LNG Shipping News

AN LNG JOURNAL TITLE ON LNG CARRIERS 16 March 2017

LNGC attacked by pirates off Nigeria

The crew of the recently delivered Knutsen LNG managed 176,300 cu m LNGC 'La Mancha Knutsen' successfully fought off a pirate attack about 90 miles south of Port Harcourt, Nigeria on 10th March.

The pirates were said to have approached the vessel in a speedboat and opened fire with small arms aiming at the bridge. They tried to board the vessel using a ladder, but the LNGC conducted evasive manoeuvres to fend off the attack.

The Master notified the Spanish Navy Centre for Maritime Surveillance and Security Operations (COVAM) – the ship's flag state maritime security agency – using the 'panic button' on the bridge. No injuries or damage were reported.

'La Mancha Knutsen' proceeded at full speed to the LNG export terminal at Bonny, Nigeria. She loaded a gas cargo and sailed last Sunday for an unknown destination.

The LNGC 'La Mancha Knutsen' was subject to a pirate attack off Nigeria.

The LNGC was delivered from Hyundai Heavy Industries last September and is the first of two sisters for the Haugesund-based tanker and gas carrier company.

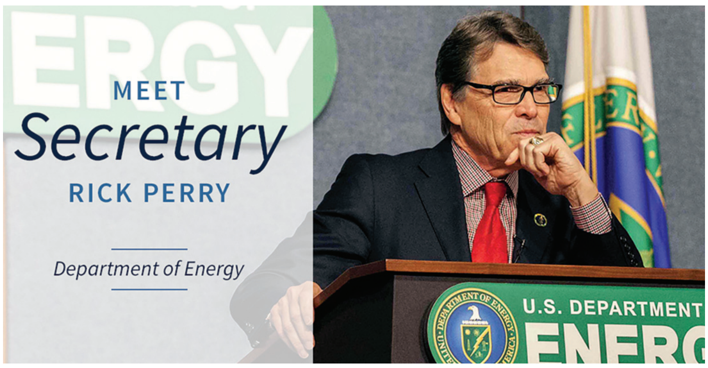
Earlier this week, security-monitoring company Control Risks said that there had been an increase in maritime kidnappings in the Gulf of Guinea last year. The area accounted for 27% of last year's maritime security incidents, the company said. ■

US LNG organisations welcome Perry

The US Senate's vote to confirm Rick Perry as the new US Energy Secretary has won the approval of two LNG groupings - Natural Gas Supply Association (NGSA) and Center for Liquefied Natural Gas (CLNG).

Dena Wiggins, NGSA President and CEO, said: "We welcome former Governor Perry's Senate confirmation to lead the Department of Energy. He assumes office at a time of tremendous opportunity for the energy sector to provide our country with affordable, abundant and clean energy.

"As Secretary of Energy, his experience governing the nation's biggest energy-producing state will prove invaluable. One-fourth of the nation's natural gas is produced in Texas, giving him a keen appreciation for the importance of natural gas to jobs, the economy, reliability and cleaner air," Wiggins said.



The incoming US Department of Energy secretary Rick Perry.

Charlie Riedl, CLNG Executive Director, added: "Secretary Perry has already been a strong advocate for LNG exports during his time as Governor of Texas and we look forward to working with him at what is a crucial juncture in the development of the global industry.

"By ensuring a prompt and transparent permitting process, we can make certain that domestic projects have the level playing field they need to succeed in an increasingly competitive international market," he concluded. ■

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LNG ORDERBOOK

Bill calls for 30% of LNG/crude exports to be shipped in US flag hulls

US Congressman John Garamendi (D- CA), ranking member of the sub-committee on the US Coast Guard and maritime transportation, has introduced HR 1240 - the 'Energising American Maritime Act.'

If passed, this bill would require up to 30% of exports of LNG and crude oil to be transported on vessels documented under the laws of the US.

It was co-sponsored by Rep John Duncan (R-TN) and Rep Duncan Hunter (R-CA).

"The state of the American maritime industry is in crisis-level decline," said Garamendi. "After World War II, our oceangoing fleet of US-flagged ships numbered 1,200. Today, it's fewer than 80. This isn't just an economic concern—it's also a national security risk. We can't rely on foreign-flagged vessels to provide the necessary movement of strategic materials in a time of war. Requiring even a minority of strategic energy asset exports to be carried on US-flagged ships will compel us to rebuild the technical skill to man these vessels—and with that comes good, high-paying, maritime jobs."

"We're the most powerful nation in the world, but 99% of our trade travels on foreign-flagged ships," Garamendi continued. "To develop the kinds of jobs that will keep the American economic engine moving, we need to right this ship and grow America's maritime sector."

This legislation has strong support from the domestic maritime industry: "The legislation would revitalise the maritime industry by creating thousands of seafaring jobs," said Marshall Ainley, President of the Marine Engineers Beneficial Association (MEBA). "Not only important to our economic security, a strong commercial fleet is crucial to our national security as it maintains a base of trained mariners who are prepared to serve the US military. The MEBA appreciates Rep Garamendi's effort to apply 'Make it in America' standards to the maritime industry."

Brian Schoenman, Political and Legislative Director of the Seafarers International Union, said: "From a US merchant marine perspective, this bill offers an excellent opportunity to create American jobs while strengthening US national, economic and homeland security. Our military leaders as well as government officials have expressed concern about declines in US-flag tonnage and the number of US mariners. This is a chance to start reversing those losses, which will benefit the entire country."

Masters, Mates and Pilots President, Capt Don Marcus, said: "The enactment of this legislation will both ensure that at least some of the jobs associated with the export of LNG will go to American maritime workers and help guarantee that we will have the civilian maritime manpower needed to support America's national security requirements in time of war or other international emergency. This is truly an America-first proposal that we are proud to support." ■

LNG to remain key energy source

Japan imported 8.3 mill tonnes of LNG in January, an increase of 1.06 mill tonnes, compared to the previous year.

The data, released by the Japanese Ministry of Finance, also revealed that the amount the country pays for LNG imports had increased by 6.7% since 2015.

Japan is one of the largest LNG importers in the world and it is expected that gas and LNG will continue to remain a key energy source in the future. The country's reliance on LNG rose in 2011, following the closure of its nuclear reactors, and as these latest figures show, has continued to increase since then.

Ahead of next month's Gastech, Koichi Wada, Division COO, Natural Gas Business Division, Mitsubishi Corp, said: "Natural gas has an advantage from environmental and supply-diversification perspectives and could compensate if the targets of other fuels are not achieved. In this context, we see that natural gas could potentially have a higher share in the mix target of 2030 and the trend might continue until 2040."

The Paris Agreement, which calls for governments to reduce their greenhouse emissions, will transform the future of the Japanese energy mix. Whilst renewable energies will account for a certain percentage of the energy mix throughout the world, the current operational shortcomings will mean that renewable energies will be unable to supply all energy needs. According to analysts, Eclipse, Japan's total LNG demand is predicted to be 77 mill tonnes by 2020.

Gavin Sutcliffe, Head of Content at Gastech organiser, dmg :: events Global Energy, added: "As a signatory of the Paris Agreement, Japan needs to quickly re-prioritise its energy policy. Whilst the nation's energy sector has remained largely unchanged over the past few decades, we are expecting to see significant shifts in the composition of the country's energy mix in the near future, with a marked preference for LNG and gas."

Japanese energy companies are continuing to invest in the LNG and gas aspects of their businesses. Mitsubishi recently commissioned the PT Dinggi Senoro LNG (DSLNG) project, demonstration that gas will continue to play a significant role.

Sutcliffe continued: "We are expecting to see Japanese energy companies engaging in the development of prime assets, as well as exploring and cultivating new demand in emerging countries." Hosted by Mitsubishi Corp and nine of the country's biggest energy companies: JERA, Mitsui & Co, Tokyo Gas, INPEX Corp, ITOCHU Corp, Japan Petroleum Exploration (JAPEX), JX Nippon Oil & Energy, Marubeni Corp and Sumitomo Corp, this year's Gastech Exhibition and Conference will be held in Chiba, near Tokyo. ■

LNG Shipping News
1st Floor, 30 Warner Street
London EC1R 5EX
United Kingdom
www.lngjournal.com
Tel: +44 (0)20 7253 2700

Publisher
Stuart Fryer

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

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

Subscriptions
Elena Fuertes
Tel: +44 (0) 20 7253 2700
elena@lngjournal.com
Subscription included with LNG Journal

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

Japan to liberalise gas market

Ahead of next month's GasTech, co-hosts Mitsui & Co has underlined the importance of a stable LNG supply in order to fulfil Japan's future energy demand.

Mitsui & Co's COO of Energy Business Unit II, Hirotatsu Fujiwara, said, "LNG and gas will continue to play an important role long-term in a low-carbon global economy."

He also stated that despite forecasts that renewable energy may grow at around 2% per year, fossil fuels, especially LNG, will continue to be a significant source for meeting energy demand even in 2040.

As the world's largest importer of LNG, Japan relies on a stable supply of LNG. Following liberalisation of its electricity market, which has led to new competition among utility companies, Japan's retail gas market will also be liberalised this year, which makes 2017 one of the most pivotal in the country's energy market.

These recent moves in the energy market will be discussed and debated in early April in Tokyo (Chiba) at Gastech Japan 2017 conference & exhibition – of which Mitsui & Co are co-hosts, along with nine other major Japanese energy stakeholders, including Tokyo Gas, JERA, Mitsubishi, INPEX, ITOCHU, JAPEX, JX Group, Marubeni and Sumitomo Corp.

The event arrives in Japan for the first time in its 45-year history. More than 20,000 people are expected to attend the exhibition and around 2,000 attending the conference.

Fujiwara added; "We are proud to be one of the hosting companies of Gastech 2017, as it serves as an essential platform for networking among players in the global gas industry including producing countries and customers. We are expecting innovative discussions at Gastech on the production and liquefaction of gas, and we're excited to see many of the technology and engineering companies getting involved."

Meanwhile, next year, it will be the turn of Barcelona, Spain to host the 2018 Gastech Exhibition & Conference.

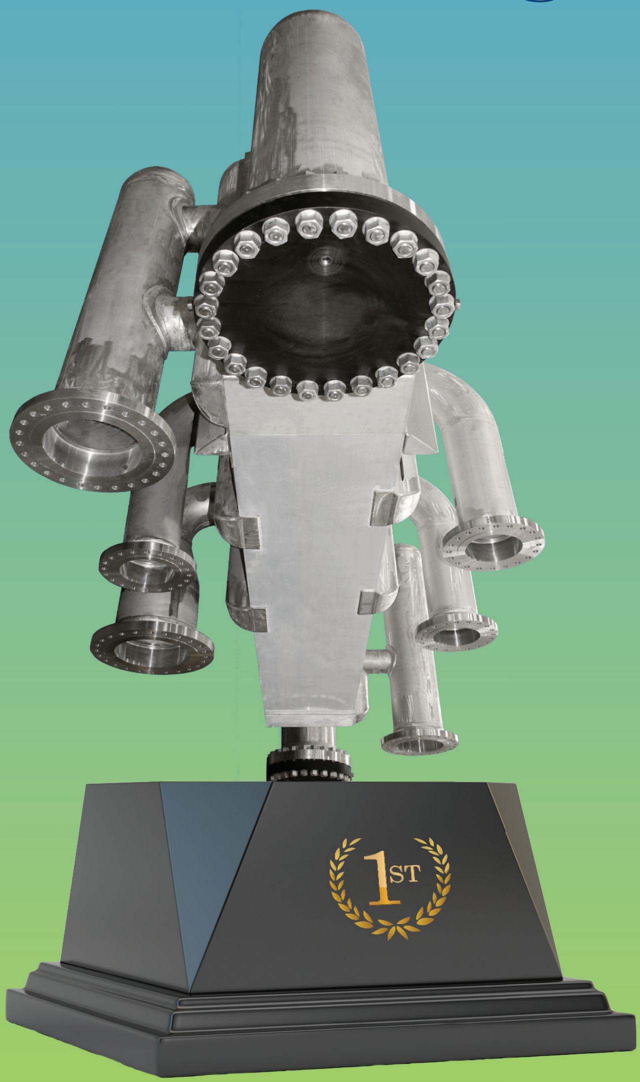
It will be held at Fira Barcelona, Gran Via Venue, between 17th-20th September, 2018 and hosted by a consortium of Spain's leading energy stakeholders, including Enágas, Gas Natural Fenosa, Repsol – and endorsed by the national gas association, Sedigas.

Global LNG demand outlook has revived and forecasts estimate that by 2026 global demand will grow by 50%, to around 430 mill tonnes, according to Wood Mackenzie. Further robust growth in Asia, propped up by Indian and Chinese demand, will continue to see increased requirements and improved flexibility across the LNG business.

Gastech will arrive in Spain at a time of considerable resurgence for the European gas & LNG sectors. Antoni Peris, Sedigas President, said: "It will be a great pleasure for us to host the 30th edition of the Gastech Exhibition & Conference in Spain. This event has proven to be of great relevance when addressing issues around the global gas and LNG industry. Furthermore, the recent creation of an organised gas market in Spain, Mibgas - and its aim to become an LNG European hub - attests the promising future the Spanish Gas Industry has."

European LNG imports are poised for a second year of growth, following years of decline from 2011 to 2015, buoying the LNG market. ■

Chart Brazed Aluminum Heat Exchangers



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Cosco in sale and leaseback deal with Golar LNG

Cosco Shipping Development Co has signed a sale and leaseback deal with an affiliate of Golar LNG to purchase the 160,000 cu m 2014-built LNGC 'Golar Crystal'.

The deal also includes a repurchase option.

Cosco subsidiary Oriental Fleet signed the contract with Golar Hull to buy the vessel for $187 mill and bareboat charter it back for 10 years, the company said.

Under the terms of the deal, Golar Hull will pay $75 mill upfront for the bareboat charter, which will be offset against the sale price, plus another $62 mill in charter fees, payable every quarter.

Golar Hull has the option to buy back the vessel at the end of the 10 year period or be subject to a $50 mill balloon payment penalty if the option is not exercised.

Cosco reportedly said that the deal would kick start the expansion of the group's ship leasing business and enhance its profitability.

Cosco Shipping Development is the new name of China Shipping Container Lines. It became an integrated financial services concern focusing on ship leasing and ship finance, following the merger of Cosco and China Shipping last year.

Golar Crystal (left) has been purchased by COSCO on a leaseback basis.

OLT Offshore LNG Toscana allocates 16 slots

The allocation of capacity for OLT Offshore LNG Toscana's regasification and storage bundled service for 2017/2018 has been successfully completed.

Total storage capacity amounted to a natural gas equivalent of 1.5 bill cu m.

The tender received 21 different company offers and, taking into account the operational limits of the STOGIT storage system, it was possible to allocate 16 slots, three in April, four in May, three in June, two in July, two in August and two in September.

This was for a total quantity of LNG equivalent to about 1.3 bill cu m, which will be sent to the STOGIT storage system.

All the slots are subject to confirmation by the successful bidders, as per the procedural conditions.

OLT said that the steadily increasing number of offers testifies to the position achieved by the Terminal 'FSRU Toscana' in the international LNG market.

This service provides that a quantity of gas equivalent to the LNG delivered, less consumption and losses, is made available by STOGIT to the user by the end of the month following the discharge.

Offshore LT Toscana has been allocated 16 slots.

Shell halts Prince Rupert development

Royal Dutch Shell has confirmed that it is to stop the development of the proposed Prince Rupert (BC) liquefied natural gas project.

However, the oil major said that it was still analysing the potential of its other Canadian West Coast LNG option.

Shell acquired the Prince Rupert LNG project as part of its takeover of the BG Group last year.

The company said it is moving forward on the proposed Kitimat (BC) -based LNG Canada project with its partners. Last year the partners indefinitely deferred a final investment decision (FID) due to market conditions.

Shell said it still sees the LNG Canada project as an opportunity to bring Canadian gas to the worldwide market, where a growth rate of between 4-5% between 2015 and 2030 is forecast.

NEWS NUDGE

LNGC deliveries

There were at least three newbuilding LNGC deliveries reported in February.

Maran Gas Maritime took delivery of the 173,400 cu m 'Maran Gas Olympias'. There are still six more to come - one next year and the remaining five in 2019.

Teekay LNG welcomed the third in the series of 173,000 cu m MEGI LNGCs - 'Torben Spirit'.

Finally, Chevron Transport took delivery of the 160,000 cu m 'Asia Integrity' last month.

DSME's future in doubt

LNGC builder, Daewoo Shipbuilding and Marine Engineering (DSME) is soon to face a critical deadline in its fight to stay solvent.

According to reports from South Korea, next month the shipbuilder must refinance or repay $380 mill in debt. It was thought DSME will barely have enough to cover the payments – let alone the $430 mill bill that is due later this year or the $480 mill due in 2018.

DSME is cash strapped and has been losing money for some time, due to the downturn in new vessel orders worldwide.

Previously, DSME had maintained liquidity by securing new contracts, which are usually signed with an immediate down payment of up to 20% of the purchase price. But with few new orders – and with a customer unable to make the final delivery payments for two $430 mill drillships – DSME finds itself short on funds.

Given the yard's weak balance sheet, global consulting firm McKinsey said last October that it is the "least likely to survive" of South Korea's big three shipbuilders. DSME disputed McKinsey's statement.

DSME was claimed to have worked hard to cut overheads, and it had several possible sources of cash flow, including the sale of non-core assets such as its its headquarters, Yonhap news agency reported.

But it can no longer rely on additional capital injections from government-owned Korea Development Bank (KDB), DSME's majority shareholder and primary source of outside funds.

The South Korean Government had already led a $3.5 bill bailout package in 2015, and in January this year, it granted a multi-billion dollar capital increase, share conversion and debt-for-equity swap.

Cash strapped DSME is building a series of Arc7s for the Yamal LNG project.

However, public appetite for large-scale bailouts has dropped in the wake of Hanjin Shipping's collapse, and KDB announced last month that DSME will not receive any more tax dollars for restructuring, according to Yonhap.

The yard's government creditors may come to its rescue once again, the agency reported, as they may choose to intervene again, as DSME's collapse would likely affect the national economy at a politically sensitive time.

As DSME struggles to meet its obligations, competitor Hyundai Heavy Industries is on the march, settling contract disputes and negotiating with buyers for up to $1 billion in new sales.

DSME is the main yard building the Arc7 LNGCs for the Yamal project. ■

Nakilat on cost savings exercise - eyes expansion

On 12th March, Nakilat held its AGM and an EGM to address its financial year 2016.

During the AGM, Nakilat's Board said that the company achieved a net profit of QR955 mill, compared to QR984 mill for 2015.

The Board also said that despite the current economic challenges, the decrease in the current oil and gas prices and overcapacity in the shipping industry, Nakilat's approach to its dividend disbursement would enable the company to continue to maintain a strong balance sheet and stable cash flow to support its debt repayment structure and remain resilient to weather volatile market conditions.

This would allow the company to maintain its leading market position in the transportation of LNG and capitalise on any future opportunities that may arise.

Nakilat plans to continue further expansion into international shipping markets in the years to come, the Board said in the 2016 annual report.

Managing Director, Eng Abdullah Fadhalah Al Sulaiti, explained: "Despite the volatile market condition, Nakilat continued to achieve growth and development across our various operations, capitalising on the strength of our integrated businesses and talents within the organisation.

"We successfully consolidated the management of four wholly-owned LNGCs to our in-house shipmanagement arm, Nakilat Shipping Qatar Limited (NSQL), in the last quarter of 2016, and embarked on an organisation-wide cost optimisation exercise to further enhance synergies, while upholding the same high safety and quality standards, across our joint venture operations in Qatar.

"These initiatives together with our sound business strategy have formed a solid foundation for Nakilat to achieve its vision to be a global leader and provider of choice for energy transportation and maritime services," he said.

Nakilat's LNGC fleet comprises 63 vessels, while the company also owns and manages four large LPG carriers and operates the shiprepair and construction facilities at Erhama Bin Jaber Al Jalahma Shipyard in Ras Laffan Industrial City via two strategic joint ventures - N-KOM and NDSQ.

The group also offers a full range of marine support services to vessels operating in Qatari waters, the company claimed. ■

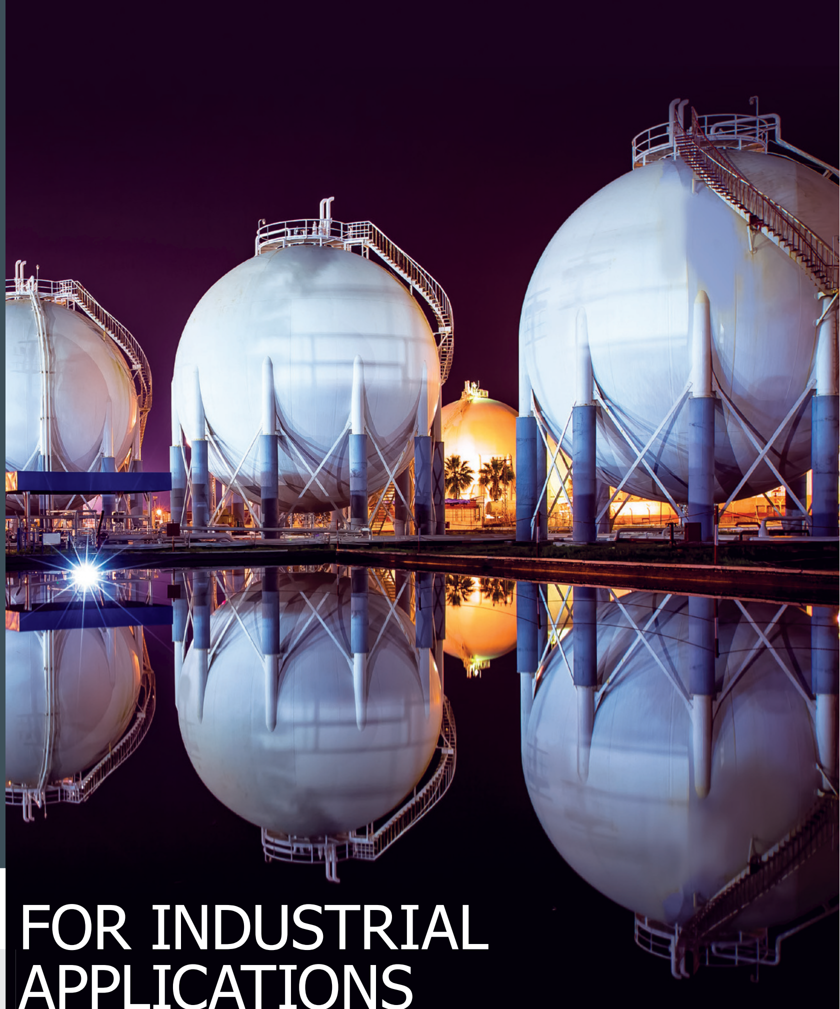
GasLog in cash raising scheme

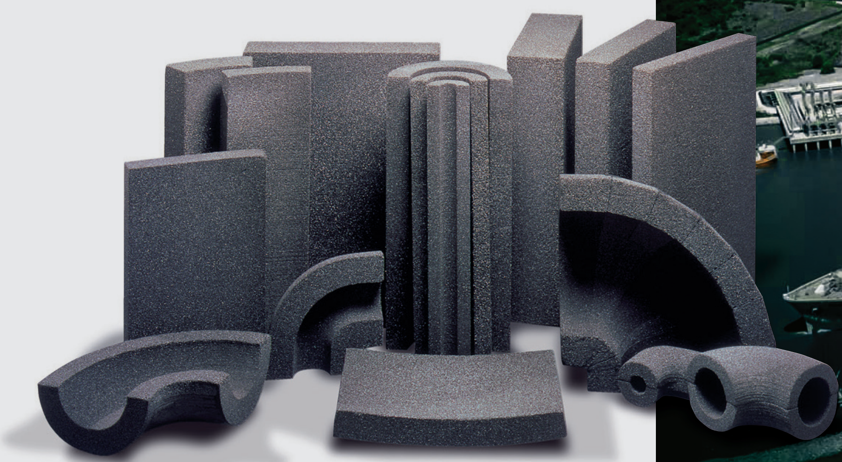
GasLog Ltd is to offer $250 mill aggregate principal amount of senior unsecured notes due 2024 in a public offering.

GasLog is planning to use the net proceeds from the offering to repay debt and for general corporate purposes, including working capital.

Stifel, Nicolaus & Co and DNB Markets are acting as joint book-running mangers and structuring agents of the offering.

The offering is being made only by means of a prospectus supplement and accompanying base prospectus. When available, the prospectus supplement and accompanying base prospectus relating to the offering may be obtained from Stifel, Nicolaus & Co. ■





PrimeServ wins LNGC engine maintenance contract

MAN PrimeServ, the after-sales division of MAN Diesel & Turbo (MDT), has signed a maintenance contract with Teekay for three LNGCs.

The new EMC (engine management concept) contract calls for engine maintenance on board the 173,400 cu m LNGCs 'Oak Spirit', 'Creole Spirit' and 'Torben Spirit'.

It covers the provision of spare parts, maintenance management and the servicing of each vessel's two 5G70ME-GI dual-fuel main engines.

Jeffrey Ang, MDT's Head of CoC – Engines & Marine Systems, Asia/Pacific, said: "This agreement is significant in that it is the first market agreement that PrimeServ has clinched involving our dual-fuel, two-stroke ME-GI engines. Furthermore, with Teekay nominating us as their preferred service provider, this contract will undoubtedly add momentum to our efforts to expand the EMC's reach within the gas-engine segment."

The LNGC 'Creole Spirit' is on of three Teekay gas carriers to be signed up to PrimeServ's maintenance agreement.

According to the terms of the contract, MDT's Copenhagen office will deliver maintenance management and spare parts, while MDT Shanghai will take care of the engines' service provisions.

Jens Seeberg, MDT's Head of Retrofit & Upgrade, and Engine Management, praised the co-operation between the two geographically diverse PrimeServ locations that facilitated the drawing up of the final agreement and called the close relationship between the offices in the global organisation and its headquarters "an essential prerequisite for the EMC concept's success."

EMC is a tailor-made service model to suit each individual customer's special requirements. Operating on a fixed budget, MAN PrimeServ takes care of equipment, planned and unplanned maintenance, the dispatching of personnel, and the provision of spare parts.

The close co-operation between MAN PrimeServ's global network means that it can pool common resources and exchange knowledge, and as a result, be able to offer customers a considerably higher level of service than individual PrimeServ hubs would be able to.

MDT claimed that the ME-GI engine represents the culmination of many years' work and gives shipowners and operators the option of using fuel or gas depending on relative price and availability, as well as environmental considerations.

It uses high-pressure gas injection that allows it to maintain the attributes of MAN B&W low-speed engines. MDT said that it saw significant opportunities arising for gas-fuelled tonnage, as fuel prices rise and modern exhaust-emission limits tighten.

Research indicated that the ME-GI engine delivers significant reductions in CO_2, NO_x and SO_x emissions. Furthermore, its negligible fuel slip makes it the most environmentally friendly technology available, the company claimed. ■

Fredriksen in LNGC and VLCC deal

Daewoo Shipbuilding & Marine Engineering has received an order to build two LNGCs for an undisclosed Marshall Islands-based shipowner, believed to be connected with John Fredriksen's Flex LNG.

According to the company's stock exchange filing, the order for the two 173,400 cu m LNGCs was worth Won414.4 bill ($362.9 mill).

Under the terms of the contract, signed in late February, the shipbuilder is scheduled to deliver the new vessels by the end of August, 2019.

DSME said that the deal includes options for two more LNGCs, which, if exercised, would bring the value of the deal to Won830 bill.

At the same time, the Fredriksen-controlled tanker owner Frontline purchased two VLCCs resales from DSME.

The VLCCs were cancelled in August last year, but were being built by DSME. They were bought for $77.5 mill each, which was thought to be the catalyst for the LNGC order, hence the low price for the tankers. ■

NEWS NUDGE

New LNG training opportunities

Poten & Partners has released new LNG training dates.

* 'LNG Liquefaction projects- a North American focus' will be held at Houston on 22nd-24th March.
* 'LNG Trading' is to be held in Singapore between 25th-26th May.
* 'LNG FSRU developments' will be discussed in Houston between 12th and 14th June.
* 'Tools for effective participation in joint ventures' will be held at Perth, WA, between 24th-25th August.

Teekay declares cash dividend

Teekay GP, the general partner of Teekay LNG Partners, has declared a cash distribution of $0.5625 per unit on the Partnership's Series A preferred units for the period 1st January, 2017 to 31st March, 2017.

The cash distribution is payable on 17th April, 2017 to all unit holders of record as at 31st March, 2017.

HHI wins LNGC contract

South Korean shipbuilder Hyundai Heavy Industries (HHI) has received an order to build an LNGC, according to the Yonhap News Agency.

Although the terms of the deal were not revealed, the contract for the construction of the 180,000 cu m vessel was believed to be worth $193 mill, industry sources told the news agency.

It was thought that Norway's Knutsen OAS Shipping was behind the order, backed by a long term charter to Iberdrola. ■

Qatargas and PGNiG in new LNG agreement

Qatargas, has signed a side agreement to the existing Sale and Purchase Agreement (SPA) with Polish Oil and Gas Co (PGNiG).

Under the terms of the latest agreement, Qatargas will increase the volume of LNG currently supplied to PGNiG to 2 mill tonnes per annum. This increase will come into effect on 1st January, 2018 and will run until June, 2034.

Commenting on the new deal, Khalid Bin Khalifa Al-Thani, Qatargas CEO, said: "The Qatargas Direction Statement clearly articulates our commitment to building strong, long-term relationships with customers. This commitment is a key differentiator in a competitive market, and our customers know that they can trust Qatargas to safely and reliably meet their energy needs.

"Today, Qatargas looks forward to the next phase in our long-term relationship with PGNiG, and to the prospect of building an even stronger relationship with PGNiG as we increase our deliveries of LNG to Poland," he said.

Piotr Woźniak, CEO and President of PGNiG's management board, said: "PGNiG is firmly committed to expanding its LNG portfolio and our presence in the global LNG market. I'm very pleased that Qatargas and PGNiG have been able to achieve an agreement which contributes to the realisation of the long-term goals of both companies and supports the implementation of our strategy to diversify natural gas supplies to Central and Eastern Europe."

Maciej Woźniak, executive vice president of PGNiG's management board, added: "This agreement is the next meaningful step in deepening our close partnership with Qatargas, the world's biggest LNG company, and reaffirms Qatargas' commitment to supporting the development of an LNG hub in Poland. This agreement will also contribute to building the company's value for shareholders."

The LNG will be supplied from Qatar Liquefied Gas Company Limited (3), a joint venture between Qatar Petroleum, ConocoPhillips, and Mitsui & Co and will be delivered on board Q-Flex LNGCs to the President Lech Kaczynski LNG terminal in Swinoujscie, Poland. ■

> **"Qatargas looks forward to the next phase in our long-term relationship with PGNiG, and to the prospect of building an even stronger relationship with PGNiG as we increase our deliveries of LNG to Poland."**
>
> *- Khalid Bin Khalifa Al-Thani, Qatargas CEO*

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

Fearnley LNG

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
Mitusi 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

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WORLD SMALL SCALE LNG FLEET*

Built	Name	CBM	Cargo Type	Trading area	Trading in LNG?	Ship Owner / Operator
1974	Seagas	187	LNG	Sweden	Yes	AGA
1988	Kayoh Maru	1,517	LNG	Japan	Yes	Daiichi
1993	Aman Bintulu	18,928	LNG	Malaysia - Japan	Yes	Perbadanan/NYK
1996	Surya Aki	19,475	LNG	Indonesia - Japan	Yes	MCGC
1997	Aman Sendai	18,928	LNG	Malaysia - Japan	Yes	Perbadanan/NYK
1998	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?
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 Independence	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
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	Coralius	5,800	LNG	Northwest Europe/Baltics	Yes, for Skangas	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