LNG Shipping News

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Indian sub-continent ripe for FSRUs

With more than 1.7 bill people, the Indian sub-continent countries face massive power deficits.

This is caused by a rapidly growing energy demand, due to the increasing middle class population boom; urbanisation; solid economic & GDP growth and electricity price fluctuations.

The Indian Government is aiming to change the primary energy mix, as more oil and coal-fired power plants are replaced by natural gas-fired facilities.

It is thought that natural gas will account for 20% of India's energy mix in 2025, compared to only 9% in 2005 and 11% in 2010, respectively, according to the organisers of the FSRU Asia Summit - a branch of IQPC - to be held in Singapore 20th-21st June.

Another more important consideration for the increased push for natural gas is economics. For instance, the market dynamics of the LNG industry has changed substantially over the past few years, as the price of LNG has fallen considerably, making it a less-expensive substitute for coal.

Traditional major LNG importers, such as Japan and South Korea, are reducing their LNG imports, as more of their nuclear power plants come back in operation. While Japan has been known to buy in regularly on the spot market over the past few years and paying premium prices, local importers now prefer to bring forward some of their delivery schedules from their long-term supply contracts.

The FSRU 'Exquisite' is soon to be joined by a second at Pakistan's Port Qasim facility

This has resulted in more supply from traditional sources, such as Qatar, Indonesia and Nigeria and this will increase still further, as large mega LNG plants come on stream, including Australia's Gorgon.

Double import capacity

According to a report published by Citi Research, India is the largest LNG importer after Japan, South Korea, and China. Its import capacity over the next four years is expected to double to 45 mill tonnes per annum against today's 22 mill tonnes per annum.

Another factor, which makes this area an attractive destination for LNG, is the distance from traditional suppliers. Today, it only takes three days to ship LNG to western India from Qatar, compared with more than two weeks to the UK, the summit organisers said.

The increased demand and impending imports have stretched the existing LNG receiving infrastructure in India, while Bangladesh and Pakistan have announced multi-million dollar investments into the facilities needed to receive gas.

This is where FSRUs come in. They allow a faster development timeline and lower upfront capex outlay, compared to onshore regasification and have thus become the preferred solution for several countries entering the LNG market or those who are seeking to expand their receiving infrastructure in the shortest time possible.

Within the next five years, more than 140 mill tonnes per annum of new LNG supply is expected to enter the market, or the equivalent of around 45 FSRUs, the organisers claimed. ■

> "Traditional major LNG importers, such as Japan and South Korea, are reducing their LNG imports, as more of their nuclear power plants come back in operation."

SHIPPING NEWS AGENDA

GasLog's take on the market

In its first quarter 2017 earnings report, GasLog took a look at the markets.

During the quarter, there was continued momentum in the start-up of new LNG liquefaction capacity with the third trains at both Gorgon and Sabine Pass commencing production. In addition, the world's first floating liquefaction terminal, the Petronas-owned 'PFLNG Satu', loaded its first cargo in Malaysia.

Later this year, Ichthys, Wheatstone, Cove Point and Sabine Pass Train 4 are all expected to start production. Wood Mackenzie estimated that there will be projects with around 34 mill tonnes per annum of nameplate capacity coming on stream this year.

Some offtakers of these projects are yet to secure all of their shipping requirements. In addition to newbuild LNGCs, a number of vessels to be used for these projects are expected to be sourced from LNGCs currently operating in the short-term market, which should be positive for the overall shipping supply and demand balance.

In the 2017-2020 period, Wood Mackenzie forecast around 120 mill tonnes per year of new nameplate capacity to come on stream worldwide. GasLog said that this new supply will create significant demand for LNGCs over and above those available in the market and on order today.

Looking longer term, there have been a number of encouraging developments recently: ExxonMobil purchased a 25% interest in Area 4 in Mozambique; ENI's Coral FLNG has reached the final stages of a multi-stage final investment decision (FID) process; Total made a $207 mill investment in Tellurian to develop the Driftwood LNG project; and Qatar Petroleum announced the lifting of the moratorium on incremental production from its North Field.

Last year saw significant increases in LNG demand from a number of new markets, such as Pakistan, Poland, Lithuania and Jordan, as well as major energy growth markets, including China and India. This trend has continued in 1Q17 with further strong increases in demand from China (+23% year-on-year to end March, 2017), as well as in large conventional markets, such as Japan (+13% year-on-year) and South Korea (+18% year-on-year), due to a cold winter and slow progress with nuclear re-starts.

Exploring gas imports

A number of markets that do not currently import gas are exploring LNG as an alternative to oil and coal or to replace declining domestic supply. Many countries with growing power demand, such as Ivory Coast, South Africa, Bangladesh and Myanmar, are looking at FSRUs, as a quick-to-market, cost-effective solution to import LNG.

Other countries with FSRUs already in place are looking at expanding their use, due to the successful commissioning and effective operations of the existing units. FSRUs continue to dominate new import markets, as a quicker to build, more flexible and low cost alternative to an onshore facility. Many of the current and future LNG sellers are focusing their attention on FSRUs, as a key enabler in creating new markets for their LNG, GasLog said.

In the shipping market, short-term charter rates declined in February and March, largely due to seasonally lower LNG demand following the Northern Hemisphere winter. A high number of re-lets during the quarter also weighed on the market. GasLog expected this trend to reverse, as the summer cooling season approaches in the Middle East, Europe and Asia, as well as the Southern Hemisphere winter.

While the recovery in charter rates and utilisation in the LNG shipping market is taking longer than anticipated, some initial signs of increased short-term and long-term activity are being seen. The longer term fundamentals point to a strengthening market in 2017 and beyond, GasLog concluded. ■

Panama Canal to see daily LNGC transits

The number of LNGCs transiting the Panama Canal could average one per day by 2021.

According to Panama Canal Authority CEO, Jorge Quijano, this could be driven by more US supply coming on stream and targeting North Asian demand, he said speaking to Platts during a recent conference.

"During the past nine months of operation of the Panama Canal, we have seen LNG flows that we never expected a few years back," Quijano said on the sidelines of the Sea Asia Conference, held in conjunction with the Singapore Maritime Week 2017.

The initial forecast was for one LNGC transit per week but this had already reached three to four ships, he told Platts.

Much of the future traffic will be driven by emerging LNG exports from the US, of which some will pass through the canal, he said.

In addition to LNG cargoes to North Asia, vessels serving the Pacific Mexican coastal terminals had accounted for almost 55% of the LNGCs passing through the canal to date. ■

NEWS NUDGE

Applications to export US LNG

The US Department of Energy (DoE) has received two applications to export LNG.

One application was received from Freeport LNG Development for authorisation to export previously imported LNG on a short-term basis.

The second application concerned Dominion Cove Point LNG, who asked for authorisation to export previously imported LNG on a short-term basis.

Comments must be received by 12th May, the DoE said.

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Cheniere pushes on with expansion plans

Cheniere Energy has reported first quarter 2017 revenue of $1.1 bill, while consolidated adjusted EBITDA was $483 mill.

Cheniere's expansion plans continue

The 1Q17 operating income reflected a full quarter of operations for Sabine Pass Liquefaction (SPL) Trains 1 and 2.

In January, SPL received investment grade rating (BBB-) from Fitch. During the quarter, SPL issued $2.15 bill senior secured notes, terminated its credit facilities and entered into a $750 mill revolving credit agreement to backstop equity funding for the Corpus Christi project and provide liquidity.

Some 43 cargoes were loaded at Sabine Pass in 1Q17, including seven commissioning cargoes. In April, SPL celebrated its 100th cargo.

By 28th March, Train 3 was substantially completed, while the commissioning process was started on Train 4. Stage 3 (Train 5) was 63.1% complete overall with engineering 99.2% complete, procurement 93% complete and construction 19.2% complete.

As for Corpus Christi, Stage 1 (Trains 1 & 2) was 59.1% complete overall with engineering 100% complete, procurement 78.6% complete, construction 30.7% complete, LNG Tank A 59.5% complete and LNG Tank C 51.7% complete.

The target is for Train 1 to start operations in the first half of 2019 and Train 2 in the second half of 2019. Stage 2 (Train 3) was fully permitted, Cheniere said.

Cheaper costs

Expansion at Cheniere's facilities would cost about $500-$600 per tonne of annual production, significantly cheaper than greenfield projects because of the ability to use existing infrastructure, CEO, Jack Fusco, said during an earnings call.

The five liquefaction trains and associated facilities being completed at Sabine Pass have an estimated cost of $20 bill for peak capacity of 25 mill tonnes per year, equivalent to 3.45 bill cu ft per day of gas, for a unit cost of about $800 per tonne of annual production, the company said.

The estimated cost of the two Corpus Christi liquefaction trains and associated facilities currently under construction is $10.5 bill-$11 bill for combined peak capacity of 10 mill tonnes per year, or $1,050-$1,100 per tonne of annual production.

"We have recently acquired additional real estate positions to enable significant growth at both sites, with the expectation that our existing sites will remain advantaged relative to greenfield for the foreseeable future," Fusco added. ■

Golden Pass authorised to export LNG

Late last month, the US Department of Energy (DoE) announced that it had signed an order authorising Golden Pass Products to export domestically produced LNG to countries that do not have a free trade agreement (FTA) with the US.

Golden Pass was authorised to export LNG up to the equivalent of 2.21 bill cu ft per day of natural gas to any non-FTA country not prohibited by US law or policy from the proposed terminal near Sabine Pass, in Jefferson County, Texas.

With the dramatic increase in domestic natural gas production, the US is transitioning to become a net exporter of natural gas. The DoE has authorised a total of 19.2 bill cu ft per day of natural gas exports to non-FTA countries from planned facilities in Texas, Louisiana, Florida, Georgia, and Maryland. If built, these projects would result in the US being the world's largest LNG exporter, the department claimed.

Golden Pass estimated that the construction of its facility would provide 45,000 direct and indirect jobs over five years and the project would also provide 3,800 direct and indirect permanent jobs over the next 25 years once in operation. The consortium also forecast that the cumulative impact of construction and 25 years of operation would provide up to $2.4 bill in federal tax revenues and $1.2 bill in state tax revenues.

This increase in domestic natural gas production was expected to continue, as the US Energy Information Administration's (EIA) 'Short Term Energy Outlook' predicted an average dry natural gas production rate of 73.1 bill cu ft per day in 2017, the second highest on record, the DoE said.

Federal law generally requires approval of natural gas exports to countries that have an FTA with the US. For countries that do not have an FTA, the Natural Gas Act allows the DoE to grant export authorisations unless it finds that the proposed exports "will not be consistent with the public interest."

The DoE said it conducted an extensive review of the Golden Pass application.

Among other factors, the DoE said that it had considered the economic, energy security and environmental impacts, including macroeconomic studies that showed positive benefits to the US economy in scenarios with LNG exports up to 28 bill cu ft per day.

As a result, the DoE determined that exports from Golden Pass, jointly owned by Qatar Petroleum (70%) and ExxonMobil (30%), for a period of 20 years, was not inconsistent with the public interest. ■

> **"With the dramatic increase in domestic natural gas production, the US is transitioning to become a net exporter of natural gas."**

Flex LNG seeks finance for LNGC newbuildings

John Fredriksen's Flex LNG is attempting to finance the purchase of two MEGI LNGCs currently under construction at Daewoo Shipbuilding and Marine Engineering (DSME).

The funds are to be secured through a private placement of around 89.5 mill new shares at a subscription price of NOK12 per share, raising gross proceeds of NOK1.07 bill ($125 mill).

The total amount to be paid for the acquisition of the vessels, which are scheduled for delivery in the second and third quarters of 2019, is $180 mill each.

Of this amount, 20% is payable within three days from a successful completion of the private placement and the remaining part of the contract price is payable upon delivery of the vessels, the company said in an stock exchange filing.

Completion of the private placement is conditional upon the necessary corporate agreements, including approval from the company's shareholders at an extraordinary general meeting to be held in mid-May and the new shares having been fully paid and legally issued.

In mid-February, the company said that it planned to purchase the LNGCs from affiliates of Geveran Trading, the company's largest shareholder.

Subsequently, the Norwegian Financial Supervisory Authority said that it had approved a prospectus for FLEX LNG, dated 8th May, 2017, relating to:

(A) The listing of 72,434,782 new shares issued in a private placement completed on 9th March, 2017;

(B) A subsequent offering of up to 7,200,000 new shares;

(C) The listing of 78,000,000 consideration shares issued in connection with the company's acquisition of shipbuilding contracts for two MEGI LNGCs newbuilds completed 9th March, 2017;

(D) The listing of 89,479,166 new shares issued in a private placement that was placed on 27th April, 2017, subject to approval by the company's shareholders in a general meeting scheduled for 15th May, 2017.

The subscription period for the subsequent offering will commence at 09:00 a.m. CET on 18th May, 2017 and expire at 16:30 p.m. CET on 1st June, 2017.

Arctic Securities is acting as manager for the subsequent offering. ■

ENGIE and AES expand partnership

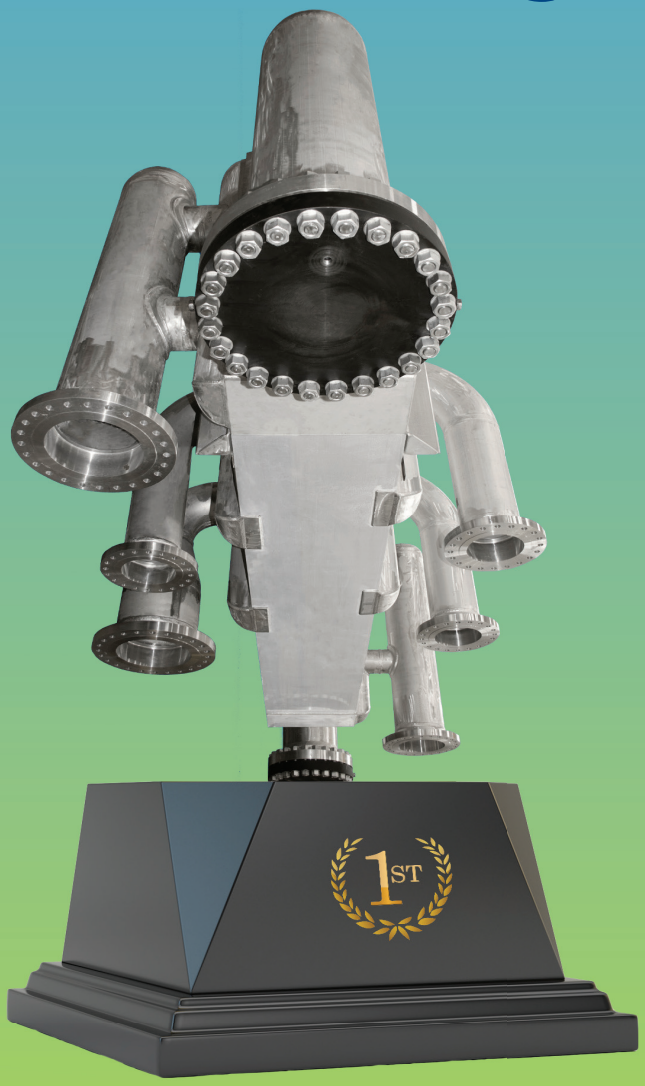
ENGIE and the AES Corp are to enter into a joint venture to market and sell LNG to third parties in Central America.

The joint venture will use the Costa Norte LNG terminal currently under construction in Colón, Panama, which is owned 50/50 by AES and Inversiones Bahía. The total capacity of this terminal will be around 1.5 mill tonnes per annum, of which 25% will be used for the 380 MW AES Colón power station currently under construction on the same site.

ENGIE will supply up to 400,000 tonnes of LNG per year to the power plant by the beginning in 2018. The remaining capacity will be mainly available to market and sell to third parties, including up to 700,000 tonnes per year of LNG sourced from ENGIE, primarily through the US Cameron gas liquefaction project.

AES said that this joint venture further strengthens the joint agreement signed by the two companies late last year to jointly market LNG in the Caribbean from AES' Andres regasification plant in the Dominican Republic. ■

Chart Brazed Aluminum Heat Exchangers



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GasLog increases revenue and turns a profit

GasLog and its subsidiaries have announced revenues of $128.3 mill, a profit of $23.4 mill and earnings per share of $0.08, for the first quarter of this year.

This compares with the 1Q16 figures of $104.4 mill, a loss of $5.3 mill and loss of $0.23 per share, respectively.

Adjusted profit in 1Q17 under GAAP was $21.9 mill (1Q16: $6.2 mill) and EBITDA increased to $89.1 mill (1Q16: $62.3 mill). Adjusted EBITDA was $89.3 mill (1Q16: $62.2 mill) and adjusted earnings per share was $0.06, against an adjusted loss per share of $0.09 for 1Q16.

A quarterly dividend of $0.14 per common share is payable on 25th May, 2017.

CEO Paul Wogan has overseen GasLog's improved results

Earnings/loss per share (EPS) and adjusted EPS are net of the profit attributable to the non-controlling interest of $14.6 mill and the dividend on preferred stock of $2.5 mill for the quarter, compared with $10.6 mill and $2.5 mill, respectively, for 1Q16.

During the last quarter, Gaslog Ltd announced the dropdown of the 'GasLog Greece' to GasLog Partners for $219 mill. In January, 2017, GasLog Partners successfully completed an equity offering of 3,870,000 common units raising net proceeds of $78 mill, which will be used to fund the vessel's dropdown.

The company also announced the completion of a public offering of $250 mill of 8.875% senior unsecured notes, due in 2022. Post quarter end, $150 mill of the net proceeds were used for the partial prepayment of the junior tranche of the credit agreement entered into on 18th February, 2016, originally due in April, 2018.

Gastrade purchased

GasLog also closed the acquisition of a 20% shareholding in Gastrade, a private limited company licensed to develop an independent natural gas system offshore Alexandroupolis in Northern Greece, utilising an FSRU along with other fixed infrastructure.

Paul Wogan, GasLog CEO, stated: "GasLog had another active quarter, achieving record revenues and EBITDA for the company. During the period, GasLog Partners raised $78 mill in new equity and we subsequently announced the sale of the 'GasLog Greece' to GasLog Partners for $219 mill. This second dropdown transaction in six months demonstrates GasLog Partner's ability to recycle capital through the business to support GasLog's ambitious LNG carrier and FSRU growth plans.

"As we execute further drop-downs from our extensive pipeline of contracted vessels, GasLog will increase its share of the cash flows distributed by GasLog Partners, further enhancing the ability of GasLog to fund its growth.

"We were pleased to execute a $250 mill US bond offering during the quarter, which provides GasLog with access to a new and liquid pool of capital. The transaction also enables the company to push out most of its 2018 debt maturities to 2022, creating additional liquidity for growth.

"In the short-term shipping market, spot rates fell from the highs seen during the Northern Hemisphere winter. We believe this rate sensitivity to seasonal changes in demand demonstrates that the market is tightening. We expect the current marginal vessel oversupply to be absorbed in the coming months, as new liquefaction projects come online, leading to a recovery in rates in 2018," he said. ■

Exmar takes a hit

Gas carrier owner and manager Exmar has reported a loss after tax of $4.1 mill for the first quarter of this year, compared with a profit of $9.3 mill in 1Q16 on a turnover of $21.5 mill, compared with $25.5 mill in the same period the year before.

EBIT crashed to $3.4 mill, compared with $17.1 mill in 1Q16, while EBITDA fell to minus $9 mill in 1Q17, compared with minus $700,000 in the same period of 2016.

The EBIT for the LNG and LNG Infrastructure Division in 1Q17 was $5 mill (including a $0.5 mill cost associated with the failed VOPAK transaction), compared to $13.3 mill in 1Q16. The first quarter 2016 EBIT included a $5 mill termination fee from Pacific Exploration and Production on the 'Caribbean FLNG'.

All five vessels (four FSRUs and one conventional LNGC) currently employed on long term timecharters have performed according to their contracts. However, the 1Q17 results from the LNG division were negatively impacted by the lack of employment for the 'Excel' during the period. The vessel commenced a three month timecharter at the end of March with extension options until the end of the year in line with the current market rates.

As previously announced, Exmar and VOPAK decided to discontinue their discussions on a potential sale of the FSRUs. This transaction was subject to multiple restructuring of current companies and operations, as well as the consent from various stakeholders that eventually could not be met.

The idle 'Excel' helped to bring Exmar's revenue down

Exmar will therefore continue to benefit from the four FSRUs on long term charter to Excelerate Energy, the company said. The company also claimed to be the world's largest FSRU operator with 10 units under management and an 11th FSRU to be delivered this year.

Several alternative partnerships for FSRU projects are under discussion, Exmar said.

Financing of the 'Caribbean FLNG' and final delivery of the unit still remain subject to the approval of Chinese local authorities, which is expected to be received this month. Progress has been made on the future employment of the FLNG, the company claimed. ■

NEWS NUDGE

Three elderly LNGCs sold

Broking sources have reported the sale of 1978-1979- built LNGCs 'LNG Leo', 'LNG Gemini' and 'LNG Virgo', to Sinokor.

They are of 126,750 cu m capacity and are fitted with GE turbines.

No price indication was given.

Höegh takes delivery of another FSRU

Höegh LNG took delivery of its latest FSRU newbuilding, the 170,000 cu m 'Höegh Giant', on 27th April.

The FSRU was built by the South Korean shipbuilder, Hyundai Heavy Industries and will be moored at the Tema LNG Project in Ghana under a 20-year charter contract with Quantum Power (QP), who also has a further five year option period.

Start-up is expected in the middle of next year.

Höegh LNG has three more FSRUs under construction, which are scheduled for delivery in the first and fourth quarters of 2018, and the second quarter of 2019, respectively.

"We have 10 FSRUs in operation or under construction, and intend to continue growing by winning more contracts and adding to our newbuilding programme, while seamlessly starting up commercial operations in new locations. Our ambition is to remain the market leader in the FSRU industry," Sveinung Støhle, President and CEO, said.

GasLog extends charter - drops down another LNGC

On 28th April, 2017, GasLog signed an amendment to the 'GasLog Skagen' seasonal timecharter agreement, by which the seasonal charter was replaced by a continuous timecharter for 2.4 years, due to end in August, 2019.

The amended charter will cover the same number of fixed days as the previous seasonal charter and will eliminate redelivery risks at the beginning and end of each seasonal period. In addition, the amended charter will provide assurance of revenue through August, 2019.

In addition, GasLog has confirmed that GasLog Partners has completed the acquisition of 100% of the shares in the entity that owns and charters the 174,000 cu m, tri-fuel LNGC 'GasLog Greece'.

She has been operated by GasLog since her delivery in 2016 and is currently on a long-term timecharter with a wholly owned subsidiary of Royal Dutch Shell through March, 2026. Shell has the option to extend this charter by an additional five years. ■

Awilco's loss grows

Awilco LNG suffered a loss of $10.4 mill in the first quarter of this year, compared to a loss of $2.5 mill in 4Q16.

Freight income fell to $2.5 mill for 1Q17, compared with $9.1 mill in 4Q16 and EBITDA was minus $2 mill, compared with plus $ 6.1 mill in the previous quarter.

Vessel utilisation was only 41 %, compared to 83 % in 4Q16.

The drop in freight income income for the quarter was as a result of low activity and weak spot market rates. Both 'WilForce' and 'WilPride' operated in the spot market in 1Q17. Voyage related expenses increased to $1.6 mill, compared to $300,000 in the previous quarter, due to extended periods of vessels being idle and subsequent repositioning costs.

Book value of vessels was $369.2 mill as at 31st March, 2017. Total current assets were $24.6 mill as at the same date, compared with $36.4 mill in 4Q16, of which cash and cash equivalents were $19.4 mill. Total equity stood at $122.4 mill.

Idle vessels resulted in greater losses

After steady rate improvement and utilisation in the second half of 2016, the LNG shipping market weakened unexpectedly in the beginning of 2017. Both rates and utilisation thus far in 2017 have been significantly below Awilco LNG's expectations. Activity in the market has shown signs of improvement in 2Q17, but market rates are still significantly below current cash breakeven levels, the company said.

Due to the difficult current spot market conditions negatively impacting liquidity, Awilco said that it was evaluating its capital structure and was in positive discussions with its main creditor - Teekay LNG Partners.

The Board said that it expected the process will be successfully completed within a short period of time and on this basis the Board confirmed that it is correct to prepare the 1Q17 financial statements on a going concern assumption. ■

MISC's net profit up 18%

Gas carrier, tanker and offshore owner, MISC Bhd, recorded a 18% rise in net profit for its first quarter of 2017, as revenue expanded 25%.

This rise was largely due to consolidation of the Gumusut-Kakap Semi-Floating Production System (GKL).

Net profit for the quarter came in at RM676.2 mill compared with RM571 mill in 1Q16.

Revenue for 1Q17 grew to RM2.98 bill from RM2.39 bill, mainly from GKL's income from the offshore segment and improved contribution from the LNG sector after two new vessels commenced their charters.

However, MISC's operating profit for the quarter was 30% lower year-on-year at RM681.3 mill, versus RM975.5 mill.

The drop came from four of its five business segments - LNG, petroleum, heavy engineering and others, although the offshore segment returned to the black with a profit of RM302.1 mill, versus a loss of RM164.5 mill in 1Q16.

On the prospects for this year, MISC said vessel oversupply was expected to persist in the LNG shipping market, as heavy deliveries of new LNGCs will continue, coupled with significant number of older vessels coming off charter, which would result in LNGC charter rates remaining soft in the near-term.

"Cost management and resource optimisation remains an on-going priority. Our existing portfolio of long term contracts will continue to support the stable financial performance of the offshore business segment," MISC said in its financial statement. ■

RasGas delivers 2,000th KOGAS cargo

RasGas delivered its 2,000th cargo of LNG to Korea Gas Corp (KOGAS) on 25th April, 2017.

The cargo was shipped by the KOGAS LNGC, 'SK Summit', which also carried the first LNG cargo supplied by RasGas to South Korea in August, 1999.

In recognition of this milestone, RasGas CEO, Hamad Mubarak Al Muhannadi, stated, "We are deeply proud of our long-standing partnership with KOGAS, which has been maintained for more than two decades. KOGAS is not only RasGas' largest long-term customer, it is also our foundation customer and we are honoured by the trust they have placed in RasGas over the years to safely and reliably deliver LNG to meet Korea's energy needs from Qatar."

KOGAS CEO, Mr Seung-Hoon said in a statement: "I would like to congratulate on this memorial event of 2,000th cargo shipment and thank the colleagues of RasGas for their contributions to the uninterrupted services in the course of delivery of LNG from Qatar to Korea.

"Over the last few decades, RasGas and KOGAS have been proving the power of harmonious partnership between seller and buyer. I strongly believe that the partnership brought us this achievement today," he said.

KOGAS was established in 1983 and in October, 1995, RasGas signed its first-ever long-term SPA with KOGAS. RasGas and KOGAS have subsequently entered into two further long-term SPAs and today RasGas delivers more than 9 mill tonnes of LNG to KOGAS annually.

RasGas' Interim Marketing and Shipping Officer, Ali Khalaf Al Kaabi, added, "This 2,000th cargo delivery truly does underline the commitment both our companies have to providing customers with flexible, competitive and cleaner energy. Our relationship with KOGAS has been mutually beneficial in this respect, but it has also ensured a sustainable energy supply for the people and the economy of Korea. This is something we are especially pleased to have been part of." ■

TMC to supply compressors to Höegh FSRU

TMC Compressors (TMC) has won a contract from Hyundai Heavy Industries to supply a complete marine compressed air system to a newbuilding FSRU building for Höegh LNG.

TMC's scope of work includes engineering, manufacturing and supply of a complete compressed air system consisting of 2 x 44 kW service air compressors and 2 x 44 kW control air compressors.

The contract value was not revealed.

"This is the 8th or 9th FSRU that Hyundai Heavy Industries is building for Höegh LNG, and we have delivered marine compressed air systems to all of them. Repeat orders such as this for high-end vessels is a confirmation that both Höegh and Hyundai Heavy Industries value the reliability a fully marinised compressor technology like ours provides," said Per Kjellin, TMC managing director.

Höegh LNG's FSRU will have a minimum regasification capacity of 750 mill cu ft per day by 2018. The newbuild vessel will be used at an LNG import project in Pakistan, which Qatar Petroleum, Total, Mitsubishi, ExxonMobil, and Höegh LNG is developing in collaboration with Global Energy Infrastructure Limited (GEIL).

"This is a high profile development with a number of reputable industry giants involved, so we are very happy that our compressor technology has been chosen for this FSRU," added Kjellin. ■

TMC has won another contract from Höegh LNG

Management buyout secures Woodfield future

Marine loading arm manufacturer, Woodfield Systems, is now under new ownership following a management buyout (MBO) by four of its senior management team.

David Williams, Christina Collins, Gary Reddecliffe and Glen Doherty have acquired a majority shareholding in the business from its previous parent, MacGregor, which is part of Cargotec. MacGregor will retain a minority shareholding in the new parent company as part of the deal.

"Woodfield Systems was acquired as part of the Aker Solutions acquisition by MacGregor back in 2014, however, due to the specific client base of Woodfield we have always sat outside the core portfolio of MacGregor," said sales director, David Williams.

"The MBO allows us to fully focus on our core business and supporting our customers with our range of products and services for the onshore marine loading and fluid transfer of crude oil, refined products, chemicals LPG and LNG."

The MBO team was supported by Scott Miles, Advisory and Assurance Partner of regional finance and accountancy experts Kreston Reeves, in negotiating the deal for the buyout. Legal support on the transaction was provided by Outset Group. ■

Qatargas delivers first cargo to Yuedong

Qatargas recently delivered the first natural gas cargo to China National Oil Corp's (CNOOC) Yuedong LNG terminal.

The cargo, delivered on board the Qatargas-chartered Q-Flex LNGC, 'Al Kharaitiyat', was used to commission CNOOC's latest LNG terminal.

"Qatargas is delighted to supply the commissioning cargo to CNOOC's Yuedong Terminal. We are also pleased to see Qatari LNG playing an increasingly important role in meeting the growing demand for LNG in the People's Republic of China," Khalid Bin Khalifa Al-Thani, Qatargas CEO, said.

The 'Al Kharaitiyat' seen at Yuedong Terminal No 1

The Yuedong LNG receiving terminal, which has an initial receiving capacity of 2 mill tonnes per annum, is owned and operated by CNOOC. The new terminal joins the company's existing terminals in Shanghai, Guangdong, Fujian, Zhejiang and Hainan.

This is the fourth commissioning cargo from Qatargas to CNOOC's LNG terminals, bringing Qatargas' total number of inaugural cargoes to LNG terminals in China to seven, the company said. ■

Africa's first FLNG nears

The Republic of Equatorial Guinea, Ophir Holdings & Ventures, a subsidiary of Ophir Energy, OneLNG and La Compañía Nacional De Petróleos De Guinea Ecuatorial (GEPetrol) have signed an umbrella agreement (UA) to establish the legal and fiscal framework for the Fortuna FLNG Project, Africa's first deepwater FLNG project.

The UA reconfirms the participation rights of GEPetrol as a partner for 20% of the upstream portion of the project and for a future potential participation of up to 30% ownership of the midstream FLNG by Equatorial Guinea or a designated state company.

Signing the UA was one of the key milestones passed ahead of Final Investment Decision (FID), which is on schedule for mid-2017 with first gas expected in mid-2020.

The execution of the UA completes one of the four key milestones required for FID. The other three are: (i) the award of construction contracts for the upstream and midstream vessel, (ii) the completion of the project finance facility and (iii) a decision on the amount of gas to be termed at FID and signature of resulting LNG SPAs.

With respect to these milestones:

(i) The impending award of construction contracts is well progressed and on schedule.

(ii) Term sheets have been agreed with a consortium of Chinese-based lenders. The counterparties to the financing have now entered into final documentation stage.

(iii) The Fortuna partners will decide in the coming weeks the amount of the expected 2.5 mill tonnes per annum to put under contract at FID from the several offtake options available.

The expected total capital expenditure for the integrated project is about $2 bill to reach first gas. Around $1.2 bill is expected to be debt financed, with full drawdown by the start of commercial operations. ■

ABS and Hanjin reveal FSRU design concept

Working with Hanjin Heavy Industries (HHIC), ABS has completed a new smaller FSRU design concept.

"Industry is exploring options for getting gas to new and expanding markets," said ABS Vice President for Global Gas Solutions, Patrick Janssens. "As a technology leader, ABS is working with innovators who are looking more closely at FSRUs as a flexible and efficient gas delivery solution."

The smaller 25,000 cu m design concept incorporates four type C cargo tanks to simplify the transfer of gas to the storage terminal.

In reviewing this new design, ABS applied its latest safety standards and confirmed that the conceptual design meets applicable class requirements.

"Partnering with ABS and leveraging its knowledge and experience in LNG regasification helped us prove the feasibility of the concept and better understand the safety implications throughout development of the design," said HHIC Executive Managing Director, Moon-Tae Yoon. "This project is an important milestone for HHIC and this type of asset will serve a critical need in markets that are looking for efficient ways to get gas."

Recognising the changing landscape and increased industry focus on gas, ABS launched its Global Gas Solutions team in 2013 to support industry in developing gas-related projects. ■

ABS head of Global Gas Solutions - Patrick Janssens

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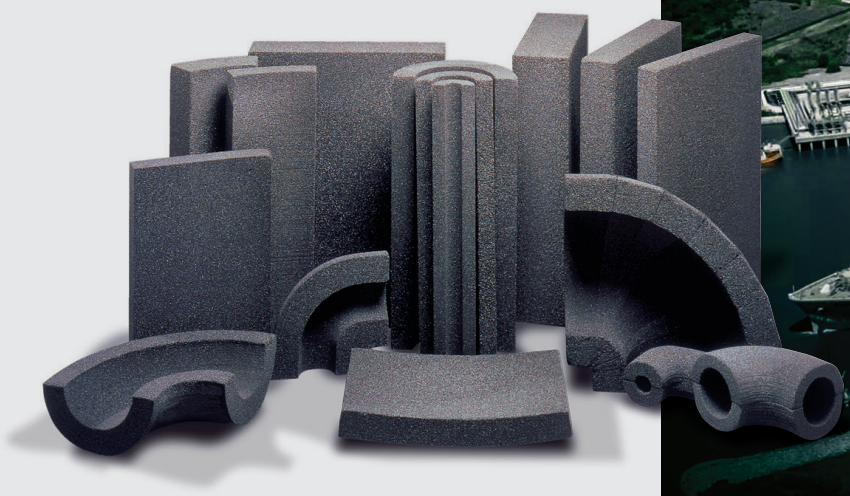

WORLD LNG CARRIER ORDERBOOK

Name	Segment	Status	Yard	Design	Prop	Capacity	Delivery Date	Ordered	Imo	Hull No	Primary Owner
Asia Venture	LNGC	Order	Samsung	TZ Mk. III	TFDE	160000	01/04/2017	2012	9680190	2070	Chevron
Kawasaki Sakaide 1718	LNGC	Order	Kawasaki	Moss	TFDE	180000	01/04/2017	2013	9698123	1718	K-Line
Hyundai Princepia	LNGC	Order	DSME	GT NO 96	TFDE	174000	01/04/2017	2014	9761841	2451	Hyundai LNG Shipping
SM Eagle	LNGC	Order	DSME	GT NO 96	TFDE	174000	01/04/2017	2014	9761827	2449	Korea Line
Hyundai Peacepia	LNGC	Order	DSME	GT NO 96	TFDE	174000	01/05/2017	2014	9761853	2452	Hyundai LNG Shipping
Daewoo 2450	LNGC	Order	DSME	GT NO 96	TFDE	174000	01/05/2017	2014	9761839	2450	Korea Line
Jmu Tsu 5070	LNGC	Order	Japan Marine United Corp (Jmu)	SPB	TFDE	165000	01/05/2017	2014	9736092	5070	MOL
Hudong-Zhonghua H1717a	LNGC	Order	Hudong-Zhonghua	Membrane	TFDE	174000	01/06/2017	2012	9672844	H1717A	China LNG Shipping Holdings
Hudong-Zhonghua H1719a	LNGC	Order	Hudong-Zhonghua	Membrane	TFDE	174000	01/06/2017	2013	9694751	H1719A	China LNG Shipping Holdings
Oceanic Breeze	LNGC	Order	Mitsubishi H.I.	Moss	STRH	155300	01/07/2017	2013	9698111	2310	K-Line
Seri Cempaka	LNGC	Order	Hyundai Heavy	Moss	STRH	150000	01/07/2017	2013	9714290	2731	Petronas
Murex	LNGC	Order	DSME	GT NO 96	MEGI	173400	01/07/2017	2013	9705641	2416	Teekay LNG
Daewoo 2462	LNGC	Order	DSME	GT NO 96	TFDE	180000	01/07/2017	2015	9771913	2462	MOL
Bishu Maru	LNGC	Order	Kawasaki	Moss	TFDE	164700	01/08/2017	2013	9691137	1713	K-Line
Seri Camar	LNGC	Order	Hyundai Heavy	Moss	STRH	150000	01/08/2017	2013	9714305	2732	Petronas
Jmu Tsu 5071	LNGC	Order	Japan Marine United Corp (Jmu)	SPB	TFDE	165000	01/08/2017	2014	9752565	5071	NYK
Daewoo 2417	LNGC	Order	DSME	GT NO 96	MEGI	173400	01/08/2017	2013	9705653	2417	Teekay LNG
Daewoo 2421	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	01/08/2017	2014	9768368	2421	Dynagas
Hudong-Zhonghua H1718a Holdings	LNGC	Order	Hudong-Zhonghua	Membrane	TFDE	174000	01/09/2017	2013	9694749	H1718A	China LNG Shipping
Samsung 2153	LNGC	Order	Samsung	KC-1	TFDE	174000	01/09/2017	2014	9761803	2153	SK Shipping
Samsung 2154	LNGC	Order	Samsung	KC-1	TFDE	174000	01/09/2017	2014	9761815	2154	SK Shipping
Daewoo 2426	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	30/09/2017	2014	9750658	2426	MOL
Castillo De Caldelas	LNGC	Order	Imabari	TZ Mk. III	MEGI	178000	01/10/2017	2014	9742819	8188	Elcano
Mitsubishi Nagasaki 2316	LNGC	Order	Mitsubishi H.I.	Moss	STRH	153000	01/10/2017	2014	9743875	2316	NYK
SK Resolute	LNGC	Order	Samsung	TZ Mk. III	XDF	182000	01/10/2017	2013	9693173	2081	SK Shipping
Hudong-Zhonghua H1720a	LNGC	Order	Hudong-Zhonghua	Membrane	TFDE	174000	01/10/2017	2012	9672818	H1720A	China LNG S Holdings
Jmu Tsu 5072	LNGC	Order	Japan Marine United Corp (Jmu)	SPB	TFDE	165000	01/10/2017	2014	9758832	5072	MOL
Eduard Toll	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	31/10/2017	2014	9750696	2423	Teekay LNG
Castillo De Merida	LNGC	Order	Imabari	TZ Mk. III	MEGI	178000	01/11/2017	2014	9742807	8177	Elcano
Seri Cemara	LNGC	Order	Hyundai Heavy	Moss	STRH	150000	01/12/2017	2014	9756389	2735	Petronas
Kawasaki Sakaide 1731	LNGC	Order	Kawasaki	Moss	TFDE	177000	01/12/2017	2015	9774135	1731	MOL
Daewoo 2453	LNGC	Order	DSME	GT NO 96	MEGI	173400	01/12/2017	2014	9770921	2453	Teekay LNG
Rudolf Samoylovich	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	01/12/2017	2014	9750713	2425	Teekay LNG
Daewoo 2422	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	01/12/2017	2014	9768370	2422	Dynagas
Daewoo 2424	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	31/12/2017	2014	9750701	2424	MOL
Flex Endeavour	LNGC	Order	DSME	GT NO 96	MEGI	172400	01/01/2018	2014	9762261	2447	John Fredriksen
Flex Enterprise	LNGC	Order	DSME	GT NO 96	MEGI	172400	01/01/2018	2014	9762273	2448	John Fredriksen
SK Audace	LNGC	Order	Samsung	TZ Mk. III	XDF	182000	01/01/2018	2013	9693161	2080	SK Shipping
Hudong-Zhonghua H1664a	LNGC	Order	Hudong-Zhonghua	GT NO 96	TFDE	174000	01/01/2018	2014	9750232	H1664A	Teekay LNG
Pan Asia	LNGC	Order	Hudong-Zhonghua	GT NO 96	TFDE	174000	01/01/2018	2014	9750220	H1663A	Teekay LNG
BW Tulip	LNGC	Order	DSME	GT NO 96	MEGI	173000	01/01/2018	2014	9758064	2435	BWGas
Daewoo 2460	LNGC	Order	DSME	GT NO 96	MEGI	174000	01/01/2018	2014	9766889	2460	Chandris
Teekay NB-6	LNGC	Order	DSME	GT NO 96	MEGI	173400	01/02/2018	2014	9770933	2454	Teekay LNG
Hyundai Ulsan 2800	LNGC	Order	Hyundai Heavy	TZ Mk. III	XDF	174000	01/02/2018	2014	9748899	2800	GasLog
Daewoo 2443	LNGC	Order	DSME	GT NO 96	MEGI	173400	01/02/2018	2014	9766554	2443	BP
Jmu Tsu 5073	LNGC	Order	Japan Marine United Corp (Jmu)	SPB	TFDE	165000	01/02/2018	2014	9758844	5073	MOL
Samsung 2130	LNGC	Order	Samsung	TZ Mk. III	XDF	174000	01/03/2018	2014	9744013	2130	GasLog
Daewoo 2442	LNGC	Order	DSME	GT NO 96	MEGI	173400	01/03/2018	2014	9766542	2442	BP
Hyundai Ulsan 2801	LNGC	Order	Hyundai Heavy	TZ Mk. III	XDF	174000	01/03/2018	2014	9748904	2801	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 = 26 April 2017

Name	Segment	Status	Yard	Design	Prop	Capacity	Delivery Date	Ordered	Imo	Hull No	Primary Owner
MOL E.On.	LNGC	Order	DSME	GT NO 96	TFDE	179900	01/04/2018			TBN	MOL
Kawasaki Sakaide 1720	LNGC	Order	Kawasaki	Moss	TFDE	164000	01/04/2018	2014	9749609	1720	K-Line
Mitusi NB 2 Cameron	LNGC	Order	Kawasaki	Moss	STRH	155000	01/04/2018	2014	9759252	1729	MOL
Daewoo 2441	LNGC	Order	DSME	GT NO 96	MEGI	173400	01/04/2018	2014	9766530	2441	BP
Mitsui Cameron Shi NB 1	LNGC	Order	Samsung	Mark III Flex	TFDE	177000	01/05/2018	2014	9760768	2148	MOL
Samsung 2149	LNGC	Order	Samsung	Mark III Flex	TFDE	177000	01/05/2018	2014	9760770	2149	MOL
Mitsui KHI NB 1	LNGC	Order	Kawasaki	Moss	STRH	155000	01/05/2018	2014	9759240	1728	MOL
Daewoo 2432	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	01/05/2018	2014	9750660	2432	MOL
Daewoo 2430	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	01/05/2018	2014	9750725	2430	Teekay LNG
Daewoo 2455	LNGC	Order	DSME	GT NO 96	MEGI	173400	01/05/2018	2014	9770945	2455	Teekay LNG
Daewoo 2464	LNGC	Order	DSME	GT NO 96	MEGI	173400	01/05/2018	2015	9785158	2464	Chandris
Mitsubishi Nagasaki 2324	LNGC	Order	Mitsubishi H.I.	Moss	STaGE	165000	01/06/2018	2015	9779226	2324	NYK
Daewoo 2458	LNGC	Order	DSME	GT NO 96	MEGI	173400	01/06/2018	2015	9767950	2458	Maran Gas Maritime
Daewoo 2444	LNGC	Order	DSME	GT NO 96	MEGI	173400	01/06/2018	2014	9766566	2444	BP
Daewoo 2427	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	01/06/2018	2014	9768382	2427	Dynagas
Hudong-Zhonghua H1665a	LNGC	Order	Hudong-Zhonghua	GT NO 96	TFDE	174000	01/06/2018	2014	9750244	H1665A	Teekay LNG
Samsung 2107	LNGC	Order	Samsung	TZ Mk. III	MEGI	174000	01/07/2018	2013	9709025	2107	Flex LNG
BW Lilac	LNGC	Order	DSME	GT NO 96	MEGI	173000	01/07/2018	2014	9758076	2436	BWGas
Daewoo 2445	LNGC	Order	DSME	GT NO 96	MEGI	173400	01/07/2018	2014	9766578	2445	BP
Samsung 2150	LNGC	Order	Samsung	Mark III Flex	TFDE	177000	10/07/2018	2014	9760782	2150	MOL
Daewoo 2446	LNGC	Order	DSME	GT NO 96	MEGI	173400	01/08/2018	2014	9766580	2446	BP
Mitsubishi Nagasaki 2323	LNGC	Order	Mitsubishi H.I.	Moss	STaGE	180000	01/08/2018	2015	9774628	2323	MOL
Daewoo 2431	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	01/09/2018	2014	9750737	2431	Teekay LNG
MOL NB 2 Freeport	LNGC	Order	Kawasaki	Moss	STaGE	177000	01/10/2018	2015	9791200	1734	MOL
Mitsubishi Nagasaki 2325	LNGC	Order	Mitsubishi H.I.	Moss	STaGE	165000	01/10/2018	2015	9779238	2325	NYK
Mitsubishi Nagasaki 2326	LNGC	Order	Mitsubishi H.I.	Moss	STaGE	180000	01/10/2018	2015	9796781	2326	NYK
Samsung 2108	LNGC	Order	Samsung	TZ Mk. III	MEGI	174000	31/10/2018	2013	9709037	2108	Flex LNG
Daewoo 2428	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	01/11/2018	2014	9768394	2428	Dynagas
NYK NB 2 Freeport	LNGC	Order	Kawasaki	Moss	STaGE	177000	01/12/2018	2015	9791212	1735	MOL
Mitsubishi Nagasaki 2327	LNGC	Order	Mitsubishi H.I.	Moss	STRH	180000	01/12/2018	2015	9796793	2327	NYK
Daewoo 2429	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	01/12/2018	2014	9768526	2429	Dynagas
Daewoo 2456	LNGC	Order	DSME	GT NO 96	MEGI	173400	01/01/2019	2015	9753014	2456	Maran Gas Maritime
Pan Africa	LNGC	Order	Hudong-Zhonghua	GT NO 96	TFDE	174000	01/01/2019	2014	9750256	H1666A	Teekay LNG
Daewoo 2433	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	01/01/2019	2014	9750749	2433	Teekay LNG
Daewoo 2459	LNGC	Order	DSME	GT NO 96	MEGI	173400	01/01/2019	2015	9767962	2459	Maran Gas Maritime
SK Shipping SK E&S NB1	LNGC	Order	Hyundai Heavy	TZ Mk. III Flex	XDF	180000	01/02/2019	2016	9810549	2937	SK Shipping
Hyundai Samho S856	LNGC	Order	Hyundai Samho	TZ Mk. III	MEGI	174000	01/02/2019	2015	9781918	S856	Teekay LNG
Mitsubishi Nagasaki 2332	LNGC	Order	Mitsubishi H.I.		STaGE	165000	01/02/2019	2015	9810020	2332	Mitsubishi
Samsung 2131	LNGC	Order	Samsung	TZ Mk. III	XDF	174000	01/03/2019	2014	9744025	2131	GasLog
Hyundai Samho S857	LNGC	Order	Hyundai Samho	TZ Mk. III	MEGI	174000	01/03/2019	2015	9781920	S857	Teekay LNG
Mitsubishi Nagasaki 2321	LNGC	Order	Mitsubishi H.I.	Moss	STaGE	177000	01/04/2019	2015	9770438	2321	NYK
Daewoo 2457	LNGC	Order	DSME	GT NO 96	MEGI	173400	01/04/2019	2014	9753026	2457	Maran Gas Maritime
SK Shipping SK E&S NB2	LNGC	Order	Hyundai Heavy	TZ Mk. III Flex	XDF	180000	01/05/2019	2016	9810551	2938	SK Shipping
Mitsubishi Nagasaki 2322	LNGC	Order	Mitsubishi H.I.	Moss	STaGE	177000	01/06/2019	2015	9770440	2322	MOL
Flex Constellation	LNGC	Order	DSME	GT NO 96	MEGI	173400	01/06/2019	2017	9825427	2470	John Fredriksen
Nb Gaslog - Centrica Samsung 2212	LNGC	Order	Samsung	GTT Mark V	XDF	180000	01/07/2019	2016	9816763	2212	GasLog
Flex Courageous	LNGC	Order	DSME	GT NO 96	MEGI	173400	01/08/2019	2017	9825439	2471	John Fredriksen
Hyundai Ulsan 2964	LNGC	Order	Hyundai Heavy	TZ Mk. III Flex	MEGI	180000	01/08/2019	2017	9825568	2964	Knutsen
Samsung 2213	LNGC	Order	Samsung	GTT Mark V	XDF	180000	01/09/2019	2016	9819650	2213	GasLog
Daewoo 2489	LNGC	Order	DSME	GT NO 96	MEGI	173400	01/11/2019	2015	9792606	2489	BWGas
Daewoo 2434	LNGC	Order	DSME	GT NO 96	TFDE - Azipod	172410	01/11/2019	2014	9750672	2434	Teekay LNG
Maran Gas NB1	LNGC	Order	DSME	GT NO 96	MEGI	173400	19/11/2019	2016	9810379	2467	Maran Gas Maritime
Maran Gas NB2	LNGC	Order	DSME	GT NO 96	MEGI	173400	19/11/2019	2016	9810367	2466	Maran Gas Maritime
Trinity J/V (Mitsui & Co.)	LNGC	Order	Imabari	GTT Mark III Flex	MEGI	178000	01/01/2020			TBN	K-Line
Imabari Saijo 8200	LNGC	Order	Imabari		MEGI	178000	01/10/2021	2015	9778923	8200	Trinity LNG Transport SA

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 = 26 April 2017

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/Lucia Ambition	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 (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?
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 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	LNG Prime	2,250	LNG	Northwest Europe	Yes	Veka Deen LNG

For more information please visit http://small-lng.com
*Includes multi-gas, ethylene and LNG bunker ships with 40,000 cubic metres LNG cargo capacity or less
TBN = To Be Nominated indicates ships are still at construction/planning stage
** = project shelved † =Data to be verified Data last updated = 26 April 2017

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Built	Name	CBM	Cargo Type	Trading area	Trading in LNG?	Ship Owner / Operator
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	Yuan He 1	30,000	LNG	China	Yes	CSR
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	Coralius	5,800	LNG	Northwest Europe/Baltics	Yes, for Skangas	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	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
2019	KLine TBN	7,500	LNG	Korea	Yes	Korea Line
2019	KLine TBN	7,500	LNG	Korea	Yes	Korea Line

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 = 26 April 2017

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