LNG Shipping News

AN LNG JOURNAL TITLE ON LNG CARRIERS 13 June 2019

Asian demand set to power growth

After another record year, global demand for natural gas is forecast to keep growing over the next five years.

This growth pattern will be driven by strong consumption in the fast-growing Asian economies and supported by the continued development of the international gas trade.

Natural gas demand grew by 4.6% in 2018, its fastest annual pace since 2010, according to the IEA's latest annual market report, Gas 2019. Gas accounted for almost half the increase in primary energy consumption worldwide.

Demand is expected to rise by more than 10% over the next five years, reaching more than 4.3 trill cu m in 2024.

"Natural gas helped to reduce air pollution and limit the rise in energy-related CO2 emissions by displacing coal and oil in power generation, heating and industrial uses," said Dr Fatih Birol, IEA's Executive Director. "Natural gas can contribute to a cleaner global energy system. But it faces its own challenges, including remaining price competitive in emerging markets and reducing methane emissions along the natural gas supply chain."

China is expected to account for more than 40% of global gas demand growth to 2024, propelled by the government's plan to improve air quality by moving away from coal. Chinese natural gas consumption grew 18% in 2018 but is expected to slow to an average annual rate of 8% to 2024, due to slower economic growth.

The IEA also saw strong growth in gas consumption in other Asian countries, particularly in South Asia. In Bangladesh, India and Pakistan, the industrial sector is the main contributor to growth, especially for fertilisers to meet the needs of growing populations.

The Indian sub-continent is using LNG for industrial purposes

Industrial use of natural gas, both as a fuel and a feedstock, is set to expand at an average annual rate of 3% and account for almost half of the rise in global consumption to 2024.

Power generation remains the largest consumer of natural gas, in spite of slower growth, due to strong competition from renewables and coal.

LNG as fuel

Gas 2019 also focused on the role of LNG at sea, which is set to emerge as a fast-growing alternative fuel, due to stricter rules on sulfur content that take effect in January, 2020.

Supplies to meet growing global demand for natural gas will come from both new domestic production in fast-growing economies but also increasingly from major exporting countries, led by the development of abundant US shale gas resources.

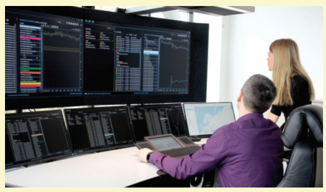
The strong LNG export capacity growth will enable international trade to play a growing role in the development of natural gas markets, as they move towards greater globalisation.

Investment in LNG projects has rebounded in 2018 after several years of decline, and the large number of projects due to take final investment decision (FID) in 2019 is likely to further support trade and market expansion. However, more investment will be needed in the future.

The recent convergence in market prices in major regions gave an indication of the increasing globalisation of the natural gas trade. Establishing market-driven pricing mechanisms in fast-growing economies remains a challenge, however.

Recent reforms in major markets sent encouraging signals, but more will be required to ensure the sustainable market-driven development of natural gas in these economies, the report said. ■

SHIPPING NEWS AGENDA



All change at Cool Pool

GasLog Ltd, GasLog Partners and Golar LNG are to assume commercial control of their respective LNGCs currently operating in the spot market through The Cool Pool.

This pool was an LNGC commercial pooling agreement between GasLog and Golar LNG Ltd, focusing exclusively on spot fixtures of up to 12 months in duration.

Golar's intention to spin off its spot TFDE LNGCs, coupled with the belief that robust LNG commodity supply and demand fundamentals leading to a tightening LNG shipping market and increased multi-year charter opportunities, has led GasLog to decide to withdraw its vessels from The Cool Pool.

The five LNGCs owned by GasLog and the one owned by GasLog Partners currently operating in the spot market will be withdrawn from The Cool Pool in the coming months, based upon their current commitments and charter opportunities.

Paul Wogan, GasLog CEO, said "I would like to thank our Cool Pool partners for their collaboration over the past four years. However, with Golar's declared intention to spin off its LNG vessels and a tightening of the LNG carrier market now underway, we believe it is the right time to assume control of our vessel marketing as we seek to place more vessels on longer-term charters to optimise the earnings of our fleet through the cycle. This move is underpinned by increasing levels of customer enquiry in multi-month and multi-year charters."

Andrew Orekar, GasLog Partners CEO, added "The Partnership remains focused on delivering cash flow visibility for our unitholders, and today's decision to withdraw the 'GasLog Shanghai' from The Cool Pool will enhance our ability to secure an attractive term charter for this vessel."

Golar's spin-off entity, will assume ownership of the Cool Pool following GasLog's departure this month, subject to market conditions. There will be a phased withdrawal period to allow for conclusion of existing GasLog vessel charter contracts.

The company also said that it was in talks with other owners of similar tonnage to join the new shipping entity.

It is expected that Golar's spot traded TFDE LNGC, 'Golar Tundra', together with Golar Power's available TFDE carriers and any further tonnage within the new shipping entity will continue to trade within the Cool Pool after the formal launch of the spin-off.

Transfer of the Cool Pool to this new shipping entity is expected to create the leading independent provider of available on-the-water TFDE LNGCs, Golar claimed. ■

Dahej expansion complete

India's Petronet LNG has completed its expansion programme at its Dahej LNG import terminal.

The expansion project is due to become fully operational by the end of this month, according to S&P Global Platts.

In a note to the Securities and Exchange Board of India on Monday, Petronet confirmed that the 2.5 mill tonnes per year regasification capacity had been commissioned and that the additional gas send-out from the terminal had begun.

The expansion will take the terminal's total import capacity to 17.5 mill tonnes per year.

Dahej is India's busiest LNG terminal, accounting for 72% or 15.98 mill tonnes per year of the total LNG imports into India in 2018, Platts Analytics data showed.

Thus far this year, the terminal has imported 6.71 mill or 71% of the total LNG imports into India year to date.

Petronet LNG operates both the Dahej LNG terminal in Gujarat and the 5 mill tonnes per year Kochi LNG terminal in Kerala on India's west coast. ■

Höegh's take on FSRU demand

The increasing supply of competitively priced LNG and a diverse set of demand factors for this fuel – including environmental motivation – support demand for FSRUs, since these provide the most efficient doorway to global LNG trade.

A significant number of FSRU projects still in the development phase provide a diverse set of business opportunities for existing and future FSRUs, Höegh LNG said in its first quarter results presentation (see page 6).

FSRUs currently operate as LNG import facilities under 24 separate contracts.

For example, since the start of this year, FSRUs have started operations in Kaliningrad, Bangladesh and Brazil. Moreover, FSRUs are expected to arrive and start operation in India and Turkey later this year.

In addition to the contracts currently being served, another 10-12 projects have signed up for FSRU capacity and plan to start importing LNG over the next three years.

The global FSRU fleet consists of 34 units (including two smaller barges) as at 31st March, 2019. Twelve FSRUs, including three LNGC-to-FSRU conversions, are currently under construction.

Of these, five appeared to be uncommitted, including one conversion, Höegh said. ■

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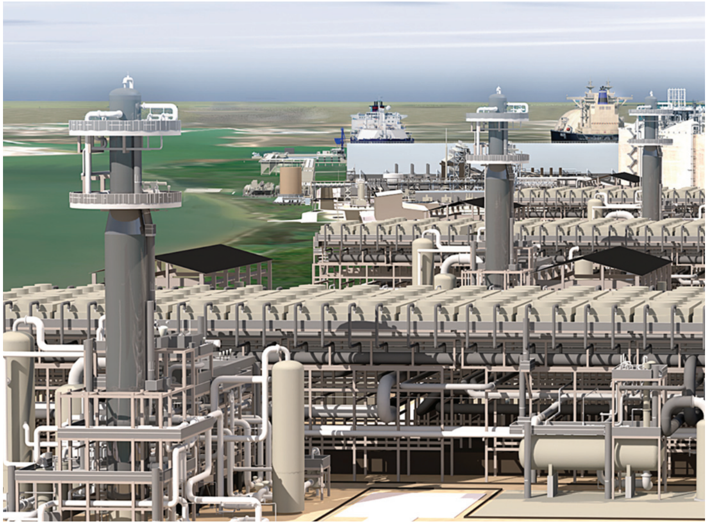
DOE agrees Freeport LNG export capacity increase

Late last week, the US Department of Energy (DOE) approved additional exports of domestically produced natural gas from the Freeport LNG Terminal located on Quintana Island, Texas.

The announcement was made at the Tenth Clean Energy Ministerial (CEM10) in Vancouver, Canada, at which the DOE highlighted its efforts to advance clean energy.

Under the order, Freeport LNG Expansion. and FLNG Liquefaction 4 (together, FLEX4) have authority to export up to 0.72 bill cu ft per day of LNG from a fourth liquefaction train (Train 4) to be built at the terminal.

The US Federal Energy Regulatory Commission (FERC) authorised FLEX4 to site, construct, and operate Train 4 on 17th May, 2019 (see *LNG Shipping News*, 30th May, page 2).



Freeport LNG has received US DOE agreement for its expansion plan

"Increasing export capacity from the Freeport LNG project is critical to spreading freedom gas throughout the world by giving America's allies a diverse and affordable source of clean energy. Further, more exports of US LNG to the world means more US jobs and more domestic economic growth and cleaner air here at home and around the globe," said US Under Secretary of Energy, Mark Menezes.

"Approval of additional LNG exports from Freeport LNG furthers this Administration's commitment to promoting American energy, American jobs, and the American economy. Further, increased supplies of US natural gas on the world market are critical to advancing clean energy and the energy security of our allies around the globe.

"With the US in another year of record-setting natural gas production, I am pleased that the Department of Energy is doing what it can to promote an efficient regulatory system that allows for molecules of US freedom to be exported to the world," said Assistant Secretary for Fossil Energy, Steven Winberg, who signed the export order and was also in attendance at the Clean Energy Ministerial.

Prior to the recent announcement, Freeport LNG Expansion and other Freeport entities, had received approval to export LNG from the first three liquefaction trains at the terminal.

The first train is expected to begin commercial exports later this year. ■

Cheniere to build Sabine Pass Train 6 - raises cash

Cheniere Energy' Board has approved a comprehensive capital allocation framework and has agreed FID for Train 6.

This programme will prioritise reinvestment of cash flows to grow the company's LNG platform, achieve improved credit metrics for the liquefaction project entities and on a consolidated basis, and return excess capital to shareholders through a framework that gives the company flexibility to adapt to changes in growth opportunities and market conditions.

Cheniere expects to generate over $9 bill of available cash through the first half of 2024.

Jack Fusco, Cheniere's President and CEO, explained; "The capital allocation framework prioritises continued investment in our LNG platform through new high-return growth projects, beginning with Sabine Pass Train 6, on which we have made a positive FID and have issued full notice to proceed to Bechtel.

"We believe the framework will also strengthen the balance sheets across our corporate structure, which is vital to our sustained growth, and enables us to return excess capital to shareholders through share repurchases.

"The market-leading execution we have achieved across our world-class LNG platform has provided stable and growing cash flow, which forms the foundation for this capital allocation framework, and we remain committed to delivering long-term shareholder value through growth," he said.

As mentioned, Cheniere's subsidiary, Cheniere Energy Partners has agreed a FID for Train 6 of the Sabine Pass liquefaction project (SPL project) in Cameron Parish, Louisiana, and has issued full notice to proceed with construction to Bechtel Oil, Gas and Chemicals, Inc.

To fund part of the construction of Train 6 and a third LNG berth and required supporting infrastructure, Cheniere Partners has entered into five-year, $1.5 bill senior secured credit facilities with 29 banks and financial institutions in a transaction that closed on 29th May, 2019.

SG Americas Securities acted as financial advisor and MUFG Bank acted as sole co-ordinating lead arranger.

Production increase

Cheniere has also raised its run-rate production guidance to 4.7 - 5 mill tonnes per annum per Train, up from 4.4 – 4.9 mill tonnes. This increase is based on the impact of production and maintenance optimisation, and de-bottlenecking projects at both the SPL project and CCL project.

Incorporating the impact of Sabine Pass Train 6 and increased run-rate production guidance, Cheniere has revised its run-rate financial guidance to - a consolidated adjusted EBITDA of $5.2 to $5.6 bill and distributable cash flow per share of between $8.4 and $9.6.

In addition, Cheniere Corpus Christi Liquefaction Stage III has agreed a long-term gas supply agreement with Apache Corp.

Under the GSA, Apache has agreed to sell 140,000 MMBtu per day of natural gas to Corpus Christi Stage III for about 15 years. ■

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NOVATEK signs several gas accords

During last week's official visit of the Chinese President Xi Jinping to Russia, PAO NOVATEK, Sinopec and Gazprombank signed a Heads of Agreement to establish a joint venture to market LNG and natural gas to Chinese customers.

"Chinese companies are investing in the development of NOVATEK's LNG projects in the Arctic region of the Russian Federation. Creating a joint venture to trade LNG and natural gas in the domestic market of China not only facilitates sales of LNG produced, but also opens up opportunities for investments in the development of the end-customer segment in one of the largest and the fastest-growing gas and LNG market in the world," said NOVATEK's Chairman, Leonid Mikhelson.

"This represents another step in implementing our long-term strategy across the entire value chain from the extraction and liquefaction of natural gas to the sale of LNG to the customers," he added.

A couple of days later, during the St Petersburg International Economic Forum, NOVATEK announced that it has signed a Share Purchase Agreement (SPA) with CNOOC.

This was in relation to the sale of a 10% participation interest in the Arctic LNG 2 project.

The signing ceremony of NOVATEK, SCF, COSCO and Silk Road Fund tie-up

Another SPA was signed with a wholly owned subsidiary of China National Petroleum Corp (CNPC) also for the sale of a 10% participation interest in the same project.

Arctic transport

In addition, NOVATEK, China COSCO SHIPPING Corp, Sovcomflot and Silk Road Fund, signed an agreement to address Maritime Arctic Transport (MArT).

According to this agreement, the parties intend to establish a long-term partnership to jointly develop, finance and implement year-round logistics for shipping hydrocarbons from Russia's Arctic zone to the Asia/Pacific region, as well as organising transit cargo traffic along the Northern Sea Route (NSR) between Asia and Western Europe.

The agreement was signed by: Sergey Frank, President and CEO of Sovcomflot; NOVATEK's Leonid Mikhelson; Xui Lizhong, Chairman of the Board of Directors of COSCO Shipping Corp and Wang Yanzhi, President of the Silk Road Fund.

The focus of the MArT joint venture is to manage a fleet of Arctic Ice Class vessels, comprising existing and new ships, engaged in the transportation of LNG for current and planned NOVATEK projects, including Yamal LNG; Arctic LNG 2 and others. ■

Total gains a further foothold in the US

Total is to takeover Toshiba's LNG portfolio in a bid to become a major US LNG player.

This includes a 20-year tolling agreement for 2.2 mill tonnes per annum of LNG from Freeport LNG Train 3 in Texas and the corresponding gas transportation agreements on the pipelines feeding the terminal.

Train 3 is expected to start commercial operations by the second quarter of 2020.

Under the transaction, Total will acquire all of the shares of Toshiba America LNG corporation for $15 mill and will be assigned all contracts related to the LNG business by Toshiba Energy Systems and Solutions Corp for $815 mill.

As a result, Total will receive $800 mill from Toshiba on the closing date.

"The takeover of Toshiba's LNG portfolio is in line with Total's strategy to become a major LNG portfolio player. Adding 2.2 mill tonnes per annum of LNG to our existing positions in the US, in particular Cameron LNG, will enable optimisations of the supply and operations of these LNG sources," said Philippe Sauquet, Total's President Gas, Renewables and Power. "Already an integrated player in the US gas market, Total is set to become one of the leading US LNG exporters by 2020 with a 7 mill tonnes per year portfolio."

This transaction is expected to close by the end of this year.

Total is the second-largest private global LNG player, with an overall LNG portfolio of around 40 mill tonnes per annum by 2020 and a worldwide market share of 10%.

With 21.8 mill tonnes of LNG sold in 2018 and through its stakes in liquefaction plants located in Qatar, Nigeria, Russia, Norway, Oman, Egypt, the UAE, the US, Australia, Angola and Yemen, the French energy giant sells LNG in all global markets. ■

NEWS NUDGE

Ferrol receives first Corpus Christi gas cargo

Ferrol's Reganosa's receiving terminal recently welcomed its inaugural LNG cargo from Corpus Christi, Texas, which was also the first to be delivered from the Texas plant to a Spanish receiving terminal.

The gas, a Trafigura cargo, was shipped on the LNGC 'Excalibur'.

Corpus Christi is the third largest US LNG export facility and began operations last December.

'Prelude' exports first cargo

On Monday, Shell shipped the first LNG cargo from the delayed FLNG 'Prelude' moored off northwest Australia.

"Today's (Monday's) first shipment of LNG departed from 'Prelude' FLNG, safely," Shell's integrated gas and new energies director, Maarten Wetselaar, said in a statement.

The cargo was shipped on the LNGC 'Valencia Knutsen' to Asian customers, Shell said, without giving any other details.

"How fast 'Prelude' delivers its second and third cargo and ramps up to plateau output will be a key indicator of success," said Daniel Toleman, an analyst at Wood Mackenzie, talking with Reuters. ■

Off-hires propel Flex LNG into loss

Flex LNG Ltd has reported a net loss of $3.4 mill and loss per share of $0.06 for the first quarter 2019, compared to net income of $15.2 mill and earnings per share of $0.38 for 4Q18.

Vessel operating revenues were $19.1 mill for 1Q19, compared to $36.1 mill in the previous quarter.

The company suffered an increase in vessel operating costs during the quarter, which was primarily due to vessels being off-hire, with associated positioning and idle costs, partly offset by reduced claims expense, compared to 4Q18.

Flex LNG's cash and cash equivalents decreased by $9.5 mill to $45.6 mill in 1Q19 (4Q18 = $38.5 mill cash inflow).

In April, the company signed a $250 mill secured term loan facility from a syndicate of banks for the financing of the two newbuildings 'Flex Constellation' and 'Flex Courageous'.

This financing is expected to be drawn upon delivery of the vessels from the shipyard, which is currently scheduled for June and August, 2019, respectively (see below).

The same month, Flex LNG announced that it has entered into a sale and charter-back deal with Hyundai Glovis for the LNGCs 'Flex Endeavour' and 'Flex Enterprise'.

Under this agreement, the company will sell the vessels for $420 mill gross, with a net consideration of $300 mill adjusted for a non-amortising and non-interest bearing seller's credit of $120 mill in total.

Both vessels will be timechartered back from Hyundai Glovis for 10 years.

CEO, Øystein Kalleklev, commented;:"First half of 2019 has been challenging, due to the disruption in the LNG trade caused by a unseasonably mild winter, a glut of LNG hitting the market, as well as shift in trading patterns favouring shorter hauls to Europe.

"We in Flex LNG have deliberately elected to sail against the current to be able to position us for the shift in currents expected to take place in the second half of the year. With tighter market and significant contango in the gas market, we are upbeat about the outlook for owners of uncommitted 2-stroke LNGCs.

"Furthermore we continue to strengthen the organisation with in-sourcing of shipmanagement with the aim of delivering the highest standard in terms of customer experience. Additionally, our US listing will give us access to a larger and deeper capital market which is advantageous in such a capital intensive shipping segment as LNG transportation," he said.

Another LNGC delivered

Meanwhile, Flex LNG recently took delivery of the 173,400 cu m LNGC 'Flex Constellation' from South Korea's Daewoo Shipbuilding and Marine Engineering (DSME).

According to the company, 'Flex Constellation' was delivered three weeks ahead of scheduled having been fixed for her maiden voyage from the yard.

The LNGC is the fifth unit in the company's fleet and the fourth to be built by DSME. Flex LNG has three more units on order at DSME and two 174,000 cu m LNGCs at Hyundai Samho. The ships are set to be handed over in 2020 and 2021, respectively.

The company said that in connection with delivery, $125 mill of the new $250 mill bank facility was used securing the ship a cash break-even level of about $45,000 per day.

'Flex Constellation' features high pressure MEGI 2-stroke propulsion and is equipped with a partial reliquefaction system bringing the boil off rate in laden condition down to 0.075%. ■

Egas settlement affects Höegh LNG

Höegh LNG Holdings has reported total income of $84.3 mill for the first quarter of 2019, compared with $122.3 mill in the preceding quarter.

The decrease mainly reflected the $40.3 mill recognition of revenue under the suspension and settlement agreement with Egas in 4Q18.

In addition, more days in FSRU mode for 'Höegh Esperanza' and a full quarter of revenues under 'Höegh Gannet's' interim LNGC charter contributed to the 1Q19 total income, while lower income under 'Höegh Giant's' spot-market related LNGC charter and certain tax elements booked in 4Q18 offset these positive factors, Höegh said.

EBITDA was $55.9 mill for the period, down from $81.4 mill in the preceding quarter. Adjusting for revenue recognition of the Egas settlement and IFRS 16 effects, reported EBITDA increased by $5.5 mill from $50.4 mill in 4Q18.

Höegh LNG recorded a profit of $4.5 mill, down from $45 mill reported in the previous quarter. The decrease is a result of lower EBITDA, due to the Egas adjustment and higher depreciation and interest expenses owing to a combination of the delivery of 'Höegh Gannet' in December, 2018 and IFRS 16 effects.

Other financial activities during the quarter comprised $320 mill in draw-down under the $385 mill facility, refinancing 'Höegh Gallant' and 'Höegh Grace'.

As at 31st March, 2019, Höegh LNG held $165.4 mill in current cash, while net interest-bearing debt increased by $212 mill to $1,463 mill, mainly owing to the implementation of IFRS 16 leases as at 1st January, 2019. ■

'Höegh Gallant' was the subject of a refinance package

LNGC rate drop hits Dynagas

Dynagas LNG Partners announced that the net Income for the three months ended 31st March, 2019 was $1.9 mill, compared to $4.8 mill in the corresponding period of 2018, a decrease of 60.4%.

This drop was mainly attributable to a decrease in revenues and an increase in operating expenses during the period; and the increases in US Libor rates, which correspondingly, increased the Partnership's interest and finance costs regarding the Partnership's $480 mill senior secured term loan.

Adjusted net Income was $1.7 mill, compared with $7.2 mill in the corresponding period of 2018, which was a drop of 76.4%. Adjusted EBITDA for 1Q19 was $21.7 mill, compared to $26.6 mill for 1Q18, which was a decrease of 18.4%.

Voyage revenues were $31.4 mill for 1Q19, compared to $33.9 mill for the corresponding period of 2018, which represented a fall of 7.4%.

This decrease was mainly due to:lower revenues earned on the 'Arctic Aurora', which, in August 2018 rolled-over into a new charter with Equinor at a lower charter rate; lower revenues earned on the 'Ob River', which completed employment under its multi-year charter contract with Gazprom Global LNG in April, 2018 and subsequently, began employment under a 10-year charterparty with a Gazprom company at a lower charter rate; and lower revenues earned on the 'Lena River', which completed its employment under its multi-year charter contract with Gazprom in October, 2018 and in the same month, was delivered into its multi-month charter with a major energy company at a lower charter rate, pending its delivery to its multi-year charter with Yamal.

This was partly offset by the increase in 1Q19 voyage revenues on the steam turbine LNGC, 'Clean Energy', which was delivered to its eight-year charter party with Gazprom in July, 2018. The vessel was trading in the spot market in 1Q18 at a lower charter rate.

Dynacom reported average gross daily hire rate of about $57,700 per day per vessel in 1Q19, compared to around $66,300 per day per vessel in the corresponding period of 2018.

CEO, Tony Lauritzen, commented:"Our fleet performed with 100% fleet utilisation reflecting our manager's operational performance. Our underlying charter business remains healthy with our fleet of six LNG carriers all contracted on charters to international gas producers with an average remaining duration of 9.3 years.

"The 'Lena River' is expected to commence employment under its long term charter with Yamal LNG in July, 2019, following which, all of our LNG carriers will be fully contracted with the earliest potential availability in the third quarter of 2021, which is the earliest contracted re-delivery date for one of our six LNG carriers.

"We continue to be focused on the refinancing of our 6.25% $250 mill senior unsecured, non-amortising notes, which are due on 30th October, 2019. In this respect, we are in an advanced stage with commercial banks and other capital sources for a potential financing transaction which, among other things, may provide funding for the payment due on the maturity date of our 2019 notes, and/or Term Loan B, or a combination of the foregoing.

"Although we believe we will be successful in raising the requisite capital, we have not yet and may not enter into definitive binding documentation.

"We believe in the positive long term fundamentals of the LNG shipping industry as the production of LNG continues to grow and natural gas continues to gain market share as a reliable, abundant, price competitive and relatively cleaner energy resource. We are looking forward to concluding our above-mentioned refinancing and thereafter, focusing on new projects in the future," he said. ■

Dynagas will benefit from 'Clean Energy's' eight year charter to Gazprom

Tango LNG loads first cargo

EXMAR has completed the commissioning of the 'Tango FLNG'.

The performance acceptance tests were successful, the first cargo has been offloaded for export.

With this first shipment the start-up was accomplished in record time following the contract signing in November, 2018 and delivery acceptance of the unit in Bahia Blanca in February, 2019, EXMAR claimed.

For Argentine energy company, YPF, the delivery of the first LNG cargo of about 25,000 cu m from the Vaca Muerta shale gas reserves marks the entry of Argentina into the global LNG exporting nations.

"For EXMAR, the successful performance test in Bahia Blanca confirms the technical capabilities of the 'Tango FLNG'. 'Tango FLNG' is the first FLNG operating in the Americas and this historic milestone clearly proves EXMAR's front runner position for cost competitive and quick-to-market floating liquefaction solutions," said Nicolas Saverys, EXMAR's CEO.

Subsequently, it was reported that the Cheniere Energy-controlled LNGC 'Fuji LNG' was loading at 'Tango LNG', according to data from cFlow, S&P Global Platts' trade flow software.

Cheniere was believed be the purchaser of YPF's 30,000 cu m cargo from Argentina's FLNG.

YPF chartered the FLNG for 10 years from EXMAR. The terminal has the capacity to store 16,100 cu m per day of LNG and liquefy 2.5 mill cu m of gas per day.

'Fuji LNG' discharged at Escobar's LNG regasification plant around 21st May and sailed to Bahia Blanca two days later, S&P Global Analytics data showed. ■

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N-KOM undertakes 200th LNGC repair

Nakilat-Keppel Offshore & Marine (N-KOM) completed its 200th LNGC repair recently.

This involved the 135,295 cu m 'Al Khor', which visited the Erhama bin Jaber Al Jalahma Shipyard.

Chartered by Qatargas and operated by NYK LNG Shipmanagement, the LNGC underwent general drydocking maintenance repairs and upgrades at the shipyard.

This is third time the moss-type 'Al Khor' has called for repairs at the facility, having previously been drydocked in 2014 and 2016.

In addition to regular maintenance, the vessel also underwent water ballast steel renewal and tank treatment, hull treatment, as well as several surveys and endurance tests during the drydocking period.

Nakilat's CEO Eng. Abdullah Fadhalah Al Sulaiti, said: "We are extremely proud to celebrate this significant milestone, which is a testament to the trust and confidence our clients have in our services.

"Our strong focus on safety, quality and efficiency has seen us delivering almost 1,000 marine and offshore projects to satisfied customers from around the world. We will continue to strive in providing excellent services to all our valued customers and business partners, strengthening and expanding our business portfolio.

"I would also like to express my deepest appreciation to our partners, especially Qatar Petroleum and Qatargas, for their strong support and co-operation that has led to this achievement, as well as the entire workforce at the shipyard who have contributed tremendously achieving our vision to be a global leader and provider of choice for energy transportation and maritime services," he said.

Earlier this year, N-KOM welcomed its first FSRU repair project.

N-KOM recently celebrated its 200th LNGC drydocking

MOL signs MOU with Makarov University

On 5th June, 2019, Mitsui OSK Lines (MOL) signed a Memorandum of Understanding with the St Petersburg-based Admiral Makarov State University of Maritime and Inland Shipping.

This MOU reconfirms and further develops the co-operation between the two organisations related to the training of seafarers especially for Northern Sea Route (NSR) operations.

MOL is operating Arc7 LNGCs for the Yamal LNG project that use the NSR, and its crews have undergone specialist training, such as Polar water training courses for navigating officers and cold climate survival training course at the Makarov Training Centre, which is a part of Makarov University.

The centre is one of the world leading establishments in Polar waters and ice navigation simulator training and is approved by ClassNK and accredited by the Russian Federation.

MOL has also started recruiting cadets at Makarov University, who will be trained on board vessels operated by MOL, with the long-term plan to become future Masters or Chief Engineers on its vessels.

With the objective of being one of the leading shipping companies operating on the NSR, MOL identified the need to have seafarers especially well-trained for this operation.

Currently, new projects in the Arctic are being developed and MOL aims to meet the increasing needs for safe transportation through the development of a trained crew pool with support from the Makarov University, the company explained.


Kenta Matsuzaka, MOL's Managing Executive Officer (left), and Sergey Baryshnikov, Rector of Makarov University (right)

AIE awards Port Kembla construction contract

Australian Industrial Energy (AIE) has awarded the contract for the construction of Port Kembla Gas Terminal's wharf and pipeline to the SCSB joint venture.

The joint venture comprises two international specialists - Spiecapag and Soletanche Bachy, - that have extensive experience in major infrastructure projects in Australia and worldwide.

It is estimated the construction of the new wharf facilities and pipeline could see sub-contracts worth around $76 mill awarded to businesses in the Illawarra region.

Information sessions outlining the opportunities for local business will take place over coming months, AIE said.

Once completed, scheduled for late 2020, Port Kembla will be New South Wales first LNG import terminal.

LNGCs will berth adjacent to an FSRU, which will regasify and store the LNG and send the gas to local receivers via the pipeline.

ABB opens Murmansk service centre

ABB has opened an ice-going vessel service centre in Murmansk.

The newly inaugurated centre will support ABB's ship power, propulsion and automation technologies and expand service capabilities for ice-going vessels.

This new centre builds on a decade of local ABB services in support of ice-going vessels and relies on a strong core of engineering expertise in Murmansk. In 2009, ABB's engineers operating from smaller service facilities in Murmansk supported 15 vessels fitted with the group's equipment; in 2019, the number of ships exceeded 50, with projects covering over 100 Azipod propulsion units.

"Opening the Murmansk Marine Service Centre is a truly special moment for ABB in Russia," said Juha Koskela, Managing Director, ABB Marine & Ports. "We work relentlessly to ensure that our services meet customer needs and expectations locally. Murmansk becomes the latest facility to join our global network of dedicated service centres that deliver expertise and reliability 24/7, helping manage vessels throughout their lifecycles."

The new Murmansk centre occupies 2,000 sq m in a purpose-built facility with offices, electrical and mechanical testing areas, and a workshop served by overhead gantry cranes. It also includes a warehouse for Azipod propulsion and electrical spare parts to ensure shortest delivery times and to further enhance responsiveness.

"With an initial staff of 20, including 12 local field engineers, the new marine centre is well positioned to accommodate the needs of our growing customer base, alongside an additional pool of service engineers on the island of Sakhalin in Russia's Far East," said Sergey Shevchuk, Local Business Manager, ABB Marine & Ports Russia.

The new centre will also provide Russian language support to owners within the worldwide ABB Ability Collaborative Operations centres network. Thus far, seven global Collaborative Operations Centres connect into shipboard sensors to monitor the equipment on board and support remote preventive and even predictive maintenance as part of ABB's 'Electric. Digital. Connected.' approach.

ABB's technologies are widely used for vessels operating in the Northern Sea Route (NSR). To date, ABB has delivered Azipod electric propulsion systems to over 80 icebreakers or ice-going vessels with a combined propulsion power of up to 45 MW.

Speaking about the Azipod powered Arc7s, an ABB spokesperson told *LNG Shipping News*; "The Murmansk facility joins ABB's global network of dedicated service centres that help manage vessels throughout their lifecycles 24/7. That also covers the vessels serving some of Russia's most significant export developments in a generation – including Yamal LNG." ■

ABB's new Murmansk centre will look after Yamal's Arc7s

Bechtel to construct Rio Grande's first phase

Bechtel has been awarded the engineering, procurement, and construction (EPC) contract by NextDecade for the first phase of its Rio Grande LNG project.

Rio Grande will consist of three liquefication trains, two 180,000 cu m storage tanks, and two marine berths. There is also scope to build an additional storage tank and LNG truck loading facilities.

"Our LNG team is building on a proven track record of delivering world-class projects that help our customers bring an important energy source to the global economy," said Darren Mort, Bechtel's LNG general manager. "Our milestones are a testament to what the industry can accomplish with innovative approaches to technical challenges, and collaboration between owners, contractors, suppliers, and local communities."

Since 2015, Bechtel has delivered 14 large-scale LNG production trains worldwide for Cheniere, Shell, Chevron, Santos, and ConocoPhillips.

Today, Bechtel-built facilities produce more than 30% of the world's LNG capacity, the company claimed. These facilities are now supplying about 61 mill tonnes of LNG per year to global energy markets. ■

Saipem signs Mozambique EPC contract

Saipem, in a joint venture with McDermott International and Chiyoda Corp, has reached agreement with Area 1 Concessionaires for an EPC contract to engineer and construct an onshore LNG project in Mozambique.

Saipem will operate as head of CCS JV scarl, the joint venture incorporated in Italy to undertake the project.

The contract was signed by Anadarko Moçambique Area 1, Lda, a wholly owned subsidiary of Anadarko Petroleum Corp, which operates Offshore Area 1 and acts as front-runner of a consortium, which includes ENH Rovuma Área Um, SA, Mitsui E&P Mozambique Area1 Ltd, ONGC Videsh Ltd, Beas Rovuma Energy Mozambique Limited, BPRL Ventures Mozambique BV and PTTEP Mozambique Area 1 Limited.

The LNG project consists of the construction of two LNG trains, with a total nameplate capacity of 12.88 mill tonnes per annum, as well as all necessary associated infrastructure, storage tanks and export jetty facilities.

The EPC contract is still subject to a full Notice to Proceed, which Anadarko is expected to issue after the Final Investment Decision (FID).

"After many years of dedication to this project, we are very happy to announce that we have reached full agreement for the contract. We congratulate Anadarko and its co-venturers for the achievement and grateful for the confidence demonstrated toward our CCS JV.

"We look forward to mobilising our teams to site after Anadarko issues notice to proceed following the Final Investment Decision," commented Stefano Cao, Saipem's CEO.

"With this project, we will strengthen our presence in East Africa, confirming Saipem's role among the leaders in the LNG market for the energy transition. A project of such a scale will contribute significantly to the economic growth of Mozambique as a new pole in the west-east energy routes and, as Saipem, we are proud of our substantial contribute to these future developments," he added. ■

> **With this project, we will strengthen our presence in East Africa...**
>
> *- Stefano Cao, CEO, Saipem*

NEWS NUDGE

Board changes at Teekay LNG Partners

Teekay GP LLC, the general partner of Teekay LNG Partners, has announced changes to its Board.

Effective immediately, Alan Semple, David Schellenberg, Richard Paterson, and Sylvia Barnes have joined the Board, and director Kenneth Hvid, became Chairman. Hvid is also the President and CEO of Teekay Corp, which owns the company.

"Alan, David, Richard, and Sylvia bring a wealth of operational and financial expertise to Teekay LNG Partners," Hvid said. "We are very pleased that they have all agreed to join the Board, and we look forward to their contributions, as we continue to execute on Teekay LNG's strategy in the years to come."

In connection with these new appointments, Ida Jane Hinkley, Joseph McKechnie and Beverlee Park, have stepped down.

'WilForce' damaged in collision

On 30th May 30, 2019, Awilco LNG reported that the LNGC 'WilForce' was struck by another vessel off Singapore.

No crew injuries or spills were reported. The vessel has arrived at a Singapore shipyard for class inspection and hull repairs.

It was unclear how long the vessel will be offhire, the company said. The vessel has full insurance cover for repair expenses and loss of hire, subject to deductibles.

Based on a preliminary assessment, Awilco holds the other vessel fully and completely liable for the collision, and the company expected to recover all costs, losses and expenses including deductibles in due course, it said.

Market News

Awilco has secured an eight-month timecharter from an undisclosed oil and gas major for the 2013-built 156,000 cu m LNGC 'WilPride'.

The charter is scheduled to commence next month and will contribute an annualised EBITDA of about $23 mill during the charter period, the company said.

Meanwhile, newbuildings continued to be reported.

Samsung has confirmed that it had received an order for two LNGCs worth $380 mill in total from a Bermudan company.

They are to be delivered by the end of 2022.

Later reports suggested that Flex LNG was behind the order.

Maran Gas Maritime has ordered another LNGC at Daewoo.

The 174,000 cu m LNGC is the fifth ordered at DSME and is due for delivery by the first half of 2022. ■


Atlas Copco
"Energy is a major cost driver in running an LNG plant. But with efficient Atlas Copco mixed-refrigerant compressors, we're using less energy and saving more money."
Zhang Jia-Hua, Operations Team Leader
Baotou Lu Ding Natural Gas Co. Ltd.
Inner Mongolia, China
Handle the Pressure
Although balancing the mechanics of your LNG plant can put a lot of stress on your budget, Atlas Copco Gas and Process can help you handle the pressure with highly efficient, integrally geared centrifugal compressor solutions that help keep costs under control.
Learn more about Atlas Copco Gas and Process at
www.atlascopco-gap.com

WORLD LNG CARRIER ORDERBOOK

Yard	Containment System	Capacity	Propulsion	Delivery Date	Ordered	Primary Owner
JMU	SPB	165000	TFDE	Apr-19	Feb-14	MOL
JMU	SPB	165000	TFDE	Jul-19	Feb-14	MOL
JMU	SPB	165000	TFDE	Apr-19	Feb-14	NYK
DSME	GT NO 96	173400	MEGI	May-19	Jun-14	Maran Gas Maritime
DSME	GT NO 96	172000	TFDE - Azipod	Jul-19	Jul-14	Teekay LNG
DSME	GT NO 96	172000	TFDE - Azipod	Aug-19	Jul-14	Teekay LNG
DSME	GT NO 96	172000	TFDE - Azipod	Oct-19	Jul-14	Teekay LNG
DSME	GT NO 96	172000	TFDE - Azipod	Nov-19	Jul-14	Teekay LNG
DSME	GT NO 96	172410	TFDE - Azipod	Sep-19	Jul-14	MOL
Kawasaki	Moss	155000	TFDE	Dec-19	Sep-14	MOL
DSME	GT NO 96	173400	MEGI	Apr-19	Nov-14	BP
Mitsubishi H.I.	Moss	177000	STaGE	Sep-19	Jan-15	MOL
DSME	GT NO 96	173400	MEGI	Sept-19	Sep-15	BWGas
Kawasaki	Moss	177000	STRH	Jul-19	Sep-15	MOL
Mitsubishi H.I.	Moss	165000	STaGE	May-19	Nov-15	Mitsubishi
Mitsubishi H.I.	Moss	180000	STaGE	Jun-19	Nov-15	NYK
Mitsubishi H.I.	Moss	180000	STaGE	Feb-19	Nov-15	NYK
Hyundai Heavy	GTT Mark III Flex	180000	XDF	Apr-19	May-16	SK Shipping
Hyundai Heavy	GTT Mark III Flex	180000	XDF	May-19	May-16	SK Shipping
DSME	GT NO 96	173400	MEGI	Oct-19	Jun-16	Maran Gas Maritime
DSME	GT NO 96	173400	MEGI	Nov-19	Jun-16	Maran Gas Maritime
DSME	GT NO 96	173400	MEGI	Apr-20	Dec-16	Maran Gas Maritime
Hyundai Heavy	GTT Mark III Flex	180000	MEGI	May-19	Mar-17	Knutsen
DSME	GT NO 96	173400	MEGI	Jun-19	Mar-17	Flex LNG
DSME	GT NO 96	173400	MEGI	Aug-19	Mar-17	Flex LNG
Hyundai Heavy	GTT Mark III Flex	180000	MEGI	Jun-19	May-17	Knutsen
Hudong-Zhonghua	GT NO 96	174000	MEGI	Dec-19	Jul-17	MOL
Hudong-Zhonghua	GT NO 96	174000	MEGI	Mar-20	Jul-17	MOL
Hudong-Zhonghua	GT NO 96	174000	MEGI	Jul-20	Jul-17	MOL
Hudong-Zhonghua	GT NO 96	174000	MEGI	Oct-20	Jul-17	MOL
Samsung	GTT Mark III Flex	180000	XDF	Jun-19	Dec-17	GasLog
DSME	GT NO 96	173400	MEGI	May-20	Dec-17	Maran Gas Maritime
Hyundai Heavy	GTT Mark III Flex	174000	XDF	Mar-20	Jan-18	NYK
Hyundai Heavy	GTT Mark III Flex	174000	XDF	Jan-20	Jan-18	Cardiff Marine
Hyundai Heavy	GTT Mark III Flex	174000	XDF	Feb-20	Jan-18	Sovcomflot
DSME	GT NO 96	173400	MEGI	Dec-19	Feb-18	BWGas
DSME	GT NO 96	173400	MEGI	Jun-20	Feb-18	BWGas
Hyundai Heavy	GTT Mark III Flex	174000	XDF	Mar-20	Feb-18	Cardiff Marine
Hyundai Heavy	GTT Mark III Flex	174000	XDF	Apr-20	Feb-18	Cardiff Marine
DSME	GT NO 96	173400	MEGI	Aug-20	Feb-18	John Fredriksen
DSME	GT NO 96	173400	MEGI	Sep-20	Feb-18	John Fredriksen
Hyundai Heavy	GTT Mark III Flex	174000	XDF	May-20	Mar-18	Flex LNG
Hyundai Heavy	GTT Mark III Flex	174000	XDF	Jul-20	Mar-18	Flex LNG
Samsung	GTT Mark III Flex	180000	XDF	Apr-20	Mar-18	GasLog

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 = 4th April 2019

Fearnley LNG

Yard	Containment System	Capacity	Propulsion	Delivery Date	Ordered	Primary Owner
Samsung	GTT Mark III Flex	174000	XDF	Mar-20	Mar-18	Cardiff Marine
DSME	GT NO 96	173400	MEGI	Dec-20	Mar-18	Minerva Marine
DSME	GT NO 96	173400	MEGI	Jan-21	Mar-18	Minerva Marine
Hyundai Heavy	GTT Mark III Flex	180000	MEGI	Jun-20	Mar-18	Knutsen
DSME	GT NO 96	173400	MEGI	Aug-20	Mar-18	Alpha Gas
DSME	GT NO 96	173400	MEGI	Dec-20	Mar-18	Alpha Gas
Samsung	GTT Mark III Flex	180000	XDF	Sep-20	May-18	GasLog
DSME	GT NO 96	173400	MEGI	Oct-20	Jun-18	Maran Gas Maritime
DSME	GT NO 96	173400	TFDE	Apr-21	Jun-18	Maran Gas Maritime
DSME	GT NO 96	173400	MEGI	Apr-21	Jun-18	Alpha Gas
Hyundai Heavy	GTT Mark III Flex	174000	XDF	Sep-20	Jun-18	Thenamaris
Hyundai Heavy	GTT Mark III Flex	174000		Feb-21	Jun-18	Flex LNG
Hyundai Heavy	GTT Mark III Flex	174000		May-21	Jun-18	Flex LNG
Hyundai Heavy	GTT Mark III Flex	174000		Oct-20	Jul-18	Capital Gas
Hyundai Heavy	GTT Mark III Flex	174000		Nov-20	Jul-18	Capital Gas
Hyundai Heavy	GTT Mark III Flex	174000		Mar-21	Jul-18	Capital Gas
Hyundai Heavy	GTT Mark III Flex	174000		Jun-21	Jul-18	Capital Gas
DSME	GT NO 96	173400	MEGI	Nov-20	Jul-18	John Fredriksen
Samsung	GTT Mark III Flex	180000	XDF	Dec-20	Aug-18	Celsius Shipping
Samsung	GTT Mark III Flex	180000	XDF	Mar-21	Aug-18	Celsius Shipping
Hyundai Heavy	GTT Mark III Flex	174000	XDF	Sep-20	Aug-18	Cardiff Marine
Samsung	GTT Mark III Flex	174000	XDF	Oct-20	Aug-18	GasLog
Samsung	GTT Mark III Flex	174000	XDF	Dec-20	Aug-18	GasLog
Hyundai Heavy	GTT Mark III Flex	174000	XDF	Feb-21	Sep-18	Cardiff Marine
Hyundai Heavy	GTT Mark III Flex	174000	XDF	Feb-21	Sep-18	Thenamaris
Samsung	GTT Mark III Flex	174000	XDF	Mar-21	Sep-18	NYK
Samsung	GTT Mark III Flex	174000	XDF	Jan-21	Oct-18	Minerva Marine
Samsung	GTT Mark III Flex	174000	XDF	Sep-21	Oct-18	Minerva Marine
Samsung	GTT Mark III Flex	174000	XDF	Feb-21	Nov-18	Cardiff Marine
Samsung	GTT Mark III Flex	174000	XDF	Jan-21	Nov-18	Cardiff Marine
Hyundai Heavy	GTT Mark III Flex	174000	XDF	Mar-21	Nov-18	Cardiff Marine
Hyundai Heavy	GTT Mark III Flex	174000	XDF	Apr-21	Nov-18	Cardiff Marine
Hyundai Heavy	GTT Mark III Flex	174000	XDF	Feb-21	Nov-18	Latsco Shipping
Hyundai Heavy	GTT Mark III Flex	174000	XDF	Mar-21	Nov-18	Latsco Shipping
Samsung	GTT Mark III Flex	174000	XDF	Aug-21	Dec-18	NYK
Samsung	GTT Mark III Flex	174000	XDF	Nov-21	Dec-18	NYK
DSME	GT NO 96	174000	MEGI	Feb-21	Dec-18	BWGas
DSME	GT NO 96	174000	MEGI	Jun-21	Dec-18	BWGas
DSME	GT NO 96	173400	MEGI	Jun-21	Dec-18	Maran Gas Maritime
Hyundai Heavy	GTT Mark III Flex	174000	XDF	Nov-20	Dec-18	NYK
Hyundai Heavy	GTT Mark III Flex	174000	XDF	Mar-21	Dec-18	NYK
Hyundai Heavy	GTT Mark III Flex	174000	XDF	Jun-21	Dec-18	NYK
DSME	GT NO 96	180000	MEGI	Dec-20	Dec-18	MOL
DSME	GT NO 96	173400	MEGI	Jun-21	Dec-18	MOL
Hyundai Heavy	GTT Mark III Flex	174000	XDF	Sep-20	Dec-18	Sovcomflot

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 = 4th April 2019

Fearnley LNG

Yard	Containment System	Capacity	Propulsion	Delivery Date	Ordered	Primary Owner
Hyundai Heavy	GTT Mark III Flex	174000	XDF	Feb-21	Dec-18	Sovcomflot
Samsung	GTT Mark III Flex	180000	XDF	Jun-21	Dec-18	GasLog
Samsung	GTT Mark III Flex	180000	XDF	Aug-21	Dec-18	GasLog
Samsung	GTT Mark III Flex	174000	XDF	Mar-21	Dec-18	Cardiff Marine
DSME	GT NO 96	174000	MEGI	Jun-21	Dec-18	Alpha Gas
Samsung	GTT Mark III Flex	174000	XDF	Mar-21	Dec-18	Navigare
Samsung	GTT Mark III Flex	180000	XDF	Jun-21	Feb-19	Celsius Shipping
Samsung	GTT Mark III Flex	180000	XDF	Sep-21	Feb-19	Celsius Shipping
Hudong-Zhonghua	GT NO 96	178000	XDF	Sep-21	Feb-19	CSSC
Hudong-Zhonghua	GT NO 96	178000	XDF	Feb-22	Feb-19	CSSC
DSME	GTT Mark III Flex	174000	MEGI	May-21		Nakilat
Samsung		174000		Sep-22		Sinokor
Samsung		174000		Sep-22		Sinokor
Samsung		174000		Sep-22		Sinokor
Samsung		174000		Sep-22		Sinokor
DSME	GTT Mark III Flex	173400	XDF	Aug-21		Nakilat
DSME	GTT Mark III Flex	173400	XDF	Oct-21		Nakilat
Hyundai Heavy	GTT Mark III Flex	174000	XDF	Jun-21		Capital Gas
Samsung		174000		Mar-22		Nisshin Shipping

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 = 4th April 2019

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	Aman Hakata	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	Norgas Creation	10,000	LNG/LPG/Ethylene	Worldwide	No	Norgas Carriers
2010	Norgas Innovation	10,000	LNG/LPG/Ethylene	Worldwide	No	Norgas Carriers
2011	Akebono Maru	3,556	LNG	Japan	Yes	Chuo Kaiun
2011	Norgas Conception	10,000	LNG/LPG/Ethylene	Worldwide	No	Norgas Carriers
2011	Norgas Invention	10,000	LNG/LPG/Ethylene	Worldwide	No	Norgas Carriers
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
2014	LNG-Oil combi**	2,000	LNG	Germany	Yes	Veka
2014	Short Sea LNG Tanker **	4,000	LNG	Germany	Yes	Veka
2015	LNG Inland bunker**	800	LNG	Germany	Yes	Veka
2015	LNG bunker barge 1†	2,250	LNG	China	Yes	Anhui Huaqiang Natural Gas
2015	LNG bunker barge 2†	2,250	LNG	China	Yes	Anhui Huaqiang Natural Gas
2015	LNG bunker barge 3†	2,250	LNG	China	Yes	Anhui Huaqiang Natural Gas
2015	LNG Barge TBN	3,000	LNG	US Coast	Yes	LNG America
2015	10 small carriers TBN**	5,000	LNG			Bimantara Group
2015	Jahre TBN**	6,200	LNG	Norway	Yes	Donsotank/Jahre Marine
2015	Norgas TBN**	17,000	LNG/LPG/Ethylene	Worldwide		Norgas Carriers
2015	Norgas TBN**	17,000	LNG/LPG/Ethylene	Worldwide		Norgas Carriers
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	TBN 1	27,500	LNG	China?		Danyang?
2015	TBN 2	27,500	LNG	China?		Danyang?
2015	TBN 3	27,500	LNG	China?		Danyang?
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 Innvovation	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2016	JS Ineos Inspiration	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2016	Hai Yang Shi You 301	30,000	LNG	Bali FSU	Yes	CETS (CNOOC)
2016	Navigator Aurora	35,000	Ethane/Ethylene	Markus Hood - Stenungsund	Ethane, for Borealis	Navigator
2016	Gaschem Beluga	36,000	Ethane/Ethylene	US - Teeside	Ethane, for Sabic	Gaschem Services
2016	Gaschem Orca	36,000	Ethane/Ethylene	US - Teeside	Ethane, for Sabic	Gaschem Services

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 = 4th March 2019

Small-LNG.com

Built	Name	CBM	Cargo Type	Trading area	Trading in LNG?	Ship Owner / Operator
2016	Ocean Yield TBN**	36,000	Ethane/Ethylene	US - Teeside	Ethane, for Sabic	Gaschem Services
2017	Oizmendi	600	LNG	Bilbao	Yes	Itsas Gas
2017	CME TBN†	2,200	LNG	US Coast	Yes	CME
2017	CME TBN†	2,200	LNG	US Coast	Yes	CME
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
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	Yuan He 1	30,000	LNG	China	Yes	CSR
2017	Navigator Eclipse	35,000	Ethane/Ethylene	US	Ethane	Navigator
2017	Navigator Nova	35,000	Ethane/Ethylene	US	Ethane	Navigator
2017	Navigator Prominence	35,000	Ethane/Ethylene	US	Ethane	Navigator
2018	HUA XIANG 8	13,720	LNG	China	Yes	Zhejiang Huaxiang
2018	CME TBN†	2,200	LNG	US Coast	Yes	CME
2018	Shell Bunker Barge TBN 4	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	Qi Yuan	28,000	LNG	China	Yes	Dalian Inteh Group
2018	Evergas TBN	32,000	Ethane/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2018	Evergas TBN	32,000	Ethane/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2018	Evergas TBN	32,000	Ethane/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2018	Evergas TBN	32,000	Ethane/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2018	Bunker Breeze	0	LNG	Barcelona	Yes	Suardiaz Energy Shipping
2019	KLine TBN	7,500	LNG	Korea	Yes	Korea Line
2019	KLine TBN	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
2020	Shell Bunker Barge	4,000	LNG	US Coast	Yes	Q-LNG Transport/Harvey Gulf
2020	Stolt TBN (option) **	7,500	LNG		Yes	Stolt-Nielsen Gas
2020	Stolt TBN (option)	7,500	LNG		Yes	Stolt-Nielsen Gas
2020	Total TBN	18,600	LNG	NWE	Yes	MOL
2020	FuelLNG TBN	7,500	LNG	Singapore	Yes	FuelLNG
2020	CLS TBN	3,500	LNG	Japan	Yes	CLS
2020	Eesti Gaas TBN	6,000	LNG	NWE	Yes	Eesti Gaas
2020	ENN TBN	8,500	LNG	China	Yes	ENN
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
2022	Stolt TBN	20,000	LNG	Worldwide	Yes	Stolt-Nielsen Gas
2022	Stolt TBN	20,000	LNG	Worldwide	Yes	Stolt-Nielsen Gas
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 = 4th March 2019

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