

LNG Shipping News

AN LNG JOURNAL TITLE ON LNG CARRIERS

30 March 2017

Støhle sets his stall out

Hoegh LNG currently has a revenue backlog of \$6.2 bill, President and CEO, Sveinung Støhle, told *LNG Shipping News* at a presentation in Oslo earlier this week.

This revenue backlog consists of long term charters of two conventional LNGCs and six FSRUs, due to their average remaining charter duration of 14 years from 2017.

Hoegh LNG also has another four FSRUs on order of which one remains unchartered. There are also long term options held for another three, as the company seeks to ramp up its FSRU project tenders.

The unchartered FSRU should be fixed soon, Støhle said, as a project was currently nearing fruition. He explained that as soon as an FSRU was committed to a project, the company would firm up the next order, thus giving the option of placing an FSRU quickly. The vessels are on order at Samsung and Hyundai.

He outlined the situation in Pakistan where two FSRUs are already in operation - one supplied by Excelerate and the other by BW Group, both working with consortia. Hoegh LNG has won a third FSRU project contract in a consortium with Qatar Petroleum, Exxon-Mobil, Total and Mitsubishi Corp. This grouping will build a jetty and a pipeline to connect up with Pakistan's onshore gas grid.

Hoegh completed the jetty and pipeline design in only a month, which contributed strongly to the FID timeline reduction, Støhle said.

Last December, Hoegh announced the signing of a 20-year charter agreement with Global Energy Infrastructure Limited (GEIL) following the Pakistan energy company's 20-year agreement with Qatar Petroleum to supply 1.3 mill tonnes of LNG per annum.

Similar developments

He explained that there were similar developments where gas producers took an active role in the opening up of new markets and gave the examples of Chile with Cheniere Energy and Ivory Coast with Total/Shell.

In selling the FSRU concept over a land-based receiving terminal, Støhle said that a floating option offered half the time to come on stream, ranging from six months and three years where the vessel is ordered in advance.

Also an FSRU operation offers half the cost at around \$0.3/MMBtu, based on an open loop and full usage. There is also a limited environmental footprint as the termi-



Sveinung JS Støhle President & CEO

nal is floating meaning that the mooring can be removed.

In addition, the system is flexible, as it can be re-located, re-employed or quickly converted back to an LNGC for trading.

Currently the Hoegh operation is split between two quoted companies- Hoegh LNG Holdings and Hoegh LNG Partners.

Hoegh LNG Holdings owns the two pure LNGCs, one FSRU, soon to be placed in Ghana for Quantum Power and the newbuildings plus options.

Hoegh LNG Partners raises capital to purchase FSRUs already in operation and has five, including the 'Hoegh Grace', which as been 51% dropped down thus far. Støhle said that the company was looking for more drop down opportunities, including the 49% of the remaining participation in the 'Hoegh Grace'. ■

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First Yamal LNGC handed over

Daewoo Shipbuilding & Marine Engineering has officially handed over the first of the Yamal LNG 173,600 cu m Arc7 LNGCs to Sovcomflot.

According to Yonhap, DSME will be paid WON240 bill (\$215 mill) for the 'Christophe de Margerie', which is the first of

15 ordered for the Yamal LNG project. Each ship will cost an estimated \$320 mill.

The payment will come as a relief to the shipbuilder as it struggles to restructure its mounting debt at a time of dwindling orders.

DSME successfully completed

month-long ship trials of the ship in the Arctic in November, including berthing trials at Sabbetta, the new port built on the Yamal Peninsular.

The remaining 14 Arc7 LNGCs ordered by various owners for the project will be delivered through 2020. ■

Orders on the wane

At the end of 2016, the LNGC fleet over 100,000 cum consisted of 440 vessels, of which 40 vessels were handed over last year.

The influx of newbuildings increased the fleet by around 10%, according to the BRS (Barry Rogliano) Group's annual report.

About 40 more vessels are scheduled for delivery this year, which will mean that the past two years will have seen the highest deliveries since 2008, which was exceptional due to the completion of 40 vessels for the Qatar projects alone.

As for ordering activity, proving the cyclical nature of this particular market, 67 LNGCs were contracted in 2014 but only six in 2016, BRS said. A similar pattern was observed in 2009 when only one order was placed (a consequence of the 2008 financial crisis), compared to 50 in 2011 (the Fukushima effect).

BRS admitted that it was hard to predict shipyard activity for 2017. Last year, the three large South Korean shipyards (Samsung Heavy Industries, Hyundai Heavy Industries and DSME) recorded just two LNGC orders each.

Standardisation

There appeared to be a move towards standardisation, as the South Korean contracts comprised two 174,000 cu m LNGCs and four 180,000 cu m LNGCs, each equipped with GTT cargo containment systems, and 2-stroke slow-speed propulsion systems (4 x XDF from Wärtsilä and 2 x ME-Gi from MAN). There were no orders booked in China or Japan last year.

Out of a total of 111 vessels on the orderbook in 2016, 74 were contracted in South Korea, 28 in



'Creole Spirit' joined the fleet last year

Japan and nine in China, BRS reported.

Meanwhile, the first four LNGCs fitted with 2-stroke slow-speed propulsion systems were delivered in 2016 (two 178,000 cu m units for Knutsen at Hyundai and Teekay's two 173,400 cu m vessels at DSME).

These new engines consume at least 10% less fuel than the dual-fuel diesel-electric (DFDE) systems previously on offer, BRS said. When combined with cargo containment systems with controlled natural evaporation rates of less than 0.09%, the two technologies can significantly lower the cost of transport by reducing vessel consumption, thus maximising the amount of LNG delivered.

BRS noted that the proportion of DFDE propulsion orders has declined significantly, as LNGCs with 2-stroke slow-speed propulsion systems now represent more than 60% of the vessels on order, with 40 equipped with MAN's ME-Gi system and 13 with XDF units from Wärtsilä.

Thus far, the downturn in orders has not led to a severe price

war between shipyards, despite increasing pressure from shipowners. However, each tender is subject to very strong competition and it is estimated that prices have fallen around 10% for those contracts with values under \$200 mill per ship.

Despite the high demand for LNG storage solutions with regasification capacity, only two FSRU orders were recorded in 2016. By the end of the year, there were four major players in the FSRU segment controlling 23 units in service - Hoegh (six units), Excelerate (nine), Golar (seven) and BW (one). ■

Golar LNG Partners in new LNGC contract

Golar LNG Partners has signed a timecharter contract covering up to nine years with a major international oil and gas company for one of its steam powered LNGCs - 'Golar Grand'.

'Golar Grand' is currently on charter with Golar LNG Limited and will therefore be sub-chartered back from Golar LNG, at the same rate as the new charter, for the initial period of the charter until the Golar LNG charter ends in October, 2017.

The vessel will be delivered under contract during the second quarter of 2017 for an initial period of two years with a series of extension options up to the maximum charter period of nine years.

Golar said that the partnerships operating income before depreciation derived from the 'Golar Grand' will be unchanged until October, 2017 when the Golar LNG charter ends. Assuming initial extension options for up to five years are exercised the new charter is expected to generate on average around \$10 mill of operating income before depreciation per annum over the full five year term. ■

NEWS NUDGE

FLNG projects highlighted in infographic

Ahead of the FLNG World Congress Summit 2017, to be held in Singapore 20th-21st June, organiser IQPC has produced an infographic depicting FLNG projects worldwide.

Despite the fall in LNG spot prices and postponed projects last year, select projects con-

tinue to push ahead and yet others are in FID talk.

As the market picks up again, where will the world's next movements in FLNG occur? In the infographic, IQPC briefly profiled the most-watched FLNG projects, as well as highlighting the potential developments around the world.

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GasLog Partners to buy 'GasLog Greece'

GasLog Partners is to purchase 100% of the shares in the entity that owns and charters 'GasLog Greece' from GasLog Ltd.

The total purchase price will be \$219 mill, which includes \$1 mill for positive net working capital balances to be transferred with the vessel.

GasLog Partners said that it expected to finance the acquisition with cash on hand, including proceeds from its recent equity offering, and the assumption of \$151 mill of 'GasLog Greece's' existing debt.

This acquisition is expected to close in the second quarter of 2017 and is subject to certain customary closing conditions.

'GasLog Greece' is a 174,000 cu m tri-fuel diesel electric LNGC built in 2016 and operated by GasLog since her delivery. She is currently on a long-term timecharter with a wholly owned subsidiary of Royal Dutch Shell through March, 2026, plus a charterer's option for a further five years.

The Partnership said that it believed the purchase will be immediately accretive to unitholder distributions and consistent with its strategy to grow cash distributions through dropdown and third-party acquisitions.

GasLog Partners estimated that, assuming full usage, 'GasLog Greece' will add about \$24 mill to EBITDA and \$13 mill to distributable cash flow in the first 12 months after closing. Accordingly, the purchase price represents a multiple of approximately 9.1x estimated EBITDA.

Upon closing, the vessel will support GasLog Partners' guidance to grow unitholder distributions at a 10% to 15% compound annual rate since the IPO. In conjunction with the announcement made last week, the Partnership confirmed this growth guidance, which would result in an annual distribution of

\$2.09 per unit or higher by the fourth quarter of 2017.

Andy Orekar, GasLog Partners CEO, said, "I am very pleased to announce the Partnership's fourth accretive dropdown transaction. Acquiring this strategically attractive vessel and its charter to Shell with nine years remaining highlights GasLog Partners' differentiated business model, which provides cash flow stability with growth through acquisitions.

"The acquisition expands the Partnership's fleet to 10 wholly owned LNGCs, extends our average remaining charter duration and significantly increases our EBITDA and distributable cash flow. After closing the acquisition, GasLog Partners will have a dropdown pipeline of 12 vessels, providing a visible path to future distribution increases," he said.

Paul Wogan, GasLog Ltd CEO, added, "I am delighted that we continue to execute on our strategy of dropping vessels into GasLog Partners and recycling the capital to GasLog. The proceeds from the sale, which values 'GasLog Greece' at a premium to book value, will strengthen our balance sheet and provide further funding for future profitable growth. We also benefit from increases in GasLog Partners' distribution through our unit ownership and incentive distribution rights, which should continue to enhance our cash flow, growth prospects and valuation.

"Based on the Partnership's growth guidance, GasLog's annualised distributions received from GasLog Partners are expected to equal approximately \$25 mill or higher by the fourth quarter of 2017," he concluded.



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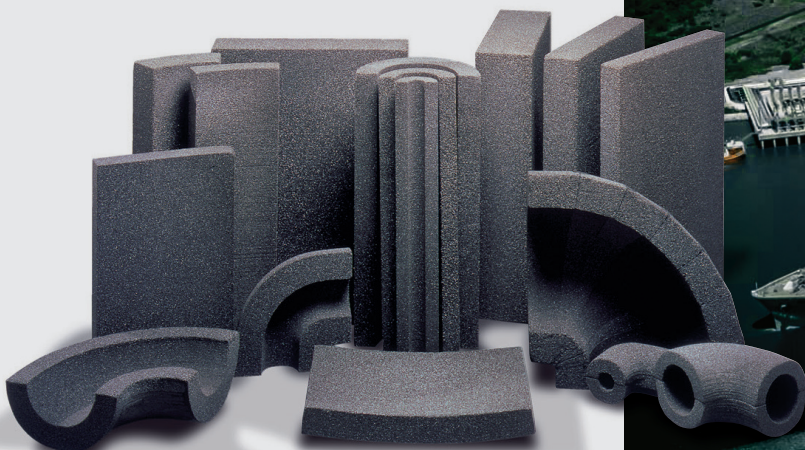
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Tightening market set to continue

During the second half of last year, in July and August, the market gradually tightened in line with an increase in Asian LNG prices, BRS said in its annual review.

Inter-basin trades resumed and, as a result, average tonne/miles increased. Demand also increased sharply after October following a number of large tenders - EGAS with 96 cargoes and Torrent Power with 37 cargoes. Rising oil prices also helped make LNG more competitive and boosted Brent-indexed Asian LNG prices.

Towards the end of 2016, seasonally-low temperatures in South Korea and Japan pushed the major LNG importers and electricity producers to issue several purchase tenders, removing the remaining available surplus in the market. The end of the year also saw several periods of maintenance or shut downs on certain projects, notably Gorgon LNG and Angola LNG, provoking some temporary shortages that were nevertheless sufficient to push up prices.

As a result of the tonnage supply declining during the year, as traders took medium-term positions and projects hedging their tonnage needs in the face of rising prices, a total of 17 fixtures of between six to 12 months duration,

with options, were signed from October onwards.

In addition, LNGCs that had been delivered ahead of their projects left the spot market. By the end of 2016, just 25 LNGCs were open on the spot market, compared with 55 in the Spring.

Charter rates had risen above \$35,000 per day for LNGCs of 160,000 cu m with DFDE propulsion, and to around \$25,000 per day for older LNGCs by the end of last year. Rates rose by the greatest margin in the Atlantic, reaching \$45,000 per day in December for modern ships. The gap with Pacific rates widened as the year progressed, which reflected the concentration of LNG demand in Asia where the majority of ships are redelivered, as they will rarely ballast empty to the Atlantic unless they have committed employment, BRS explained.

Project problems

Project deferments and cancellations impacted on all associated LNG shipping projects. For example, shipping tenders for Spanish projects (Repsol, Iberdrola, En-

desa) saw their charter periods reduced to less than 10 years, creating problems for shipowners who have difficulty in securing bank finance for such short periods.

Finally, new accounting regulations linked to IFRS16 (International Financial Reporting Standards) will also come into force in January, 2019, requiring companies chartering LNGCs to integrate the cost of the charter into their accounts, inflating the balance sheet. This will likely explain the reluctance on many charterers to sign charters for longer than 10 years, BRS said.

Shipowners, as well as charterers, expect this upward trend to continue this year, as evidenced by the end-of-year positions taken by a number of players seeking to benefit from last year's rates.

Spanish and Indian tenders (Iberdrola, Endesa, Gas Natural and GAIL) could result in employment for between 10 and 14 LNGCs, including six for GAIL from September, 2017 onwards, which will have an impact on the short-term market, BRS concluded. ■

Beleaguered DSME to concentrate on gas carriers

Cash strapped shipbuilder Daewoo Shipbuilding & Marine Engineering (DSME) reportedly said last week that its future orderbook will be mainly made up of LNGCs and other specialised vessels.

DSME also said that it was expecting a business turnaround this year, according to the South Korean news agency Yonhap.

This statement came a day after the shipyard's South Korea's state-run creditors, the world's largest by order backlog, announced a fresh rescue package worth Won6.7 trillion (\$5.98 bill), with the proviso that all stakeholders agree to a debt-for-equity swap plan.

The rescue package, proposed by the state-run Korea Development Bank and Export-Import Bank of Korea, is the second bailout for DSME, as the shipbuilder has been suffering severe liquidity problems, due to heavy losses from offshore projects.

"Starting this year, a huge chunk of our portfolio will consist of LNG ships and other vessels that we specialise in. Most of loss-making offshore facilities projects have been completed," the company said in a statement.

DSME also said that as at the end of February this year, its order backlog was 108 ships, of which 50 were LNGCs or FSRUs.

"We are going to reduce our exposure to risky offshore projects, while focusing on commercial ships and specialty vessels," DSME said, reported Yonhap. ■

Major importers to co-operate

JERA, KOGAS and CNOOC Gas and Power Trading and Marketing are to work more closely together, following the signing of a MoU last week.

Under the MOU, the major LNG importers will discuss the joint procurement of LNG, participation in upstream projects and co-operation in LNG shipping and storage.

"LNG demand fluctuates widely depending on economic conditions and energy policy in each country. JERA believes that in order to cope with such fluctu-

ation it is essential to develop the business environment through means such as accommodation schemes between buyers," JERA said in a statement.

Commenting on the MOU, Lee Seung-hoon, President of KOGAS, said that the three companies intended to play a more active role in the LNG market.

Basically, three of the world's biggest LNG buyers are joining together to ensure greater supply contract flexibility to shift power to importers from producers, as oversupply grows, one report suggested.

The three companies are responsible for purchasing a third of worldwide LNG production. ■

NEWS NUDGE

CLNG urges support for US LNG development

The Center for Liquefied Natural Gas (CLNG) has sent three letters to US policy makers, emphasising the importance of domestic

liquefied natural gas exports.

One letter was addressed to the Chairman and Ranking Member of the US Senate Committee on Energy and Natural Resources, another to the Chair-

man, Vice Chairman and Ranking Member of the US House Committee on Energy and Commerce, and the third to US Secretary Rick Perry at the Department of Energy (DoE).

These letters called on Congress and Secretary Perry to support LNG development by establishing a clear and efficient regulatory path for US LNG exports.

ICE to offer US Gulf Coast LNG futures contract

Intercontinental Exchange (ICE) is due to begin trading a US LNG futures contract in May.

With the US poised to become a net exporter of natural gas for the first time in 60 years, the exchange is to introduce the contract, which will be cash-settled against the Platts LNG Gulf Coast Marker (GCM) price assessment and use Platts-derived US GCM LNG forward curves for daily settlements.

The curves will have an initial tenor of 48 months.

"Domestic and international market participants now have a risk management solution that lays the foundation for a more effective means of hedging their spot and forward exposure," said JC Kneale, vice president, North

American power and natural gas markets at ICE, in a statement.

US gas producers, plagued by low domestic prices in recent years, are eager to sell into the international marketplace through LNG, Reuters said.

The last time the country was a net exporter of gas on an annual basis was in 1957. It started exporting gas from the lower 48 states in February, 2016. Five other US LNG export facilities are currently under construction and expected to come on stream by 2019.

Their introduction growth will result in the US becoming the third largest exporter of LNG by the end

of 2020, according to S&P Global Platts, which provides the price assessment for the ICE contract.

"We believe the US Gulf Coast is poised to become a key anchor for LNG prices," said Shelley Kerr, global director of LNG and regional director of generating fuels & electric power, Europe, Middle East and Africa (EMEA) at S&P Global Platts.

Talking to Reuters, she said growth in Asia-based LNG swaps has already been strong, and now "counterparties are demanding that the new flexible supply from the US is underpinned by both price transparency and the means to hedge."

Nakilat holds fifth officers meeting

Nakilat held its bi-annual fleet officers meeting (FOM) between 27th and 28th March, 2017 in Doha.

Held in Qatar for the first time, the event was attended by about 50 officers from Nakilat's LNG and LPG fleets, including those working on board the vessels newly transferred into Nakilat's management team.

The two-day event kicked off with a keynote address by Nakilat Managing Director Eng Abdullah Fadhlah Al Sulaiti, followed by a series of presentations to keep the officers abreast of developments at Nakilat's headquarters, as well as group activities to

foster teamwork.

Eng Abdullah Fadhlah Al Sulaiti, said: "Having the FOM in Doha for the first time since we began transitioning our wholly-owned vessels to in-house management last year, makes this event exceptionally significant. The event not only serves as a welcome to the Nakilat family but also allows more members of the management and fleet team to meet and interact with our officers, thus strengthening the working relationship between them

leading to greater synergy and more effective communications.

"It is an important platform through which we can meet with those working on the frontline and thank them for their efforts, as well obtain feedback on areas that require further improvement, so as to ensure we continue to be an employer of choice and support Nakilat vision to be a global leader and provider of choice for energy transportation and maritime services," he explained.

Proposed Irish LNG project back on track?

Ireland's €500 mill Shannon LNG import terminal is reportedly back on track amid Brexit energy concerns, according to a recent report by Dublin-based Irish Examiner.

The project was shelved in 2008, just two years after planning permission was granted, due to a disagreement over pipeline fees.

Shannon LNG was asked by Ireland's energy regulator to pay a \$50 mill per year tax for two interconnecting pipelines between Ireland and the UK, which the company claimed it would not use.

In frustration, former project owner Hess, eventually pulled out of the project and sold its interests early last year.

To date, around €67 mill has already been invested in the project, the Irish Examiner said.

It was claimed that the project had received support from a new investor, without identifying the investor.

Irish Energy Minister, Denis Naughten, has recently said that the project is one of the key opportunities for offsetting energy security risks following Brexit.

"This project is not just an option, it is becoming an imperative. We're actually by far and away the most vulnerable of all the 28 member states in the EU now," Kelly said. "Shannon LNG is the best solution available to us post-Brexit from a supply security perspective."

If developed, Shannon LNG, expected to be located in County Kerry, would have a regasification capacity of 28.3 mill cu m per day with four LNG tanks and jetties that could accommodate up to Q-Max LNGCs.

NEWS NUDGE

Nakilat takes another Q-Flex in-house

Nakilat has assumed full shipmanagement and operations of Q-Flex LNGC 'Mesaimeer' from STASCo (Shell Trading and Shipping Company Ltd.) with effect from 23rd March, 2017.

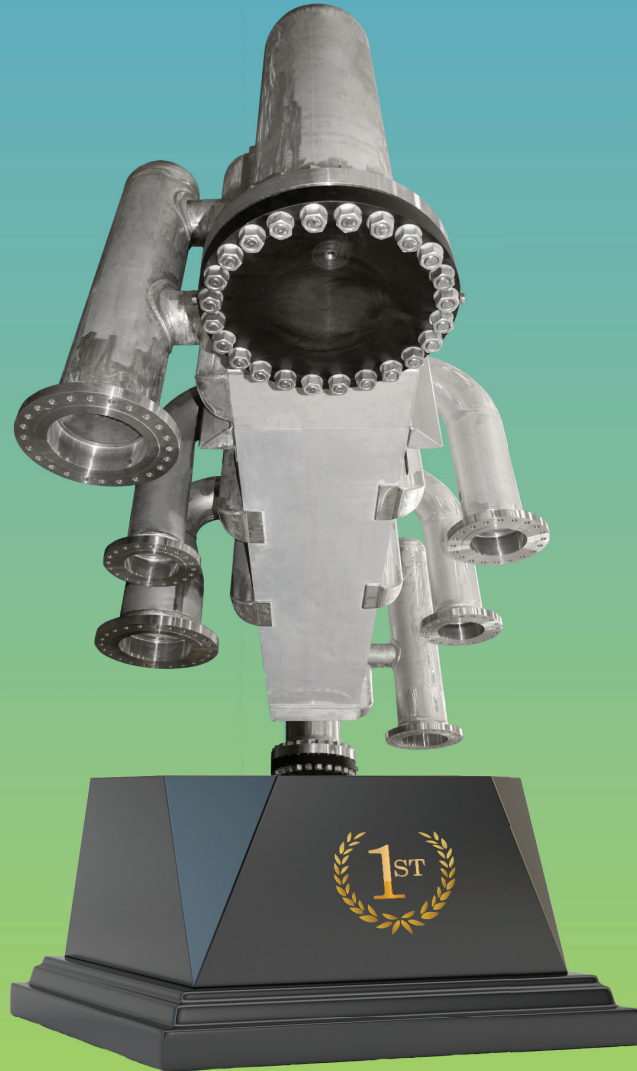
With a cargo carrying capacity of 216,312 cu m, 'Mesaimeer' is wholly-owned by Nakilat and chartered by Qatargas. The vessel built by Hyundai Heavy Industries and was delivered in March, 2009.

'Mesaimeer' is the sixth wholly-owned LNGC to come under the management of Nakilat Shipping Qatar (NSQL), bringing the total number of vessels managed by NSQL to 14, comprising 10 LNGCs and four LPG carriers.



Another LNGC has been taken in-house by Nakilat.

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SCF increases gas ship revenue

In November, 2016, PAO Sovcomflot (SCF) celebrated its 10th anniversary as an independent operator of gas carriers, as the first LNGC joined its fleet on 7th November, 2006.

The commencement of gas carrier operations marked a breakthrough for SCF into a new market segment, which had been previously inaccessible to Russian companies.

Last year, SCF's gas transport division achieved timecharter equivalent (TCE) revenue of \$140.6 mill, compared with \$137.5 mill in 2015.

Currently, SCF's fleet includes eight LNGCs and four LPG carriers. These vessels serve global charterers, such as Gazprom Marketing & Trading, Sakhalin Energy, Shell, Tangguh LNG, Trammo, and Sibur.

In January 2016, the world's first Arctic LNGC was launched for SCF. She was named 'Christophe de Margerie' after the former CEO of Total who did much to realise the Yamal LNG project, for which this vessel will transport LNG from the Yamal peninsula.

'Christophe de Margerie' is the prototype for a series of 16 Arctic LNGCs and will be the first to load at the Port of Sabetta on the



SCF has taken delivery of the first of two Arctic LNGCs.

Yamal Peninsula providing start-up work for the Yamal LNG project for the subsequent vessels.

The vessel will be operated under a long-term timecharter agreement between the SCF Group and Yamal LNG. A sistership is due to be delivered this year.

Overall, SCF reported gross revenue of \$1.4 bill for 2016, compared with \$1.5 bill for the

previous year.

The fall in revenue was caused by a drop in the tanker spot market of more than 40% and by up to 25% in the timecharter market. Net profit was \$206.8 mill, compared to \$354.5 mill recorded in 2015.

EBITDA for 2016 was \$706.5 mill, compared to \$780.1 mill in the previous year, SCF said. ■

TEN hopeful of rising LNGC rates

Tanker and LNGC owner Tsakos Energy Navigation (TEN) generated net income of \$11.9 mill in the fourth quarter of 2016.

Revenues, net of voyage expenses (bunker, port expenses and commissions), for the same period were \$99.1 mill, about \$17 mill

up on the 3Q16.

The rise in revenues was due to the addition of three tankers, plus new charter agreements

signed for the two LNGCs currently in the fleet.

In October, 2016, TEN took delivery of the LNGC 'Maria Energy' and she immediately embarked on a timecharter with escalating options until mid-2018, when it is expected that higher rates may be available, the company said.

TEN's net income for the whole of last year was \$55.8 mill, while operating income amounted to \$89.8 mill and EBITDA was \$205.1 mill.

All the vessels, apart from the 2007-built LNGC 'Neo Energy', currently on a floating storage charter, generated positive EBITDA for 2016, the company said. ■



TEN is hopeful of a tightening market for its two LNGCs.

Golar appoints Ince & Co

Law firm Ince & Co has advised Golar LNG on its recent \$187 mill sale-and-leaseback deal with COSCO Shipping Development for the 2014-built, 160,000 cu m 'Golar Crystal'.

The 'Golar Crystal' sale-and-leaseback deal represents the fifth in which Ince & Co has acted as an adviser to Golar in the last three years.

For example, the law firm advised Golar on a deal covering the LNGC 'Golar Seal' and the FSRUs 'Golar Eskimo' and 'Golar Tundra' with CCB Financial Leasing and on deals covering four LNGCs with ICBC Financial Leasing.

Golar LNG has a fleet of 26 vessels. Last summer, the company announced that it had added 'Golar Crystal' to the Cool Pool, its partnership with Dynagas and GasLog to jointly market unfixed carriers for short-term charters and spot cargoes.

Ince & Co Partner, Beatrice Russ, also led a legal team to advise Golar on its conversion financing for the 125,000 cu m 'Golar Hilli' with lender CSSC (Hong Kong) Shipping Co, to be converted into a sale-and-leaseback deal for the project's operational phase. Singapore's Keppel shipyard is converting 'Hilli' into an FLNG production vessel.

"We were delighted to assist the Golar team ... on sale-and-leaseback financing in this transaction, which saw Golar teaming up with COSCO's leasing arm for the first time," Ms Russ said. "This combination of two major industry players attracted a lot of attention in China over the last week."

Hilli has been fixed on an eight-year contract with Cameroon's Société Nationale des Hydrocarbures (SNH) and Perenco, to produce up to 1.2 mill tonnes of LNG per year, starting this year. ■

GTT to equip newbuilding Knutsen LNGC

GTT has received an order from Hyundai Heavy Industries to fit a new LNGC with a Mark III Flex containment system.

Hyundai's shipyard at Ulsan is to build the 180,000 cu m LNGC for Norwegian shipping company NORSPAN LNG XI AS (Knutsen). Delivery is scheduled for 2019.

Knutsen is a long-standing LNGC owner and equips its vessels with membrane technology. With 10 vessels of this type, Knutsen is renewing its confidence in GTT technology by choosing Mark III Flex for this new vessel, the French company claimed.

"We are very pleased with the excellent co-operation we have with Knutsen and Hyundai Heavy Industries. We are proud to be associated with this new project," declared Philippe Berterottière, GTT Chairman and CEO.

This order marks GTT's first LNGC contract this year.

With its Mark III Flex containment system, GTT provides efficient insulation solution able to reduce the daily guaranteed boil-off gas rate to 0.085 % of tank volume, the company said.

The Mark and NO ranges have been designed to meet all the transport and storage requirements of liquefied gases. Both technologies are continuously improved based on feedback from actual use at sea, GTT said. ■

GIIGNL releases new edition of the Custody Transfer Handbook

Paris-based International Group of LNG Importers (GIIGNL) has published an updated version of its LNG Custody Transfer Handbook.



Before releasing the '2017 GIIGNL LNG Custody Transfer Handbook', GIIGNL said that it had consulted with an international group of experts on how to determine the thermal energy of LNG transported by ship for the specific purpose of title transfer.

These experts, drawn from several companies involved in custody-transfer operations and led by Fluxys LNG, compiled the latest edition to respond to the rapidly changing market conditions and to address the latest commercial practices.

The new version of the handbook includes measurement procedures and equipment in relation to new technical operations, such as:

- * Partial un/loading.
- * Reloading at LNG-import terminals.
- * Ship-to-ship LNG transfers.
- * Small ship-to-shore LNG operations.

Stijn Maelfeyt, Fluxys LNG plant operations manager who headed up the working group of experts, said: "The reason for the proposed changes is of truly technical nature and GIIGNL considers it as its duty to inform the LNG industry about this and its impact."

According to Vincent Demoury, GIIGNL General Delegate: "The handbook is intended to serve as a reference manual but not as a standard or a specification. It has been updated to include the most advanced measurement technology, operational practices and international standards available to or used by all parties involved in custody transfer operations."

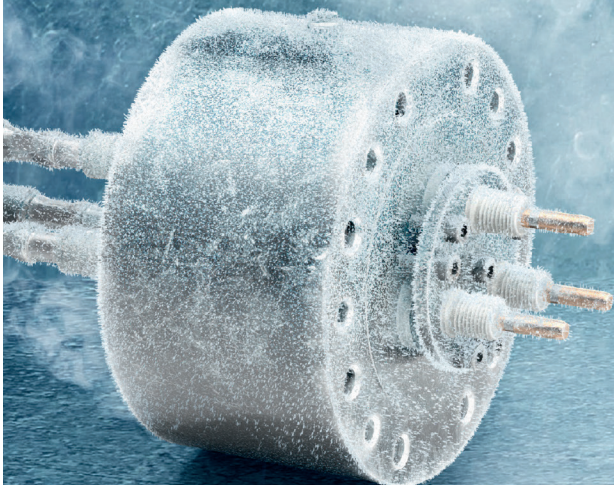
The handbook is publicly available free of charge through the GIIGNL website (http://giignl.org/system/files/giignl_cthb_5.0.web_.pdf) ■

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ABB to supply and monitor FSRU newbuilding equipment

ABB will supply the power and electric propulsion system for a new FSRU for BW Group.

The FSRU will also be remotely connected to ABB's collaborative operations centres.

The equipment to be fitted on board will provide data to the shore-side centres to allow ABB and BW to take a proactive approach to maintenance throughout the lifetime of the vessel.

"The modern power system must be both efficient and connected," said Juha Koskela, ABB's

marine and ports business managing director. "Our hardware will optimise fuel efficiency on board whilst the collaborative operations centres will monitor the vessel allowing a more informed approach to maintenance."

ABB's power generation and distribution system, along with the electric propulsion system, will work in conjunction with the dual-fuel diesel engine plant to max-

imise vessel operations, the company claimed.

Much of ABB's equipment, including generators, switchboards, transformers, main propulsion drives and motors, will transmit performance data via sensors. This information is automatically monitored from the centres onshore and ABB will work with BW during both routine and urgent maintenance cases.

The 174,000 cu m capacity FSRU was ordered from Daewoo Shipbuilding & Marine Engineering (DSME). The membrane-type vessel is expected to be delivered by DSME's Okpo yard in 2019.

Erik Bolstad, vessel segment responsible at ABB, said, "ABB's track record in commissioning and servicing LNG installations at South Korean shipyards, coupled with end-user recommendations and the reputation of the ABB brand all played a key role in securing this substantial order." ■



ABB is able to monitor the equipment on board a gas carrier

Trelleborg partners with Teekay to develop fender system

Trelleborg's marine systems operation and Teekay Marine Solutions are to launch a pneumatic fender system at next week's Gastech exhibition.

Dubbed the Halo fender, the system has been developed for the LNG ship-to-ship (STS) transfer market and for wider use.

The fenders will be offered in a range of sizes in strategic locations worldwide. They will comply with ISO 17357, will be available to buy or rent and backed up by technical and service support.

Trelleborg marine systems operation technical director Andrew Stafford will also present a technical paper at Gastech, discussing interface standards for FSRUs, FSUs and the emerging small-scale sector. ■

Wärtsilä to help develop jetty less LNG transfer concept

Wärtsilä, Houlder and Trelleborg are to introduce a new small to mid-scale LNG distribution infrastructure concept at Gastech.



A jettyless operation

Wärtsilä has partnered with marine design consultancy Houlder and hose supplier Trelleborg to develop an innovative system for transferring LNG from a vessel to terminals ashore where no jetty exists.

The concept will be formally unveiled at this year's Gastech conference and exhibition in Tokyo next week.

Due of environmental considerations and high investment costs, some communities do not need the major work required to build new harbours, quays and jetties, the companies said.

"Wärtsilä as an EPC contractor sees this collaborative concept as being an enabler for new and smarter LNG terminal solutions serving various small-scale LNG

consumers in situations where building a jetty is not feasible or cost-effective," said Kenneth Engblom, Wärtsilä's Director, Sales and Marketing, LNG Solutions.

The jettyless concept has been developed to enable the transfer of LNG from small to mid-scale carriers to onshore or floating storage and regasification terminals where it is not feasible to construct a jetty.

The floating transfer terminal by Houlder comprises a self-propelled barge that shuttles to and from LNGCs moored up to 800 m offshore and includes an integrated transfer arm developed by Houlder and Klaw LNG. Trelleborg CRYOLINE LNG floating hoses will

then used to transfer the LNG and boil-off gas between the barge and a shore facility.

Gianpaolo Benedetti, Houlder's LNG business development manager, described the floating transfer terminal as "....taking the jetty to the LNG vessel, rather than have the LNG vessel come to the jetty."

The jettyless concept is claimed to represent a low investment and quick installation solution in situations where the cost of building a jetty is prohibitive. Because each location has its own characteristics, Wärtsilä will develop different concepts to suit the particular situation. ■

NEWS NUDGE

Adriatic LNG terminal receives 500th cargo

Adriatic LNG Terminal (ALNG) received a milestone 500th cargo, delivered by RasGas LNGC, 'Al-Marrouna', on 21st February, 2017.

A celebratory event was held at the terminal to mark the occasion, with ALNG managing director, Suresh Jagadesan, boarding the 'Al-Marrouna' to meet with the marine team and vessel's crew.

The Adriatic LNG Terminal is located in the northern Adriatic Sea, about 14 km offshore from Porto Viro, near Rovigo, Italy, and is claimed to be the world's first offshore gravity-based liquefied natural gas regasification terminal.

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	Tripura (ex Surya Satsuma)	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 Bahrain Vision	12,000	LNG/LPG/Ethylene	Worldwide	No	Norgas Carriers
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	Norgas Unikum	12,000	LNG/LPG/Ethylene	Worldwide	No	Norgas Carriers
2012	Coral Energy	15,600	LNG	Northwest Europe/Baltics	Yes	Anthony Veder
2013	Coral Anthelia	6,500	LNG/Ethylene			Anthony Veder
2013	JX Energy TBN	2,500	LNG	Japan	Yes	JX Energy
2013	Kakuyu Maru	2,500	LNG	Japan	Yes	Tsurumi Sunmarine
2014	LNG-Oil combi**	2,000	LNG	Germany	Yes	Veka
2014	Short Sea LNG Tanker **	4,000	LNG	Germany	Yes	Veka
2015	10 small carriers TBN**	5,000	LNG			Bimantara Group
2015	Jahre TBN**	6,200	LNG	Norway	Yes	Donsotank/Jahre Marine
2015	JS Ineos Ingenuity	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2015	JS Ineos Insight	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2015	JS Ineos Intrepid	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2015	LNG Barge TBN	3,000	LNG	US Coast	Yes	LNG America
2015	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 Inland bunker**	800	LNG	Germany	Yes	Veka
2015	Norgas TBN**	17,000	LNG/LPG/Ethylene	Worldwide		Norgas Carriers
2015	Norgas TBN**	17,000	LNG/LPG/Ethylene	Worldwide		Norgas Carriers
2015	PetroChina TBN	30,000	LNG	China		PetroChina
2015	TBN	14,000	LNG	China	Yes	Zhejiang Huaxiang
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	Yuan He 1	30,000	LNG	China	Yes	CSR
2016	Clean Jacksonville	2,200	LNG	US Coast	Yes	CME
2016	Dalian TBN	28,000	LNG	China	Yes	Dalian Inteh Group
2016	Hai Yang Shi You 301	30,000	LNG	Bali FSU	Yes	CETS (CNOOC)
2016	JS Ineos Indepence	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2016	JS Ineos Innovation	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2016	JS Ineos Inspiration	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2016	LNG Prime	2,250	LNG	Northwest Europe	Yes	Veka Deen LNG
2016	Navigator Aurora	35,000	Ethane/Ethylene	Markus Hood - Stenungsund	Ethane, for Borealis	Navigator
2016	Ocean Yield TBN	36,000	Ethane/Ethylene	US - Teeside	Ethane, for Sabic	Gaschem Services
2016	Ocean Yield TBN	36,000	Ethane/Ethylene	US - Teeside	Ethane, for Sabic	Gaschem Services
2016	Ocean Yield TBN	36,000	Ethane/Ethylene	US - Teeside	Ethane, for Sabic	Gaschem Services
2016	Shell Bunker Barge TBN 1	6,500	LNG	Northwest Europe	Yes	Shell
2016	Shell Bunker Barge TBN 2	6,500	LNG	Northwest Europe	Yes	Shell
2016	Shell Bunker Barge TBN 3	6,500	LNG	Northwest Europe	Yes	Shell
2016	Shell Bunker Barge TBN 4	3,000	LNG	Northwest Europe	Yes	Shell
2017	ENGIE Zeebrugge	5,000	LNG	Northwest Europe	Yes	NYK
2017	CME TBN†	2,200	LNG	US Coast	Yes	CME
2017	CME TBN†	2,200	LNG	US Coast	Yes	CME
2017	Coral EnergiCE	18,000	LNG	Northwest Europe/Baltics	Yes	Anthony Veder
2017	Coralus	5,800	LNG	Northwest Europe/Baltics	Yes, for Skargas	Anthony Veder
2017	Evergas TBN	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2017	Evergas TBN	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
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	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	Bernhard Schulte TBN	7,500	LNG	Baltic	Yes	Bernhard Schulte
2018	CME TBN†	2,200	LNG	US Coast	Yes	CME
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

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 = 22 February 2017

WORLD LNG CARRIER ORDERBOOK

Name	Segment	Status	Yard	Design	Prop	Capacity	Delivery Date	Ordered	Imo	Hull No
Ougarta	LNGC	Order	Hyundai Heavy	TZ Mk. III	TFDE	170000	Feb-17	Jul-05	9761267	2814
Mitsubishi Nagasaki 2310	LNGC	Order	Mitsubishi H.I.	Moss	STRH	155300	Feb-17	Jul-05	9698111	2310
Seri Cempaka	LNGC	Order	Hyundai Heavy	Moss	STRH	150000	Feb-17	Jul-05	9714290	2731
Kawasaki Sakaide 1718	LNGC	Order	Kawasaki	Moss	TFDE	180000	Mar-17	Jul-05	9698123	1718
Murex	LNGC	Order	DSME	GT NO 96	MEGI	173400	Mar-17	Jul-05	9705641	2416
Hudong-Zhonghua H1718a	LNGC	Order	Hudong-Zhonghua	Membrane	TFDE	174000	Mar-17	Jul-05	9694749	H1718A
Daewoo 2452	LNGC	Order	DSME	GT NO 96	TFDE	174000	Mar-17	Jul-05	9761853	2452
Asia Venture	LNGC	Order	Samsung	TZ Mk. III	TFDE	160000	Apr-17	Jul-05	9680190	2070
Hyundai Princepia	LNGC	Order	DSME	GT NO 96	TFDE	174000	Apr-17	Jul-05	9761841	2451
SM Eagle	LNGC	Order	DSME	GT NO 96	TFDE	174000	Apr-17	Jul-05	9761827	2449
Daewoo 2450	LNGC	Order	DSME	GT NO 96	TFDE	174000	May-17	Jul-05	9761839	2450
Jmu Tsu 5070	LNGC	Order	Japan Marine United Corp (Jmu)	SPB	TFDE	165000	May-17	Jul-05	9736092	5070
Castillo De Merida	LNGC	Order	Imabari	TZ Mk. III	MEGI	178000	May-17	Jul-05	9742807	8177
Castillo De Caldelas	LNGC	Order	Imabari	TZ Mk. III	MEGI	178000	Jun-17	Jul-05	9742819	8188
Hudong-Zhonghua H1717a	LNGC	Order	Hudong-Zhonghua	Membrane	TFDE	174000	Jun-17	Jul-05	9672844	H1717A
Hudong-Zhonghua H1719a	LNGC	Order	Hudong-Zhonghua	Membrane	TFDE	174000	Jun-17	Jul-05	9694751	H1719A
Daewoo 2462	LNGC	Order	DSME	GT NO 96	TFDE	180000	Jul-17	Jul-05	9771913	2462
Bishu Maru	LNGC	Order	Kawasaki	Moss	TFDE	164700	Aug-17	Jul-05	9691137	1713
Seri Camar	LNGC	Order	Hyundai Heavy	Moss	STRH	150000	Aug-17	Jul-05	9714305	2732
Jmu Tsu 5071	LNGC	Order	Japan Marine United Corp (Jmu)	SPB	TFDE	165000	Aug-17	Jul-05	9752565	5071
Daewoo 2417	LNGC	Order	DSME	GT NO 96	MEGI	173400	Aug-17	Jul-05	9705653	2417
Daewoo 2421	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	Aug-17	Jul-05	9768368	2421
Samsung 2153	LNGC	Order	Samsung	KC-1	TFDE	174000	Sep-17	Jul-05	9761803	2153
Samsung 2154	LNGC	Order	Samsung	KC-1	TFDE	174000	Sep-17	Jul-05	9761815	2154
Daewoo 2426	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	Sep-17	Jul-05	9750658	2426
Flex Endeavour	LNGC	Order	DSME	GT NO 96	MEGI	172400	Oct-17	Jul-05	9762261	2447
Flex Enterprise	LNGC	Order	DSME	GT NO 96	MEGI	172400	Oct-17	Jul-05	9762273	2448
Mitsubishi Nagasaki 2316	LNGC	Order	Mitsubishi H.I.	Moss	STRH	153000	Oct-17	Jul-05	9743875	2316
SK Resolute	LNGC	Order	Samsung	TZ Mk. III	XDF	182000	Oct-17	Jul-05	9693173	2081
Hudong-Zhonghua H1720a	LNGC	Order	Hudong-Zhonghua	Membrane	TFDE	174000	Oct-17	Jul-05	9672818	H1720A
Jmu Tsu 5072	LNGC	Order	Japan Marine United Corp (Jmu)	SPB	TFDE	165000	Oct-17	Jul-05	9758832	5072
Eduard Toll	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	Oct-17	Jul-05	9750696	2423
Seri Cemara	LNGC	Order	Hyundai Heavy	Moss	STRH	150000	Dec-17	Jul-05	9756389	2735
Kawasaki Sakaide 1731	LNGC	Order	Kawasaki	Moss	TFDE	177000	Dec-17	Jul-05	9774135	1731
Daewoo 2453	LNGC	Order	DSME	GT NO 96	MEGI	173400	Dec-17	Jul-05	9770921	2453
Rudolf Samoylovich	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	Dec-17	Jul-05	9750713	2425
Daewoo 2422	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	Dec-17	Jul-05	9768370	2422
Daewoo 2424	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	Dec-17	Jul-05	9750701	2424
SK Audace	LNGC	Order	Samsung	TZ Mk. III	XDF	182000	Jan-18	Jul-05	9693161	2080
Hudong-Zhonghua H1664a	LNGC	Order	Hudong-Zhonghua	GT NO 96	TFDE	174000	Jan-18	Jul-05	9750232	H1664A
Pan Asia	LNGC	Order	Hudong-Zhonghua	GT NO 96	TFDE	174000	Jan-18	Jul-05	9750220	H1663A
BW Tulip	LNGC	Order	DSME	GT NO 96	MEGI	173000	Jan-18	Jul-05	9758064	2435
Samsung 2107	LNGC	Order	Samsung	TZ Mk. III	MEGI	174000	Jan-18	Jul-05	9709025	2107
Daewoo 2460	LNGC	Order	DSME	GT NO 96	MEGI	174000	Jan-18	Jul-05	9766889	2460
Teekay NB-6	LNGC	Order	DSME	GT NO 96	MEGI	173400	Feb-18	Jul-05	9770933	2454
Hyundai Ulsan 2800	LNGC	Order	Hyundai Heavy	TZ Mk. III	XDF	174000	Feb-18	Jul-05	9748899	2800
Daewoo 2443	LNGC	Order	DSME	GT NO 96	MEGI	173400	Feb-18	Jul-05	9766554	2443
Jmu Tsu 5073	LNGC	Order	Japan Marine United Corp (Jmu)	SPB	TFDE	165000	Feb-18	Jul-05	9758844	5073
Samsung 2130	LNGC	Order	Samsung	TZ Mk. III	XDF	174000	Mar-18	Jul-05	9744013	2130
Daewoo 2442	LNGC	Order	DSME	GT NO 96	MEGI	173400	Mar-18	Jul-05	9766542	2442
Hyundai Ulsan 2801	LNGC	Order	Hyundai Heavy	TZ Mk. III	XDF	174000	Mar-18	Jul-05	9748904	2801
Samsung 2108	LNGC	Order	Samsung	TZ Mk. III	MEGI	174000	Mar-18	Jul-05	9709037	2108

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 = 15 March 2017

Name	Segment	Status	Yard	Design	Prop	Capacity	Delivery Date	Ordered	Imo	Hull No
MOL E.On.	LNGC	Order	DSME	GT NO 96	TFDE	179900	Apr-18			TBN
Kawasaki Sakaide 1720	LNGC	Order	Kawasaki	Moss	TFDE	164000	Apr-18	Jul-05	9749609	1720
Mitsui NB 2 Cameron	LNGC	Order	Kawasaki	Moss	STRH	155000	Apr-18	Jul-05	9759252	1729
Daewoo 2441	LNGC	Order	DSME	GT NO 96	MEGI	173400	Apr-18	Jul-05	9766530	2441
Mitsui Cameron Shi NB 1	LNGC	Order	Samsung	Mark III Flex	TFDE	177000	May-18	Jul-05	9760768	2148
Samsung 2149	LNGC	Order	Samsung	Mark III Flex	TFDE	177000	May-18	Jul-05	9760770	2149
Mitsui KHI NB 1	LNGC	Order	Kawasaki	Moss	STRH	155000	May-18	Jul-05	9759240	1728
Daewoo 2432	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	May-18	Jul-05	9750660	2432
Daewoo 2430	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	May-18	Jul-05	9750725	2430
Daewoo 2455	LNGC	Order	DSME	GT NO 96	MEGI	173400	May-18	Jul-05	9770945	2455
Daewoo 2464	LNGC	Order	DSME	GT NO 96	MEGI	173400	May-18	Jul-05	9785158	2464
Mitsubishi Nagasaki 2324	LNGC	Order	Mitsubishi H.I.	Moss	STaGE	165000	Jun-18	Jul-05	9779226	2324
Daewoo 2458	LNGC	Order	DSME	GT NO 96	MEGI	173400	Jun-18	Jul-05	9767950	2458
Daewoo 2444	LNGC	Order	DSME	GT NO 96	MEGI	173400	Jun-18	Jul-05	9766566	2444
Daewoo 2427	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	Jun-18	Jul-05	9768382	2427
Hudong-Zhonghua H1665a	LNGC	Order	Hudong-Zhonghua	GT NO 96	TFDE	174000	Jun-18	Jul-05	9750244	H1665A
BW Lilac	LNGC	Order	DSME	GT NO 96	MEGI	173000	Jul-18	Jul-05	9758076	2436
Daewoo 2445	LNGC	Order	DSME	GT NO 96	MEGI	173400	Jul-18	Jul-05	9766578	2445
Samsung 2150	LNGC	Order	Samsung	Mark III Flex	TFDE	177000	Jul-18	Jul-05	9760782	2150
Daewoo 2446	LNGC	Order	DSME	GT NO 96	MEGI	173400	Aug-18	Jul-05	9766580	2446
Mitsubishi Nagasaki 2323	LNGC	Order	Mitsubishi H.I.	Moss	STaGE	180000	Aug-18	Jul-05	9774628	2323
Daewoo 2431	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	Sep-18	Jul-05	9750737	2431
MOL NB 2 Freeport	LNGC	Order	Kawasaki	Moss	STaGE	177000	Oct-18	Jul-05	9791200	1734
Mitsubishi Nagasaki 2325	LNGC	Order	Mitsubishi H.I.	Moss	STaGE	165000	Oct-18	Jul-05	9779238	2325
Mitsubishi Nagasaki 2326	LNGC	Order	Mitsubishi H.I.	Moss	STaGE	180000	Oct-18	Jul-05	9796781	2326
Daewoo 2428	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	Nov-18	Jul-05	9768394	2428
NYK NB 2 Freeport	LNGC	Order	Kawasaki	Moss	STaGE	177000	Dec-18	Jul-05	9791212	1735
Mitsubishi Nagasaki 2327	LNGC	Order	Mitsubishi H.I.	Moss	STRH	180000	Dec-18	Jul-05	9796793	2327
Daewoo 2429	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	Dec-18	Jul-05	9768526	2429
Daewoo 2456	LNGC	Order	DSME	GT NO 96	MEGI	173400	Jan-19	Jul-05	9753014	2456
Pan Africa	LNGC	Order	Hudong-Zhonghua	GT NO 96	TFDE	174000	Jan-19	Jul-05	9750256	H1666A
Daewoo 2433	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	Jan-19	Jul-05	9750749	2433
Daewoo 2459	LNGC	Order	DSME	GT NO 96	MEGI	173400	Jan-19	Jul-05	9767962	2459
SK Shipping SK E&S NB1	LNGC	Order	Hyundai Heavy	TZ Mk. III Flex	XDF	180000	Feb-19	Jul-05	9810549	2937
Hyundai Samho S856	LNGC	Order	Hyundai Samho	TZ Mk. III	MEGI	174000	Feb-19	Jul-05	9781918	S856
Mitsubishi Nagasaki 2332	LNGC	Order	Mitsubishi H.I.		STaGE	165000	Feb-19	Jul-05	9810020	2332
Samsung 2131	LNGC	Order	Samsung	TZ Mk. III	XDF	174000	Mar-19	Jul-05	9744025	2131
Hyundai Samho S857	LNGC	Order	Hyundai Samho	TZ Mk. III	MEGI	174000	Mar-19	Jul-05	9781920	S857
Mitsubishi Nagasaki 2321	LNGC	Order	Mitsubishi H.I.	Moss	STaGE	177000	Apr-19	Jul-05	9770438	2321
Daewoo 2457	LNGC	Order	DSME	GT NO 96	MEGI	173400	Apr-19	Jul-05	9753026	2457
SK Shipping SK E&S NB2	LNGC	Order	Hyundai Heavy	TZ Mk. III Flex	XDF	180000	May-19	Jul-05	9810551	2938
Mitsubishi Nagasaki 2322	LNGC	Order	Mitsubishi H.I.	Moss	STaGE	177000	Jun-19	Jul-05	9770440	2322
Nb Gaslog - Centrica	LNGC	Order	Samsung	GTT Mark V	XDF	180000	Jul-19	Jul-05	9816763	2212
Samsung 2212										
Samsung 2213	LNGC	Order	Samsung	GTT Mark V	XDF	180000	Sep-19	Jul-05	9819650	2213
Daewoo 2489	LNGC	Order	DSME	GT NO 96	MEGI	173400	Nov-19	Jul-05	9792606	2489
Daewoo 2434	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	Nov-19	Jul-05	9750672	2434
Maran Gas NB1	LNGC	Order	DSME	GT NO 96	MEGI	173400	Nov-19	Jul-05	9810379	2467
Maran Gas NB2	LNGC	Order	DSME	GT NO 96	MEGI	173400	Nov-19	Jul-05	9810367	2466
Trinity J/V (Mitsui & Co.)	LNGC	Order	Imabari	GTT Mark III Flex	MEGI	178000	Jan-20			TBN
Imabari Saijo 8200	LNGC	Order	Imabari		MEGI	178000	Oct-21	Jul-05	9778923	8200