LNG Shipping News

AN LNG JOURNAL TITLE ON LNG CARRIERS 30 May 2019

US/China tariff war to hit LNG cargoes

China has recently announced that it would increase the tariff on US LNG imports to 25% from 10% next month.

This move is seen as retaliation against the White House increasing tariffs on $200 bill worth of Chinese goods by the same amount.

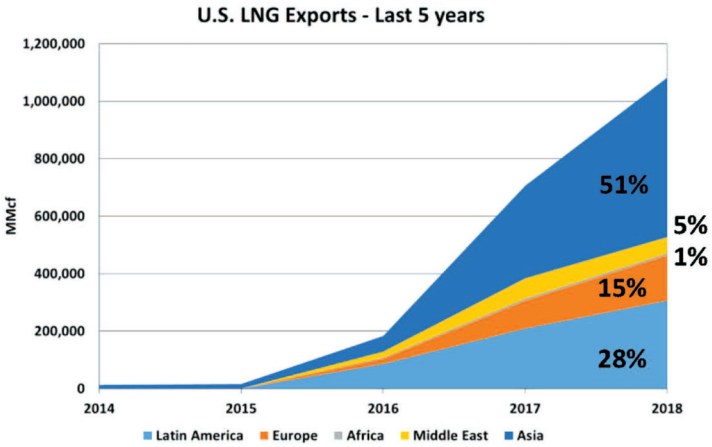
The consensus is that the 25% tariff on US LNG exports could halt the trade between the two countries, Banchero Costa said in a comment.

Losing China as importer is likely to have an impact in final investment decisions (FID) for new US export capacity and could potentially slow the growth of its exports in favour of those from Qatar, Australia, Russia and Mozambique and others.

It appears there will be no US booming exports without China, as European imports are largely supplied economically via pipeline from Russia, while Japan and South Korea are thought unlikely to be able to absorb a lot more gas, given the planned restart of nuclear power plants.

However, it seems that the Chinese thirst for gas is not over, especially considering LNG is the cleaner alternative to coal in generating electricity, Banchero Costa said.

China will probably source a growing amount of LNG from other exporters, possibly displacing other importers that could turn to US for their needs.



Source: Banchero Costa

As always, prices will ultimately drive the development of the trades, the researcher and broker said.

Export history

The US started exporting LNG from the lower 48 states in 2016, following the surge of natural gas production that followed the shale revolution and the development of new export capacity.

In 2017, the US was already a net exporter of natural gas, ranking sixth in the top exporting countries' list following Qatar, Australia, Malaysia, Nigeria and Indonesia.

A year later, exports grew by a staggering 53% and Indonesia and Nigeria were overtaken.

Exports boomed to South Korea (+91%,+118 bill cu ft), Latin America (+46%,+97 bill cu ft), Japan (+130%,69 bill cu ft), Europe (+62%,+61 bill cu ft) and India (+176%,+37 bill cu ft).

Last year, half of the US LNG exports went to Asia, followed by 28% to Latin America, 15% to Europe, 5% to the Middle East and 1% to Africa.

Of the 51% that ended up in Asia, the largest share was taken by South Korea, followed by Japan, China and India.

Exports to China, the world's second largest and the fastest growing importer of gas, were 10% lower -10 bill cu ft - and so far this year, only two vessels have sailed from the US to China, compared to 14 in the same period in 2018.

The 10% tariff on LNG was imposed in September, 2018. ■

> "It seems that the Chinese thirst for gas is not over, especially considering LNG is the cleaner alternative to coal in generating electricity"
>
> *- Banchero Costa*

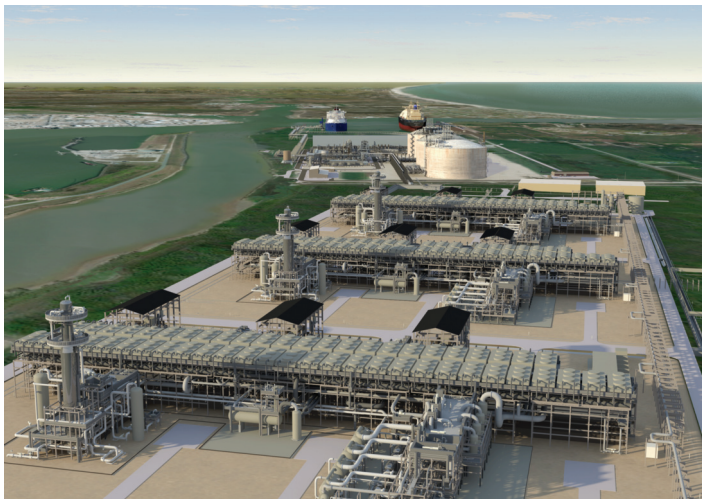
SHIPPING NEWS AGENDA

Freeport LNG receives FERC approval for Train 4

The US Federal Energy Regulatory Commission (FERC) has approved the construction of Freeport LNG's Train 4 expansion project.

This marked FERC's fourth approval of an LNG export project this year, following last month's approval of the Driftwood and Port Arthur projects, and February's approval of the Venture Global Calcasieu Pass project.

"I'm proud of the efforts by the Commission and its staff to process today's and our previous LNG orders," FERC Chairman, Neil Chatterjee, said. "Exporting LNG from the US can help increase the availability of inexpensive, clean-burning fuel to our global allies who are looking for an efficient, affordable and environmentally friendly source of generation."



Freeport's Train 4 has been given FERC go ahead

The Train 4 project is an expansion of the liquefaction project currently under construction at the Freeport LNG terminal site in Texas.

It involves construction of a liquefaction unit similar to Freeport's other three units at the site, as well as associated pipelines, storage vessels and related facilities.

Train 4 will allow Freeport LNG to liquefy for export the equivalent of an additional 0.74 bill cu ft of natural gas per day from the site. ■

'FLNG Tango' to export first cargo

Argentina is set to become the 21st LNG exporting country, as the first gas cargo from 'FLNG Tango' is due to exported in the next few days.

State energy firm YPF was said to be offering a part cargo from the FLNG moored off Bahia Blanca, two LNG trading sources told Reuters.

One source said the cargo was on a free-on-board (FOB) basis for prompt loading.

EXMAR's 'FLNG Tango' arrived in Bahia Blanca in February.

Argentina has imported LNG for some time, along with buying pipeline gas from neighbouring countries, plus producing its own gas to boost supplies especially during winter.

But rising output from Vaca Muerta, one of the world's largest reserves of shale oil and gas, helped it reduce LNG imports by over 20% last year to 2.6 mill tonnes, according to industry group GIIGNL.

However, new exports do not mean that the country will cease importing LNG, as energy firm Integracion Energetica Argentina (IEASA), formerly known as ENARSA, has issued buy tenders for LNG cargoes for delivery throughout May to September, Reuters reported. ■

Open Season starts at Wilhelmshaven LNG Terminal

LNG Terminal Wilhelmshaven (LTW) has started an Open Season programme.

LTW will continue the initiative started by Uniper to realise what is claimed will be the first LNG import terminal in Germany.

In order to take part in this process, interested parties were asked to submit a written expression of interest, demonstrating that it is already active on the LNG market or intends to become involved in the future.

Following the conclusion of a non-disclosure agreement, LTW will grant access to further details of the project. Afterwards, the participants can conclude a non-binding agreement (Heads of Agreement) with LTW until 19th July, 2019.

Binding contracts are currently planned for mid-October, 2019.

Within the next three years, LTW plans to construct an LNG terminal, centred on an FSRU, at Germany's only deepwater port and start operations. The nominal send-out LNG capacity will be up to 10 bill cu m per year.

Wilhelmshaven is claimed to offer ideal conditions from both a marine and logistics perspective. Connecting it to the natural gas transmission grid only requires about a 30 km pipeline to be built on mainly agricultural land. LNGCs will be able to access the terminal at all tidal states, in accordance with highest international security standards.

In addition to regasification and transfer into the transmission grid, the FSRU will be able to load LNG onto bunker barges or tank trucks for onward transportation.

LTW is a Uniper Group subsidiary. The group is currently in talks with potential partners from the natural gas and LNG industry regarding a majority share in the terminal company, which will act as an independent terminal operator. ■

LNG Shipping News
2 Prospect Road
St Albans AL1 2AX
United Kingdom
www.lngjournal.com
Tel: +44 (0)20 7253 2700

Publisher
Stuart Fryer

Editor
Ian Cochran
+44 (0) 7748144265
cochran@tankeroperator.com

Ad sales enquiries
Narges Jodeyri
+44 (0)20 7017 3406
narges@lngjournal.com

Subscriptions
Stephan Venter
Tel: +44 (0) 20 7253 2700
venter@lngjournal.com

Production
Vivian Chee
Tel: +44 (0) 20 8995 5540
chee@btconnect.com

Sempra to supply gas to Saudi Aramco

Sempra Energy and Saudi Aramco's respective subsidiaries, Sempra LNG and Aramco Services Co, have signed a heads of agreement (HOA) for a sale and purchase (SPA) agreement.

This SPA will involve a firm 20-year agreement to supply 5 mill tonnes per annum of LNG from Phase 1 of the Port Arthur LNG export project currently under development. It also includes the negotiation and finalisation of a 25% equity investment in the facility.

Amin Nasser, Saudi Aramco's CEO and President, said, "The agreement with Sempra LNG is a major step forward in Saudi Aramco's long term strategy to become a leading global LNG player. With global demand for LNG expected to grow by around 4% per year, and likely to exceed 500 mill tonnes a year by 2035, we see significant opportunities in this market and we will continue to pursue strategic partnerships which enable us to meet rising global demand for LNG."

"At Sempra Energy, we are developing one of the largest LNG export infrastructure portfolios in North America, with an eye towards connecting millions of consumers to cleaner, more reliable energy sources," said Jeffrey Martin, chairman and CEO of Sempra Energy. "We are pleased to partner with affiliates of Saudi Aramco, the largest oil and gas company in the world, to advance the development of Sempra LNG's natural gas liquefaction facility in Texas and enable the export of American natural gas to global markets."

Port Arthur LNG Phase 1 project is expected to include two liquefaction trains, up to three LNG storage tanks and associated facilities that should enable the export of around 11 mill tonnes per annum of LNG on a long-term basis with potential expansion capabilities of up to eight liquefaction trains or about 45 mill tonnes per year of capacity. ■

Calcasieu Pass gets funding

Stonepeak Infrastructure Partners is to invest $1.3 bill in Venture Global's Calcasieu Pass LNG export facility in Cameron Parish, Louisiana.

This brings the total committed capital to fund the construction of the export facility and the continued development of Venture Global's Plaquemines LNG and Delta LNG facilities, up to $2.2 bill, the company confirmed.

Venture Global LNG Co-CEO, Mike Sabel, said, "We are happy to announce this important milestone for Calcasieu Pass and very proud to partner with a world-class investor like Stonepeak. Their team brings a great depth of LNG knowledge and a track record of investing in exceptional infrastructure projects throughout North America."

Co-CEO, Bob Pender, added, "Calcasieu Pass is already significantly advanced in both site construction and module manufacturing, owing to the $855 mill previously raised to date. We are finalising the balance of our Calcasieu Pass financing with our consortium of project finance lenders, and we look forward to providing LNG to our global customers - Shell, BP, Edison, Galp, Repsol and PGNiG - in 2022."

"We are long-term believers in the increasing importance of LNG as a global source of greener, cheaper energy and Stonepeak could not be more pleased to support Venture Global through the financing of this exciting project.

"Calcasieu Pass will be a critical provider of LNG to its blue-chip customer base and we look forward to supporting Venture Global, who we believe to be a global leader in developing low cost LNG production, in its efforts to bring cost-advantaged supply to new and existing markets," said Stonepeak Senior Managing Director, Jack Howell.

Calcasieu Pass has received all the necessary permits, including FERC authorisation and non-FTA export authorisation from the US Department of Energy, and construction activities are ongoing with over $250 mill spent on site preparation work, final engineering and equipment purchases and fabrication, Venture Global said.

It also said that it expected to receive FERC and DOE authorisations for Plaquemines LNG in the third quarter of this year and commence construction shortly after.

Morgan Stanley served as the exclusive financial adviser for Venture Global LNG on this transaction and Latham & Watkins acted as Venture Global's legal counsel. Simpson Thacher served as legal counsel for Stonepeak.

As part of this investment programme, Stonepeak Managing Director, James Wyper, will join the Calcasieu Pass board. ■

Cameron LNG's first cargo this week

The MOL-managed LNGC 'Marvel Crane' was due to arrive at Sempra Energy's Cameron export terminal in Louisiana to load the facility's first cargo.

She was reported to be in the Gulf of Mexico late on Monday in ballast, according to S&P Platts.

Cameron LNG started up on 14th May and has been producing natural gas since then in preparation for the export of its first cargo, Platts said.

The 'Marvel Crane', left Barcelona on 5th May, cFlow data showed. A representative of the Lake Charles Pilots Association told Platts that his log showed a scheduled arrival of the LNGC at the Sempra facility on Tuesday.

It was said that the LNGC 'Shinshu Maru' was also heading for the Cameron loading terminal, according to tracking data.

She departed from Zeebrugge on 24th May, cFlow showed. ■

'Marvel Crane' is ready to lift first cargo


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

LNGCs help MISC to accrue higher revenues

MISC Group revenue for the quarter ended 31st March, 2019 of RM2,277.7 mill was 12.7% higher than the corresponding 2018 quarter's revenue of RM2,020.8 mill.

A larger number of operating vessels in the LNG segment contributed to the firmer revenue in the current quarter, as did stronger tanker rates. In addition, Heavy Engineering revenue also increased resulting from higher completion progress of ongoing projects.

A Group operating profit of RM591.9 mill was also higher than 1Q18's operating profit of RM383.4 mill, following improved freight rates in the Petroleum segment. Additional charter rate for the FSUs in the LNG segment also contributed to the higher operating profit.

This increase however was reduced as Heavy Engineering segment recorded higher unabsorbed overheads as expected contract awards have yet to materialise. The Offshore segment also recorded lower operating profit.

Group profit before tax of RM542 mill was higher than the corresponding quarter's profit before tax of RM319.2 mill, following the higher operating profit, gain on acquisition of a business and gain on disposal of a ship. However, this increase was offset with higher finance costs, due to the increase in borrowings.

LNGCs have helped to boost MISC's bottom line

MISC's President/Group CEO, Yee Yang Chien said; "Global energy volatility could linger for yet a while and we have been taking the necessary steps to continuously shape and future-proof our business. Despite the prevailing challenges, MISC once again proved its resilience by turning in commendable financial and operational performances across our business segments.

"We expect no less than another challenging year ahead. Nonetheless, we are confident of the growth opportunities available in the global energy industry and we believe we have the resources and financial stability to support our long-term efforts in strengthening our position in the market as well as filling the growth pipeline with a right mix of new projects.

"As we strive to fulfill our aspiration to consistently provide better energy related maritime solutions and services, we remain optimistic on the long-term prospects and possibilities that lie ahead that drives our ambition of moving energy to build a better world," he added.

LNG rates down

In the LNG shipping segment, spot charter rates eased off in 1Q19 on the back of diminishing winter demand and new tonnage delivery, after a historical winter peak towards the end of 2018.

In the second half of 2019, LNGC deliveries are expected to slow and new liquefaction capacity will likely help keep rates afloat. Two new LNGCs joined MISC's fleet at the end of 2018 and early 2019, providing a source of income growth for the segment.

These additions and the existing portfolio of long term charters in place will underwrite a steady performance for MISC's LNG business for the year, the group said. ■

Newbuilding LNGCs boost Teekay's revenue

Teekay LNG Partners reported a GAAP net income of $21.6 mill and GAAP net income per common unit of $0.19 for the first quarter of this year, compared with a negative $7 mill for 1Q18.

Adjusted net income was $33.4 mill and adjusted net income per common unit was $0.34, compared wth $22.1 mill in 1Q18.

Total Adjusted EBITDA came in at $158.2 mill, compared with $117.6 mill for 1Q18.

The income was positively impacted by: earnings from the 10 LNGC newbuildings delivered into the consolidated fleet and joint ventures between February, 2018 and January, 2019; higher earnings from the 'Torben Spirit', due to a higher charter rate on a new three-year contract, which commenced in December, 2018; higher earnings from the 'Magellan Spirit', which is currently chartered-in from the Partnership's 52%-owned joint venture with Marubeni Corp and has been employed and chartered-out since October, 2018 to March, 2019; and higher earnings from the Partnership's seven multi-gas carriers.

These increases were partially offset by lower earnings from the conventional tanker fleet during 1Q19, due to the sales of four tankers between February, 2018 and January, 2019.

"During the first quarter, the Partnership continued to report significant cash flow growth mainly driven by recent newbuild deliveries and the contract start-up of various LNG carriers at higher rates," commented Mark Kremin, Teekay Gas Group's President and CEO. "Looking ahead, we expect contract start-up of four additional LNG carrier newbuildings and the Bahrain LNG terminal in the second half of 2019, which we anticipate will continue to drive further growth in total adjusted EBITDA throughout the rest of 2019 and into 2020.

"Despite the near-term weakness in the spot LNG carrier market since the start of the year, we have recently been able to take advantage of the improving medium-term fundamentals by securing multiple attractive charters on our LNG carriers for periods ranging from one to three years. This has allowed us to lock-in charters at attractive rates and maximise utilisation, thereby further enhancing our earnings stability and improving our cash flows.

"We remain committed to our balanced capital allocation plan, which returns additional capital to unitholders, including the recent 36% cash distribution increase, while also creating equity value through continued delevering of our balance sheet. The new charters that we recently secured are expected to enable Teekay LNG to delever faster and with better visibility, which provides us with greater flexibility to allocate excess capital in the future," he added.

As of 31st March, 2019, the Partnership had total liquidity of $322.1 mill (comprised of $122.6 mill in cash and cash equivalents and $199.5 mill in undrawn credit facilities). ■

Golar to spin-off LNGC business

At a recent meeting in Bermuda, Golar LNG's Board said it would continue with the spin-off of the company's TFDE LNGC business, subject to satisfactory market conditions.

The company intends to focus its future activities primarily around FLNG and downstream assets, it said, adding that this move would allow LNG shipping investors more direct exposure to the LNG shipping market and reposition Golar's core business toward LNG infrastructure on long-term contracts.

For the first quarter of this year, Golar LNG reported a substantial increase in operating income to $28.9 mill from a $102.8 mill loss recorded in 4Q18.

However, net of financing expenses, equity in net losses of affiliates, taxes and net income attributable to non-controlling interests, Golar reported a 1Q19 net loss of $41.7 mill.

Total operating revenues net of voyage, charterhire and commission expenses decreased from $141.9 mill in 4Q18 to $97.8 mill in 1Q19. Of the first quarter total, $43.6 mill was derived from vessel and other operations and $54.2 mill was from FLNG operations.

Revenues from vessel and other operations, including management fee income, net of voyage, charterhire and commission expenses decreased by $43.1 mill to $43.6 mill in 1Q19.

Adjusted EBITDA decreased from $121.2 mill in 4Q18 to $62.9 mill in 1Q19.

Golar is set to spin-off its LNGC segment

China's decision to pull LNG purchases forward into 4Q18 to avoid gas shortages together with a mild winter in Asia resulted in elevated LNG inventory levels into 1Q19. Asian LNG prices dropped, inter-basin trading opportunities disappeared and tonne/miles, utilisation and rates fell as a result, Golar said.

TCE rates drop

Fleet utilisation decreased from 93% in 4Q18 to 51% in 1Q19, while average fleet TCE earnings decreased from $77,600 per day in 4Q18 to $39,300 in 1Q19.

In line with previous quarters, 'FLNG Hilli Episeyo' generated operating revenues of $54.5 mill, including base tolling fees and the amortisation of pre-acceptance amounts recognised.

On 29th March, Golar signed contracts with LNG Hrvtska relating to the conversion and subsequent sale of the converted LNGC 'Golar Viking'. Although the sale is not expected to close until 4Q20, the transaction triggered an immediate impairment test.

As the current carrying value of the vessel exceeds the price a market participant would currently pay for it as an LNGC, a non-cash impairment charge of $34.3 mill was recognised. The sale is expected to generate net positive cash of around $40 mill.

Golar LNG subsequently declared a total dividend of $0.15 per share to be paid on 3rd July, 2019 on a record date of 13th June, 2019.

Subsequent to 1Q19, Gimi MS Corp issued Keppel Shipyard with a Final Notice to Proceed with the 'FLNG Gimi' conversion.

In addition, A two-year extension to the 'Golar Tundra' sale and leaseback facility was agreed and a five-year restated and amended facility in respect of the 'Golar Arctic' was credit approved.

Golar's total current cash position as of 31st March was $690.3 mill (including long-term restricted cash), of which $212.7 mill was unrestricted.

The sale of the converted 'Golar Viking' is expected to add a further $40 mill to liquidity in 2020. Another $85 mill is expected to be released from the Hilli LC in 2021. ■

China's first jointly purchased cargo arrives

Chinese state-owned power utilities Guangdong Energy Group and Shenzhen Energy Group received their first jointly purchased LNG cargo at the Dapeng LNG terminal in Shenzhen last week.

The delivery of the 65,000 tonne LNG cargo at the CNOOC-operated Dapeng LNG terminal in southern Guangdong province reflects China's plans to introduce market reforms in the gas sector, including the liberalisation of the gas market and opening up of infrastructure access for smaller downstream users, Guandong Energy said.

The companies expect another 65,000 tonne LNG cargo to arrive at the terminal in late June. Both cargoes were purchased in March.

Guangdong Energy will take two-thirds of the cargo while Shenzhen Energy will take the remaining third, market sources told S&P Platts. It was believed that the LNG cargoes were sold by Malaysian gas producer Petronas.

Guangdong Yudean, the former name of Guangdong Energy, issued an expression of interest in late March for two cargoes to be delivered during second half of May and the first half of July.

The contract was awarded to Petronas on a DES basis, at $4.30 and $5.25 per MMBtu, respectively, sources told Platts at the time. The later cargo was then moved earlier for late-June delivery at $5.05 per /MMBtu.

Guangdong Energy signed the terminal usage agreement with CNOOC at the end of 2018, the company said.

This month's shipment was the first LNG cargo Guangdong Energy and Shenzhen Energy received after China started opening up LNG regas terminals for third-party access.

The Dapeng LNG regas terminal is owned by Guangdong Dapeng LNG Co Ltd, a consortium of CNOOC (33%), BP (30%), Hong Kong Electric (3%), Hong Kong & China Gas Investment (3%) and Guangdong Sponsors (31%), according to Wood Mackenzie. ■

LNG Solutions for the Marine Industry

Chart's maritime LNG solutions reduce operating costs while dramatically improving emissions for compliance with today's stringent requirements in the marine industry.

Cryogenic Solutions for:

- **LNG ship fueling systems**
- **FLNG**
- **FSRUs**
- **Bunkering vessels**
- **Bunkering stations**
- **Port power applications**

www.ChartLNG.com
LNG@ChartIndustries.com

CHART®

Innovation. Experience. Performance.®

Damen completes LNGC damage repairs

During four days in January, Damen Shiprepair Brest (DSBr) carried out damage repairs to the hull of the 138,000 cu m LNGC 'Methane Princess'.

In order to achieve the repair in the shortest possible time, the work was undertaken while the vessel was afloat and with the cargo tanks holding some LNG or gas vapour.

The damage, which occurred above the waterline on the aft starboard side, was the result of a collision with a harbour tug while berthing at the Punta Europa LNG Terminal (EG LNG) in Equatorial Guinea. She then proceeded to Milford Haven to offload.

Her class society required immediate repairs and issued an extension to the 'Methane Princess's' class certificate, which made her ineligible for charter until the damage was repaired.

Damen Brest completed a quick damage repair operation on 'Methane Princess'

To achieve a speedy repair, the owners requested that DSBr perform the hot work repair with the vessel afloat and with residual gas in the tanks, so as to keep the tanks cool. By doing so, the vessel could return onhire almost immediately without the usual three to four-day cooling down process.

Meetings held

Ahead of her arrival, meetings were held with the client and the safety and control procedures prepared. Once she was alongside, several checks were performed by a shore-certified chemist to identify the various risk areas and certify that the hot work area was safe.

The yard team then constructed a platform against the side of the vessel, held in place by eyes welded onto the hull, and the work went ahead to remove and replace the damaged steel. Once the welding and the necessary tests and class certification were complete, the hull area was painted.

In September last year, 'Methane Princess' had called at the yard for a scheduled intermediate survey that included a full scope of work on the engines, cargo tanks and related equipment.

Owner, Golar LNG and DSBr have a relationship going back to the 1980s when the fleet operated under the Gotaas-Larsen banner. After a quiet period in recent years, the partnership was rekindled and discussions are underway regarding a variety of projects.

For example, 'Golar Arctic' is already booked in during the first half of this year.

In recent years, LNGC maintenance has been concentrated in the Far East, where LNG was in demand. However, demand is returning to the North Atlantic, as terminals for both exports and imports open on both sides of the Atlantic.

Damen has invested in its yards to meet the anticipated demand, the yard said. ■

KR grants design approval to DSME's SOLIDUS

Korean Register (KR) formally granted design approval to DSME for its SOLIDUS LNG cargo containment system on 28th May.

DSME worked with German chemical giant BASF to develop a high-performance and environmentally friendly insulation material in order to significantly lower the LNG boil-off rates.

In addition, to prevent any LNG leakage from SOLIDUS, and to maximise its safety, DSME has incorporated two metal barriers into the system.

It is expected that SOLIDUS' design will improve the productivity of the newbuilding process, as well as significantly reduce costs.

DSME is currently testing SOLIDUS further through R&D projects, and discussions are underway for a newbuilding to be fitted with the containment system.

Sung-Geun Lee, DSME CEO, said: "With KR's approval, DSME continues to remain in a leading position in the field of LNG technology. This is a big milestone for the market, offering the LNG carrier industry a significant and valuable additional option for LNG transportation industry. I am very proud that DSME's pioneering spirit is leading the market in this way."

"KR's design approval of SOLIDUS, means that this cargo containment system offers a significant credible technological advantage to both the domestic and global shipping industry in this sector." said Jeong-kie Lee, KR Chairman and CEO. "KR will continue to provide technical services that support new developments and innovations like this, thereby encouraging sustainable growth for the future across the maritime industry."

KR has extensive experience and technical capabilities in LNG cargo containment having developed standard designs and provided class services for MARK III, MARK III Flex, NO96 and KC-1 systems. ■

Summit's FSRU to receive first import cargo

Bangladesh's second liquefied natural gas (LNG) floating facility is to receive its first cargo this week, a spokeswoman from operator Summit LNG Terminal told Reuters.

'Summit LNG' FSRU will receive 159,000 cu m of LNG from Oman Trading International. The transfer was expected to be completed by the end of the week.

The cargo was loaded in Algeria on the LNGC 'Creole Spirit'. A second LNGC is expected to arrive on 3rd June.

The FSRU started to feed gas to Bangladesh's national grid in late April after receiving a commissioning cargo from Qatar. ■

Wärtsilä to service LNGCs

Wärtsilä has signed long-term agreements to service four Japanese-controlled LNGCs.

The company's Dynamic Maintenance Planning (DMP) scheme with a performance guarantees is to implemented on two vessels owned by a joint venture between Mitsui OSK Lines (MOL) and JERA, while the other two are owned by a joint-venture between Nippon Yusen Kabushiki Kaisha (NYK) and JERA.

The orders were booked by Wärtsilä in March, 2019.

The contracts cover a range of services, including scheduled maintenance, all workshop services, all field servicing for piston related maintenance, turbocharger maintenance, condition-based maintenance (CBM) reporting, remote operational support (ROS) from Wärtsilä's centres, and dynamic maintenance planning.

All four vessels are powered by Wärtsilä 50DF dual-fuel engines.

"Lifecycle support is central to Wärtsilä's customer-focused philosophy. These agreements have been customised to address our customers' long term needs and business objectives. They bring measurable and guaranteed lifecycle cost benefits to the owners in terms of reliability, operational efficiency, and accurate maintenance planning based on the true condition of the equipment, which minimises the risk of unexpected downtime," said Jörgen Naaijer, General Manager, Marine Agreement Sales, Wärtsilä Marine. ■

NEWS NUDGE

GAIL aims to import 75 gas cargoes

GAIL (India) has sold 100% US LNG through 2020, and about 80%-90% beyond, company Chairman, B C Tripathi, reportedly said on the back of the first quarter results presentation.

The Indian energy company aims to import 75 LNG cargoes in FY20, compared with 62 in FY19 and has signed a MoU with ExxonMobil to explore use of LNG for transportation and bunkering, according to a Reuters report.

First State Investments joins OLT Board

OLT Offshore LNG Toscana (OLT) has announced that on 23rd May, 2019 the Board formalised the transfer of shares held by Uniper (48.24%) to First State Investments.

The existing shareholders, Iren Group (49.07%), also through its subsidiary ASA, and Golar LNG (2.69%) have maintained their respective holdings.

Giovanni Giorgi, currently OLT's Operations Manager, has been appointed Managing Director replacing Richard Fleischmann. Giorgi will be jointly responsible with Alessandro Fino, Managing Director, who has held the role since December, 2014.

Giorgi has worked for OLT since 2003 and has had a particular focus on the FSRU/ FLNG sector. He has been involved in projects for various countries, including, UK, US, France, Holland, Turkey, Russia, Norway, EAU. He has been a member of SIGTTO, the Society of International Gas Tanker and Terminal Operators, since 2008. ■

Eleventh Arc7 nears Yamal

The 11th icebreaking Arc7 LNGC, 'Nikolay Yevgenov', arrived in the Kara Sea earlier this week, according to Refinitiv shipping data and MarineTraffic.

The LNGC left Daewoo Shipbuilding and Marine Engineering's (DSME) Okpo shipyard at the end of April.

She was due to arrive on 26th May, according to the data, five months ahead of the schedule set by its operator, Teekay LNG Partners.

'Vladimir Voronin', also managed by Teekay, was due to begin sea trials this month. ■

'Eduard Toll' was the fifth Arc7 to enter service

Arc 7 Table

Vessel	Status
Christophe de Margerie Sovcomflot	In operation
Boris Vilkitsky Dynagas	In operation
Vladimir Rusanov MOL	In operation
Fedor Litke Dynagas	In operation
Eduard Toll Teekay	In operation
Rudolf Samoylovich Teekay	In operation
Vladimir Vize MOL	In operation
Georgiy Brusilov Dynagas	In operation
Boris Davydov Dynagas	In operation
Nikolay Zubkov Dynagas	In operation
Nikolay Yevgenov Teekay	In operation
Vladimir Voronin (DSME 2431) Teekay	Trials
DSME 2432 (to be named) MOL	Under construction
Georgiy Ushakov (DSME 2433) Teekay	Due 29th Jan, 2020
Yakov Gakkel (DSME 2434) Teekay	Due 28th Feb, 2020

(Source: Reuters)

Panama Canal Authority takes USCG training course

Between 7th and 10th May, US Coast Guard's (USCG) Liquefied Gas Carrier National Center of Expertise (LGC NCOE) conducted training on all LNG aspects to the Panama Canal Authority and Panama Maritime Authority, and first responders.

LGC NCOE covered a wide array of topics including the chemical and physical properties of LNG, LNGCs, LNG terminals, and the use of LNG as a marine fuel.

About 50 representatives attended lectures on LNGC general arrangements, safety systems, and cargo operations. During the course, LGC NCOE instructors walked the class through a typical USCG LNGC examination, including key safety elements, followed by a discussion of historically significant case studies relating to LNG.

This year's training event was especially noteworthy, as the LGC NCOE had the opportunity to conduct training on board the Q-Flex 'Al Safliya'. At 315 m in length and with a breadth of 50 m and a 210,000 cu m cargo capacity, she was the first Q-Flex and the largest LNGC to transit the Panama Canal thus far.

"The master and crew of the 'Al Safliya', which is operated by PRONAV and chartered by Qatargas, were fantastic hosts and provided our large contingent of trainees with vessel access," said Lt Cmdr Dallas Smith, LGC NCOE supervisor.

"This professional interaction is a vital component in the US and Panama's strategic relationship and is instrumental in furthering the Panama Canal Authority and the Panama Government's understanding of LNG. Additionally, it strengthens the US' strategic understanding of the Panama Canal and its role in supporting the transportation route to accommodate the growth of the international shipments of natural gas. The Coast Guard is happy to assist those responsible for the safe transit and administration of LNG in the Panama Canal," he said.

LGC NCOE is one of six nationwide national centres of expertise focusing on providing industry specific consultation and services to the USCG and maritime industry. The centre provides technical advice on matters related to liquefied gas in the maritime community; liquefied gas training and outreach opportunities; liquefied gas workforce forecasting and performance development; and technical expertise for the establishment of local and national liquefied gas guidance, policy and regulations. ■

NEWS NUDGE

GTT wins Samsung order

GTT has received an order from Samsung Samsung Heavy Industries (SHI) to fit the tanks of a 174,000 cu m LNGC ordered by Nisshin Shiping with a Mark III Flex system.

New orders, etc

Dynagas has ordered two 180,000 cu m LNGCs at Hyundai Heavy Industries for a total of $390 mill.

This brings HHI's LNGC orderbook up to five thus far this year.

The newbuildings will be delivered by the Ulsan yard in 2022.

Each vessel will be fitted with GTT's Mark III Flex Plus technology that has a vaporisation rate of 0.07%.

They will also have high efficiency single mixed refrigerant technology that allows the reliquefaction of gas evaporated from the tanks.

In addition, MOL has reportedly firmed up another option for a 176,523 cu m LNGC at DSME for a reported price of $185 mill, bringing the total up to three ordered recently.

Minerva was also said to have contracted another 173,400 cu m LNGC at Samsung for $190 mill. She will be delivered in 2022.

In the charter market, brokers reported that Cheniere had fixed the 165,000 cu m LNGC 'Arwa Spirit' for 12 months at $80,000 per day.

FLNG starts production at new site

Petronas FLNG 'PFLNG Satu' recently started production at a new site in the Kebabangan cluster field, offshore Sabah, Malaysia.

First gas was pumped into the FLNG's turret system via a 5 km flexible pipeline on 4th May.

This was followed by a series of start-up activities, which included the cooling down of natural gas until the production of the first LNG drop from the Kebabangan field three days later.

Operated by Kebabangan Petroleum Operating Co (KPOC), the field is the second location for 'PFLNG Satu' after its successful operations in Kanowit field, Sarawak.

"We not only prove our concept of relocatable floating LNG facility, but we have also seamlessly achieved the first LNG drop in just three days after first gas in," Petronas Vice President of LNG Asset, Zakaria Kasah, said.

The FLNG is designed to operate in water depths of between 70 m and 200 m with a processing capacity of 1.2 mill tonnes per annum.

The first LNG cargo delivery at the new field is expected next month. ■

Petronas' 'PFLNG Satu' has been succesfully relocated

Seawater pumps for 'FLNG Gimi'

Singapore's Keppel Shipyard has awarded Norwegian liquid handling and pump specialist PG Flow Solutions a contract to supply high flow seawater pumps to the 'Gimi FLNG' that is being converted at the yard.

PG will deliver four large seawater pumps, each with a capacity of 5,500 cu m of water per hour. The contract value was not disclosed.

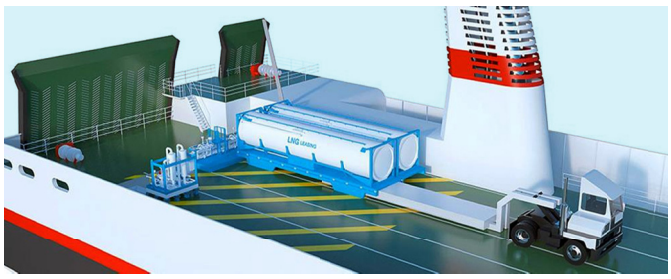
The pumps will be used to cool down the on board turbine steam condensers.

"These axial type propeller pumps represent a highly reliable technology that is just as popular in the maritime and oil and gas industries because of its low maintenance requirements. We are very proud to be involved with this prestigious FLNG project," said Kjetil Vatne, PG Flow Solutions R&D manager.

PG will assemble the pumps at the company's facility in Sande, Norway, and then transport them to Keppel's yard in Singapore. The delivery is scheduled for the fourth quarter of 2019. ■

For ALL your LNG Transport & Storage needs.

Factory built, fast delivered
1,200 m3 LNG Tanks.



On-site/Factory Built Storage Tanks, Intermodal ISO Tank-Containers, Ship/Barge Tanks, & more.

Corban Energy Group (CEG) has been creating highly engineered products required by the natural gas supply chain, from upstream to downstream. CEG has established natural gas terminals throughout the world, provided quality LNG/CNG equipment for the American market, and built storage tanks as large as 200,000 CM in capacity, with its worldwide network of engineering & manufacturing partners.

Call or e-mail us to find out how your company can benefit from our comprehensive natural gas products and services today.

www.CorbanEnergyGroup.com

CORBAN ENERGY GROUP
Your Solution for LNG/LPG

T. **201.509.8555** info@corbanenergygroup.com
418 Falmouth Avenue, Elmwood Park, NJ 07407, USA

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

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

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

Fearnley LNG

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

Small-LNG.com