-zhonghua H1830a	GTT 96 L03+	XDF	Hudong-Zhonghua	01/06/2022	170520	CSSC
Hyundai Ulsan 3111	GTT MK III Flex	XDF	Hyundai	01/01/2023	174000	Capital Gas
Hyundai Ulsan 3157	GTT MK III Flex	XDF	Hyundai	01/12/2021	174000	Tsakos Energy Navigation
Hyundai Ulsan 3145	Unknown	XDF	Hyundai	01/09/2022	180000	SK Shipping
Hyundai Samho 8032	GTT MK III Flex	XDF	Hyundai	01/01/2022	174000	NYK
Hyundai Ulsan 2939	GTT MK III Flex	XDF	Hyundai	01/10/2021	180000	SK Shipping
Samsung 2319	GTT MK III Flex	XDF	Samsung	01/03/2022	174000	JP Morgan
Samsung 2336	GTT MK III Flex	XDF	Samsung	01/12/2021	174000	JP Morgan
Samsung 2337	GTT MK III Flex	XDF	Samsung	01/07/2022	174000	JP Morgan
Daewoo 2506	GTT 96	MEGI	DSME	01/11/2021	174000	Maran Gas Maritime
Clean Cajun	Unknown	XDF	Hyundai	01/04/2022	200000	Dynagas
Clean Copano	Unknown	XDF	Hyundai	01/07/2022	200000	Dynagas
Daewoo 2505	Unknown	MEGI	DSME	01/07/2021	174000	MOL
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
Elisa Aquila	GTT MK III Flex	XDF	Hyundai	01/03/2022	174000	NYK
Daewoo 2502	GTT 96 GW	XDF	DSME	01/09/2021	173400	Nakilat
Daewoo 2503	GTT 96 GW	XDF	DSME	01/01/2022	173400	Nakilat
Adamastos	GTT MK III Flex	XDF	Hyundai	01/08/2021	174000	Capital Gas
Yiannis	GTT 96 GW	MEGI	DSME	01/06/2021	174000	Maran Gas Maritime
Hudong-zhonghua H1828a	GTT 96 L03+	XDF	Hudong-Zhonghua	01/01/2022	174000	CSSC
Mu Lan	GTT 96 L03+	XDF	Hudong-Zhonghua	01/06/2021	174000	CSSC
Samsung 2313	Unknown	XDF	Samsung	01/05/2021	180000	Celsius Shipping
Samsung 2314	Unknown	XDF	Samsung	01/08/2021	180000	Celsius Shipping
Minerva Chios	GTT MK III Flex+	XDF	Samsung	01/07/2021	174000	Minerva Marine
Marvel Swan	Unknown	XDF	Samsung	01/03/2021	173400	Navigare
Samsung 2332	GTT MK III Flex+	XDF	Samsung	01/11/2022	174000	Minerva Marine
Bw Helios	GTT 96 GW	MEGI	DSME	01/03/2021	174000	BWGas
Bw Lesmes	GTT 96 GW	MEGI	DSME	01/02/2021	174000	BWGas
Daewoo 2495	GTT 96 GW	XDF	DSME	01/06/2021	174000	Maran Gas Maritime

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 = 25th November 2020

Name	Containment system	Propulsion	Yard	Delivery date	Capacity	Primary Owner
Energy Intelligence	GTT 96 GW	MEGI	DSME	01/06/2021	174000	Alpha Gas
Gail Bhuwan	GTT 96 GW	MEGI	DSME	01/02/2021	180000	MOL
Gaslog Wellington	GTT MK III Flex+	XDF	Samsung	01/06/2021	180000	GasLog
Lng Rosenrot	GTT 96 GW	MEGI	DSME	01/01/2021	180000	MOL
LNG Ships Express	GTT MK III Flex	XDF	Samsung	01/03/2021	174000	TMS Cardiff Gas
Samsung 2306	GTT MK III Flex	XDF	Samsung	01/09/2021	174000	NYK
Samsung 2307	GTT MK III Flex	XDF	Samsung	01/12/2021	174000	NYK
Samsung 2312	GTT MK III Flex+	XDF	Samsung	01/08/2021	180000	GasLog
Diamond Gas Crystal	GTT MK III Flex	XDF	Hyundai	01/05/2021	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
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
Lngship Manhattan	GTT MK III Flex	XDF	Hyundai	01/04/2021	174000	TMS Cardiff Gas
Cool Racer	GTT MK III Flex	XDF	Hyundai	01/02/2021	174000	Thenamaris
Minerva Kalymnos	GTT MK III Flex+	XDF	Samsung	01/02/2021	174000	Minerva Marine
Samsung 2302	GTT MK III Flex	XDF	Samsung	01/03/2021	174000	NYK
Cobia Lng	GTT MK III Flex	XDF	Hyundai	01/02/2021	174000	TMS Cardiff Gas
Sof Timmerman	GTT MK III Flex	XDF	Hyundai	01/02/2021	174000	Sovcomflot
Celsius Canberra	GTT MK III Flex	XDF	Samsung	01/12/2020	180000	Celsius Shipping
Gaslog Galveston	GTT MK III Flex	XDF	Samsung	01/12/2020	174000	GasLog
Aristidis I	GTT MK III Flex	XDF	Hyundai	01/11/2020	174000	Capital Gas
Global Star	GTT 96	MEGI	DSME	01/01/2021	173400	Nakilat
Aristarchos	GTT MK III Flex	XDF	Hyundai	01/03/2021	174000	Capital Gas
Attalos	GTT MK III Flex	XDF	Hyundai	01/06/2021	174000	Capital Gas
Flex Freedom	GTT 96 GW	MEGI	DSME	01/11/2020	173400	Flex LNG
Flex Vigilant	GTT MK III Flex	XDF	Hyundai	01/05/2021	174000	Flex LNG
Flex Volunteer	GTT MK III Flex	XDF	Hyundai	01/02/2021	174000	Flex LNG
Energy Integrity	GTT 96 GW	MEGI	DSME	01/05/2021	173400	Alpha Gas
Energy Endeavour	GTT 96 GW	MEGI	DSME	01/12/2020	173400	Alpha Gas
Minerva Limnos	GTT 96 GW	MEGI	DSME	01/03/2021	173400	Minerva Marine
Minerva Psara	GTT 96 GW	MEGI	DSME	01/01/2021	173400	Minerva Marine
Dorado LNG	GTT MK III	XDF	Samsung	01/11/2020	174000	TMS Cardiff Gas

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 = 25th November 2020



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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	Akebono Maru	3,556	LNG	Japan	Yes	Chuo Kaiun
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	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	JX Energy TBN	2,500	LNG	Japan	Yes	JX Energy
2013	Kakuyu Maru	2,500	LNG	Japan	Yes	Tsurumi Sunmarine
2013	Coral Anthelia	6,500	LNG/Ethylene			Anthony Veder
2015	LNG Barge TBN	3,000	LNG	US Coast	Yes	LNG America
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	PetroChina TBN	30,000	LNG	China		PetroChina
2016	Clean Jacksonville	2,200	LNG	US Coast	Yes	CME
2016	LNG Prime	2,250	LNG	Northwest Europe	Yes	Veka Deen LNG
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	Hai Yang Shi You 301	30,000	LNG	Bali FSU	Yes	CETS (CNOOC)
2017	Oizmendi	600	LNG	Bilbao	Yes	Itsas Gas
2017	ENGIE Zeebrugge	5,000	LNG	Northwest Europe	Yes	NYK
2017	Coralius	5,800	LNG	Northwest Europe/Baltics	Yes, for Skangas	Anthony Veder
2017	Cardissa	6,500	LNG	Northwest Europe	Yes	Shell
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 = 16th November 2020

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	LNG-Gorskaya TBN	7,300	LNG	Russia	Yes	LNG-Gorskaya
2017	Coral EnergiCE	18,000	LNG	Northwest Europe/Baltics	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	Coral Encanto	30,000	LNG	China	Yes	Anthony Veder
2018	HUA XIANG 8	13,720	LNG	China	Yes	Zhejiang Huaxiang
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	Kairos	7,500	LNG	Baltic	Yes	Bernhard Schulte
2018	Bunker Breeze	0	LNG	Barcelona	Yes	Suardiaz Energy Shipping
2019	SM Jeju LNG1	7,500	LNG	Korea	Yes	Korea Line
2019	Stolt TBN	7,500	LNG	Mediterranean	Yes	Stolt-Nielsen Gas
2019	Stolt TBN	7,500	LNG	Mediterranean	Yes	Stolt-Nielsen Gas
2019	Gas Agility	18,600	LNG	NWE	Yes	MOL
2019	Flexfueller 001	1,480	LNG	Amsterdam	Yes	Titan LNG
2020	SM Jeju LNG2	7,500	LNG	Korea	Yes	Korea Line
2020	CNTIC VPOWER Global	28,000	LNG	Myanmar	Yes	Dalian Inteh Group
2020	Q-LNG 4000	4,000	LNG	US Coast	Yes	Q-LNG Transport/Harvey Gulf
2020	Stolt TBN (option)	7,500	LNG		Yes	Stolt-Nielsen Gas
2020	FuelLNG TBN	7,500	LNG	Singapore	Yes	FuelLNG
2020	CLS TBN	3,500	LNG	Japan	Yes	CLS
2020	Elenger TBN	6,000	LNG	NWE	Yes	Elenger
2020	ENN TBN	8,500	LNG	China	Yes	ENN
2020	Flexfueller 002	1,480	LNG	Antwerp	Yes	Titan LNG
2020	Ecobunker Tokyo Bay	2,500	LMG	Japan	Yes	Ecobunkers
2021	Stolt TBN (option)	7,500	LNG		Yes	Stolt-Nielsen Gas
2021	Knutsen TBN	30,000	LNG	Mediterranean	Yes	Knutsen OAS
2021	Gazprom Neft TBN	5,800	LNG	Russia	Yes	Gazprom Neft
2021	PE TBN	12,000	LNG	Singapore	Yes	MOL
2021	JMU TBN	2,500	LNG	Japan	Yes	JMU
2021	TBN	18,600	LNG	Mediterranean	Yes	MOL
2021	TG TBN	500	LNG	Korea	Yes	Trans Gas
2022	Stolt TBN	20,000	LNG	Worldwide	Yes	Stolt-Nielsen Gas
2022	Stolt TBN	20,000	LNG	Worldwide	Yes	Stolt-Nielsen Gas
2022	Clean Cañaveral	5,400	LNG	USG	Yes	PNE
2023	Cryopeak TBA	4,000	LNG	West Canada	Yes	Cryopeak
2024	Stolt TBN (option)	20,000	LNG	Worldwide	Yes	Stolt-Nielsen Gas
2024	Stolt TBN (option)	20,000	LNG	Worldwide	Yes	Stolt-Nielsen Gas
2026	Stolt TBN (option)	20,000	LNG	Worldwide	Yes	Stolt-Nielsen Gas
2026	Stolt TBN (option)	20,000	LNG	Worldwide	Yes	Stolt-Nielsen Gas

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 = 16th November 2020