

LNG Shipping News

AN LNG JOURNAL TITLE ON LNG CARRIERS

15 October 2020

Natural gas demand to recover- EIA

The US Energy Information Administration (EIA) has predicted that US LNG exports will return to pre-COVID levels by next month.

In addition, the EIA said, in its short term outlook report published last week, that exports will average more than 9 bill cu ft per day from December, 2020 through February, 2021.

The administration estimated that domestic LNG exports averaged 4.9 bill cu ft per day in September, an increase of 1.2 bill recorded for August.

Higher global forward prices indicated improving returns for US LNG buyers in European and Asian markets for this Autumn and Winter seasons.

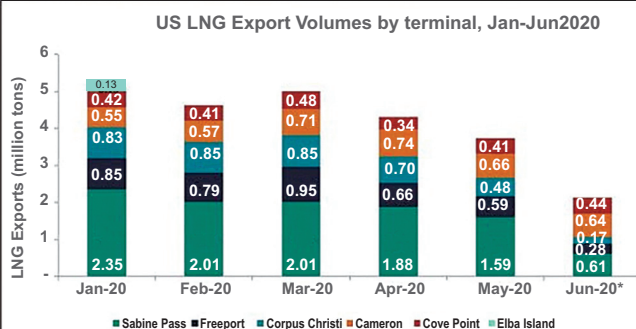
Increased price forecasts were down to expectations of natural gas demand recovery and potential LNG supply reductions, due to maintenance at Australia's Gorgon LNG plant.

Spot prices

Lower natural gas spot prices reflected declining demand for natural gas from the US electric power sector, as a result of cooler-than-normal temperatures during the second half of September and relatively low demand for US LNG exports amid hurricane-related activity in the Gulf of Mexico.

EIA said that rising domestic demand for natural gas and demand for LNG exports heading into

United States – LNG Exports by Terminal



Source: GlobalData Oil & Gas Intelligence Center, US Department of Energy
*Estimated

winter, combined with reduced production, will cause Henry Hub spot prices to rise to a monthly average of \$3.38 per MMBtu in January, 2021.

The monthly average spot prices are forecast to remain higher than \$3 per MMBtu throughout 2021, averaging \$3.13 per MMBtu for the year, up from a forecast average of \$2.07 per MMBtu in 2020.

However, GlobalData said that LNG exports from the US are likely to remain low in the near future.

Haseeb Ahmed, GlobalData's Oil and Gas Analyst, explained: "Significantly low prices of gas along with an LNG supply glut has pushed companies to revisit their capex spends on upcoming multi-billion-dollar gas projects.

"In March, 2020, Royal Dutch Shell exited the proposed Lake Charles LNG export project in Louisiana. Sempra Energy is unwilling to take financial decisions pertaining to the Port Arthur LNG terminal, due to current market challenges, which is likely to push the start of the project by a year to 2024," he said.

Ahmed added: "Even though the economic outlook showed glimpses of recovery, the sporadic nature of the pandemic was weighing down growth prospects of the LNG sector in the country.

"Moreover, EIA forecast that utilisation of LNG liquefaction facilities in the US would average around 35% in the coming months when seasonal LNG demand tends to be low," he said.

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NEWS NUDGE

Höegh undertakes tap issue

Höegh LNG Holdings said that it had successfully completed a tap issue of NOK160.5 mill.

This issue was under its existing senior unsecured bonds with

maturity date 30th January 2025.

It was exercised on a reversed inquiry basis as a switch from NOK150 mill in the company's senior unsecured bonds with maturity date 1st February, 2022.

Following the transaction, the company will offer investors to participate on equal terms in a further tap issue.

Danske Bank, Nordea and Swedbank has been mandated to facilitate the tap issue.

Tighter LNG winter market on the cards

"We expect LNG demand to increase by 4 bill cu m this winter led by growth in China, Japan, and South Asia," Refinitiv predicted last week during a lecture.

LNG supply is expected to grow by 3 bill cu m led by the US. This could lead to the LNG market being slightly tighter than last winter by 1 bill cu m.

Speaking at the GECF Monthly Gas Lecture via video conference on 6th October, Refinitiv analysts, Anne Kat Brevik, Director - LNG Research & Forecasts, Laura Page, Lead LNG Analyst, and Mr Hengky, Senior Analyst (LNG), went through the demand and supply outlook and their relationship with market's balance and pricing dynamics.

However, there remained several risks to the forecasts, they admitted, foremost of which were the winter temperatures and coronavirus pandemic. Northern Hemisphere temperatures were unusually warm last winter, dampening LNG demand, while the full-blown effect of COVID-19 remained unclear, particularly as it is currently worsening in many countries and levelling off in others.

Recognising the importance of scientifically drawn forecasts GECF Secretary General, Yuri

Sentyurin said: "In many ways, COVID-19 has highlighted the importance of data, so we can map and understand the economic and social effects of pandemic-related measures."

Accurate planning

Accurate planning for the period ahead depended on not just weather but a myriad of factors, such as government policies that can often change the course of LNG demand and pricing.

For instance, the lecturers said that LNG played out vastly differently last winter in Japan and South Korea, the world's largest and third largest LNG buyers, respectively.

In Japan, LNG import declined by about 4%, due to the mildest winter on record in addition to an industrial demand that was hit by COVID-19 in the first quarter of this year.

By contrast, South Korea saw a rise of about 7% in LNG imports, due to the government policy of switching off coal-fired power

plants between December and March this year to improve air quality - March alone witnessed the closing of 28 coal-fired power plants, stimulating gas for power demand.

"That said, while the economic recovery is still very slow in Japan, we do see the La Nina weather pattern emerging for this winter and that will mean colder temperatures than last winter, boosting demand for heating," the speakers said.

Meanwhile, South Korea, may see a 10% decline in LNG imports, due to higher availability of nuclear power and the assumption that government-mandated coal-fired plant closures may not be as numerous as last year.

"In terms of pricing dynamics, as the markets move into a period of oversupply, due to the growing convergence of global gas prices, it is important to keep an eye on the direction of gas hubs like the Henry Hub, TTF (Title Transfer Facility) and Asian spot price," the speakers stressed. ■

Pakistan to book more cargoes

Pakistan LNG Ltd (PLL) is seeking up to six cargoes for December, its procurement subsidiary said on its website, adding to the cargoes needed for November.

Two November cargoes have already been negotiated with trading house Gunvor.

December and January usually see the largest spike in demand for gas in Pakistan, but this year the demand-supply shortfall will be greater on the back of higher consumption and diminishing indigenous supply, the authorities believed, according to Reuters.

In the PLL tender advert, it said it was seeking 140,000 cu m cargoes, in six delivery windows. The deadline for bid submissions was 2nd November.

Pakistan has long term LNG agreements in place, including one with Qatar, but has also been active on the spot market since August.

In a press conference at the beginning of this month, Pakistan's Minister for Petroleum, Nadeem Babar, confirmed that the country was heading towards a major gas shortfall in December and January, blaming dwindling indigenous gas supply and rising demand.

He added that there had been a lack of local exploration licenses granted by the previous Government, and while new gas discoveries were found, they were small and said the Government would advertise more exploration licences this month. ■

Haiphong to get LNG terminal

Vietnamese authorities have reportedly approved a \$5.09 bill LNG power and LNG import terminal project at Haiphong.

It is due to be developed by ExxonMobil and is intended to start power generation in 2026-27.

In a statement issued earlier this month, the city's People's Committee said the power plant would have an initial capacity of 2.25 GW and that would be expanded to 4.5 GW by 2029-2030.

It also said the project would include a terminal with a capacity of 6 mill tonnes of LNG per year.

In June, Vietnam's government said it welcomed the oil major's move to invest in the country following a phone call between Prime Minister, Nguyen Xuan Phuc and Iriza Sayyed, ExxonMobil's President LNG Market Development Inc.

Vietnam's Institute of Energy is drafting a new master power development plan and has compiled a list of 22 LNG power plants with a combined potential capacity of

up to 108.5 GW, the first of which will be operational by 2023.

The Haiphong committee also said that it had approved another \$1.9 bill LNG power project with a capacity of 1.6 GW.

It said the first phase of this plant would be operational from 2025 and the entire plant from 2028, but did not specify a potential developer or investor, Reuters said. ■

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Cameron LNG reports no damage from 'Delta'

Sempra's Cameron LNG export facility came through unscathed from the latest Hurricane to hit the US Gulf region last weekend.

Cameron said that its disaster assessment recovery team began an investigation on Saturday and determined that it was safe to restart production the following day.

"We have resumed work to execute our plans towards achieving full production," the company said, adding that it was working closely with the Port of Lake Charles to assess the condition of the Calcasieu ship channel to confirm the accessibility to the loading jetties.

The export facility shut down on 8th October ahead of Hurricane 'Delta's' landfall the following day in Louisiana.

Offtake customers talking with newswires said that production had restarted on 11th October at the plant's Train 2, with production restarts for the No.1 and No.3 trains expected around 13th-14th October and 21th October, respectively.



No damage was reported at Cameron's export terminal last weekend

Cameron LNG had also closed on 26th August to prepare for Hurricane 'Laura'. It shipped its first cargo on 5th October on the 'SK Audace' and restarted production the following day after partial

power was restored to the plant before shutting down again to prepare for the arrival of 'Delta'.

The last export from the facility was recorded on 23rd August, according to ship tracking data. ■

Batangas terminal's next phase underway

First Gen Corp has signed a contract with Tokyo Gas for the next phase of the planned LNG terminal project at Batangas City.

In a Philippine Stock Exchange filing, First Gen confirmed it had signed a joint co-operation agreement (JCA) with Tokyo Gas.

This agreement represents the next phase of the joint development of subsidiary FGEN LNG Corp's interim offshore LNG terminal located at First Gen's Clean

Energy Complex at Batangas.

"With the JCA, the parties will now transition from the development phase under the joint development agreement (JDA), which initially governed First Gen and Tokyo Gas's relationship since 5th December, 2018," First Gen said.

The JCA is a preliminary agree-

ment between the parties to jointly pursue the design, development, testing, commissioning, construction, ownership and operations and maintenance of the offshore LNG terminal project, which includes the construction work necessary to modify the existing jetty to enable it to become a multi-purpose facility and to build an adjacent onshore gas receiving facility.

"Once completed, the project will allow FGEN LNG to bring in an FSRU on an interim basis and thus accelerate FGEN LNG's ability to introduce LNG to the Philippines," First Gen added.

Under the JCA, Tokyo Gas will have a 20% interest in the project and provide support to achieve a Final Investment Decision (FID) after which, the parties will enter into a definitive agreement. ■



Excellence's FSRU 'Excellence' is earmarked for the Batangas terminal project

NEWS NUDGE

USCG looks at LNG fuel handling

The US Coast Guard (USCG) is to amend its regulation concerning waterfront facilities handling LNG and liquefied hazardous gas (LHG).

The proposed rule would make the following three changes.

- 1) It would revise the USCG's existing regulations to allow waterfront facilities handling LNG as fuel to conduct an operational risk assessment instead of a waterway suitability assessment (WSA) without first obtaining Captain of the Port approval.
- 2) It would revise existing regulations to update incorporated technical standards to reflect the most recent published editions.
- 3) For the waterfront facilities handling LNG, which must comply with the WSA requirements, the proposed rule would require these facilities to provide information to the USCG regarding the flag of vessels transporting LNG that are anticipated to be servicing the facilities, and the nationality or citizenship of officers and crew serving on board those vessels.

Comments must be received by 4th December.

Melkoeya not to reopen until next year

Equinor has said that its Melkoeya LNG export plant is not expected to resume output until 1st January, 2021.

This follows a fire in one of the plant's electricity generating turbines on 28th September, the company said in a regulatory statement.

Melkoeya is Europe's only large-scale LNG plant and can process 18 mill cu m of gas per day, which is piped from the offshore Snoehvit field some 160 km away in the Barents Sea. ■

Hygo replaces Antonello - reviews Brazilian operation

Golar LNG Limited joint venture company, Hygo Energy Transition Limited, has appointed Paul Hanrahan as CEO, effective 19th October.

He will replace Eduardo Antonello who is stepping down from his role with Hygo, effective immediately.

The board accepted his resignation and his wish to protect and isolate Hygo from any misleading interpretation caused by recent allegations levelled against him for actions taken prior to his work for Hygo.

Hanrahan was the former President and CEO of The AES Corp, an independent power producer, former CEO of American Capital Energy and Infrastructure Management, an investment company in the energy and infrastructure industries and former CEO of Globeleq, an independent power producer in Africa (2017-2019).

Hydro said that it was committed to pursue natural gas as an energy source for the Alunorte refinery and will continue discussions with interested parties.

The Barcarena terminal is the only one permitted in the region and will have the opportunity to significantly reduce energy costs, and support environmentally responsible and sustainable industrial growth throughout this huge region.

Potential

Hygo said there was potential for replacing around 1.8 mill tonnes of LNG equivalents per annum of LPG, diesel, fuel oil, and coal from the terminal - creating the foundation for a broader transition

away from carbon-intensive energy sources in the region.

It has secured 25 year PPAs for a 605 MW power station, has received the necessary permits and has been awarded the port concession, to start building the LNG import terminal in the area.

Hygo also said that it remained committed to the Barcarena terminal and its plans will not be affected by the termination of the MOU with Hydro.

It was later reported that a Hygo affiliate has signed a Memorandum of Understanding (MOU) with Companhia de Gás do Pará (GdP), the local distributor that has exclusive rights to natural gas in Pará state.

Under the MOU, Hygo and GdP



Paul Hanrahan is due to take over as Hygo CEO

will explore the market potential and Hygo will supply natural gas and LNG to GdP once the negotiations are finalised and the contracts are in place.

LNG will be imported into the Barcarena Terminal, the construction of which is expected to start shortly with operations due to commence in the first half of 2022. ■

FLNG 'Gimi' - force majeure lifted

Golar LNG Limited subsidiary Gimi MS Corp has confirmed a revised project schedule with BP Mauritania Investments Ltd for the Greater Tortue Ahmeyim project.

The revised project schedule will result in the target connection date for the converted FLNG 'Gimi', previously scheduled for 2022, as set out in an agreement dated 26th February, 2019, being extended by 11 months.

Gimi MS Corp and BP have now received and given notice to each other confirming the revised project schedule and that there is no longer a *force majeure* situation ongoing.

The lease and operate agreement's terms are unchanged.

This confirmation of the revised project schedule and exchange of notices is expected to facilitate the conclusion of ongoing discussions with both engineering, procurement and construction (EPC) contractors and lending banks regarding the adjustment of construction and financing schedules, respectively, Golar said. ■

Turkey looks for third FSRU

Turkey plans to expand its LNG storage capacity by adding a third FSRU.

This unit will be located in Saros Bay, north of the Gallipoli Peninsula, in northwestern Turkey by 2021, the Turkish Deputy Energy and Natural Resources Minister, Alparslan Bayraktar said last week.

Speaking during a panel organised by the Turkish Academy of Science, he stressed "the critical importance" of natural gas for Turkey's clean energy policies.

"Ensuring Turkey's natural gas supply security and improving the infrastructure is very important. We have added two FSRUs in Aliaga [İzmir] and Hatay-Dörtyol to our system. Our efforts are ongoing for the third one in Saros [Bay]. It will

be added to our infrastructure next year," Bayraktar said.

Turkey's first FSRU started operations in İzmir's Aliaga district at the end of 2016, while the second, with 20 mill cu m of send-out capacity per day, was launched in the Mediterranean province of Hatay in early February, 2018.

Turkey imported 45.3 bill cu m of natural gas last year, paying approximately \$12 bill.

In addition to pipelines, Turkey improved its LNG infrastructure in a bid to increase the share of cheaper LNG in its natural gas mix to around 33% in 2020 from 28% in 2019, according to the Natural Re-

sources and Energy Ministry.

Turkey's major LNG suppliers are Qatar, the United States, Algeria, Nigeria, Cameroon and Egypt.

Turkey's natural gas imports for the first half of this year dropped by 3.5% to 22.5 bill cu m. Around 12.1 bill cu m was imported via pipeline and 10.3 bill as LNG.

In July, natural gas imports decreased by 4.5%, compared to the same month of 2019, according to the Energy Market Regulatory Authority (EPDK). The country imported 2.6 bill cu m of natural gas via pipelines, while 509 mill cu m came as LNG, according to the data. ■

NEWS NUDGE

Recent charters and newbuildings

Broking sources have reported that CNTIC VPower had chartered the 2007-built, 145,000 cu m 'Methane Alison Victoria' for three years at \$30,000 per day.

She is to be used as an FSU. In addition, Nakilat has re-

ported that its latest ME-GI propulsion LNGC, 'Global Energy', has been fixed to Cheniere Marketing International.

'Global Energy' was the first newbuild LNGC fitted with an ME-GI propulsion unit to join Nakilat's fleet and the first of four in a joint venture with Maran Ventures.

As for newbuilding contracts, Daewoo Shipbuilding & Marine

Engineering (DSME), said Monday that it has signed deals worth Won2 trill (\$1.7 bill) to build six LNGCs for two European interests.

Under two separate contracts, DSME will deliver the vessels to the European companies by July and December, 2023, respectively, the shipbuilder said in regulatory filings, without revealing the names of the clients, Yonhap reported. ■

Delfin completes FEED for FLNG project

Delfin Midstream has finalised FEED for the newbuilding FLNG of 3.5 mill tonnes per annum nameplate capacity.

This was achieved in co-operation with Samsung Heavy Industries and Black & Veatch.

The FEED results together with the overall project development activities enable the company to execute the project for a total capital cost of around \$550 per tonne per annum, Delfin claimed.

Each FLNG can be developed independently, with its own commercial and financial structure, which allows Delfin to be at the lower end of the global LNG cost curve, combined with the lowest FID threshold of 2 - 2.5 mill tonnes per annum firm offtake.

The design uses the latest gas turbine technology, optimisations of the Black & Veatch's patented PRICO liquefaction technology, direct air cooling and waste-heat recovery to achieve maximum fuel efficiency and minimal GHG emissions.

Each unit will be equipped with two offloading facilities to serve both large deepsea LNGCs, as well as the regional demand for LNG bunkering and small-scale carriers.

With ultimately four FLNGs in operation, the project will have four berths able to handle 13 mill tonnes per annum, which provides operational flexibility to service the bunkering and small-scale market.

In parallel to the FEED the co-operative has developed a term sheet for a lumpsum, turnkey engineering, procurement, construction, integration and commissioning contract (LSTK EPCIC) as the basis for the development of a fully termed agreement.

Commenting of the company's progress, Delfin CEO, Dudley Poston, said: "The successful completion of our FEED confirms our ability to offer industry leading pricing of 115% of Henry Hub plus \$2 for 20 year transactions. The flexibility of a low cost, floating asset also allows Delfin to offer shorter term 10 year deals for 115% of Henry Hub plus \$2.40 or flexible tolling structures.

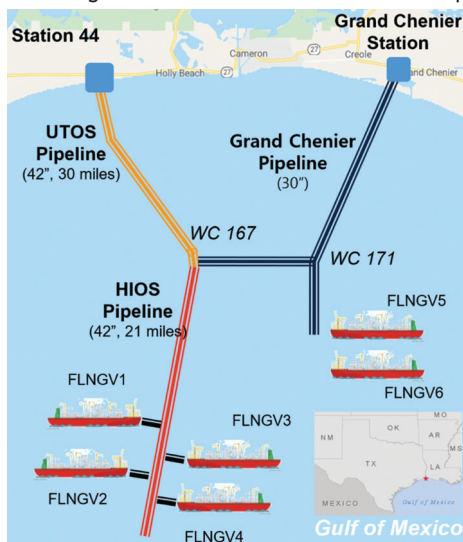
"Delfin continues to advance commercial discussions with multiple buyers and end-users and the completion of our FEED is a major milestone towards the FID of the first Delfin FLNG vessel," he said.

Wouter Pastoor, Delfin COO, added: "Recent hurricane activities in the Gulf of Mexico have highlighted the importance of sound design and operational measures to minimise potential downtime of LNG export facilities.

"The Delfin project is uniquely different, since the FLNG vessels are self-propelled and use a disconnectable mooring

solution to allow the FLNG vessel to sail away if a severe hurricane passes over the site.

"The same technology and operational procedures have been used for decades on oil FPSOs in tropical storm locations. The recent experiences with hurricane 'Laura' demonstrated the superior operations of offshore disconnectable oil FPSOs in the Gulf of Mexico," he said. ■



Delfin's offshore pipelines connect directly to the onshore pipelines with ample capacity for the first two or three FLNGs

Centrica sells gas to China

British energy services company, Centrica has signed a binding sales and purchase agreement (SPA) to supply 500,000 tonnes per annum of LNG to Chinese firm Shenergy.

Centrica said that deliveries were expected to start in 2024.

This 15-year SPA follows the heads of agreement (HoA) signed in January of this year.

It also represents the first long-term supply contract for Centrica in China.

Centrica Group CEO, Chris O'Shea, said: "We are delighted to conclude this agreement with Shenergy. The roots of our shared history date back over 150 years, to

when British Gas helped install gas lighting in the streets of Shanghai.

"Today's deal is a new milestone for our companies and complements Centrica's existing portfolio of LNG positions and contracts," he said.

Shenergy recently signed a 12-year HoA with Malaysia's Petronas LNG to import 1.5 mill tonnes of LNG to its Wuhaogou terminal.

This agreement is planned to take effect from 2022. ■

Cove Point export plant to restart - sale update

Dominion Energy Cove Point LNG export terminal in Maryland started to exit a three-week annual maintenance closure on 12th October, according to Refinitiv data.

Dominion spent about \$4 bill to add the LNG export terminal to Cove Point's existing LNG import terminal. It handled its first export cargo in March, 2018.

US LNG export capacity is expected to rise to 10.6 bill cu ft per day in 2021 and 12.1 bill in 2022 from 10 bill cu ft today.

Cove Point is designed to liquefy about 0.75 bill cu ft per day of gas and its whole capacity for 20 years was sold to a subsidiary of GAIL (India) and to ST Cove Point, a joint venture between companies involved with Japanese trading house Sumitomo Corp and Tokyo Gas.

The company also said that it expected its transaction with Berkshire Hathaway Energy, exclusive of Questar Pipelines, to close around 1st November, 2020.

As a result, Dominion Energy will receive around \$2.7 bill in cash and transfer \$5.3 bill of existing Dominion Energy Gas Holdings (DEGH) related debt to the buyer at closing.

The company also said it expected to complete the sale of

Questar Pipelines to Berkshire Hathaway Energy upon receipt of Hart-Scott-Rodino (HSR) clearance in early 2021 and will receive about \$1.3 bill in cash and transfer around \$430 mill of existing Questar Pipelines debt to the buyer.

This mutually agreed dual-phase closing is the result of updated timing expectations for receipt of the HSR clearance from the US Federal Trade Commission (FTC) related exclusively to the pipelines.

By the end of September, Dominion Energy had completed over \$500 mill of open market repurchases, as well as executed a \$1.5 bill accelerated share repurchase programme that will conclude in December.

When completed in early 2021, the company expected total share repurchases to be at least \$3 bill.

Based on a strong year-to-date performance, Dominion Energy said it expected 2020 operating earnings per share, normalised for weather, to be in the top half of its \$3.37 to \$3.60 guidance range. ■

VDR backs Brunsbüttel LNG terminal project

The German Shipowners' Association (VDR) has welcomed investments in LNG supply logistics.

"As one of the world's major shipping nations, Germany needs an LNG infrastructure for its shipping industry to prepare for the upcoming energy transformation," explained VDR CEO, Ralf Nagel.

"That's why we welcome projects that quickly become reality, such as the terminal in Brunsbüttel."

This endorsement followed discussions with Rolf Brouwer, German LNG Terminal GmbH Managing Director.

Nagel emphasised that, from his point of view, LNG was cur-

rently the only marketable fuel available with which the maritime industry could approach its climate goals within the IMO, as well as the objectives set for improving air quality.

He said that it is important in the long term that LNG technology will also enable the large-scale use of alternative 'green' gases on board ships in an environmentally friendly way.

"A ship's engine running on oil-based fuels cannot be converted to 'green gas' without

great effort and expense - but a dual-fuel or LNG-capable engine can," he explained, adding; "that's why we should impartially discuss and carefully weigh up the use of LNG to power large seagoing vessels - and by all means develop the supply logistics for this at our location."

"The LNG terminal in Brunsbüttel is an ambitious and forward-looking infrastructure project because natural gas and therefore LNG play an important role in the energy transformation.

"The shipping industry is also facing the particular challenge of significantly reducing the emission of pollutants. The planned terminal in Brunsbüttel will be a practical support for introducing more sustainable alternative fuels, especially for shipping traffic," Brouwer said. "Our project team brings a wealth of relevant experience to German LNG Terminal, enabling us to optimally implement the project from start to finish."

Two jetties

The Brunsbüttel terminal project includes two jetties, one to handle up to Q-Max LNGCs, while the other will handle smaller LNGCs,

such as bunker vessels, ranging from 70 m to 170 m in length.

It will have a maximum discharge rate of 14,000 cu m per hour, which will mean that large LNGCs can be unloaded in about 20 hours.

Smaller LNGCs will have correspondingly shorter time on the berth.

German LNG Terminal is a joint venture between Dutch companies Gasunie LNG Holding and Vopak LNG Holding, as well as Oil-tanking, a subsidiary of Marquard & Bahls, based in Hamburg.

The terminal will provide a wide range of services, including the loading and unloading of LNGCs, the temporary storage of LNG, regasification, feeding natural gas into the German natural gas network, and distribution of LNG via tank trucks and LNG tank cars.

German LNG Terminal opted for Brunsbüttel because of its proximity to Hamburg and the many manufacturing companies based in the region. In addition, the Kiel Canal also runs close to the planned terminal, which provides easy access to the Scandinavian and Baltic countries. ■



The German VDR has lauded the planned Brunsbüttel LNG terminal

ecoSMRT reliquefaction system fitted on board second SCF LNGC

Babcock's LGE business has delivered its single mixed refrigerant technology, the patented ecoSMRT, to a second SCF LNGC.

SCF Group took delivery of the 174,000 cu m 'SCF Barents' from Hyundai Samho Heavy Industries. She is on a long-term charter to Shell.

Claimed to provide the highest efficiency on the market, ecoSMRT delivers significant environmental and economic benefits to customers.

Neale Campbell, Babcock LGE Managing Director, said: "With ecoSMRT's in-service performance achieving, and at times exceeding,

the design expectations, we are delighted that SCF is now reaping the benefits of this system.

"As an early adopter of the technology, SCF recognised the opportunity that ecoSMRT presented and can now boast the most efficient LNG carrier reliquefaction system in service today," he said.

Roman Pokromkin, SCF Group's Head of Technical Policy and Shipbuilding Unit, added: "'SCF Barents' is the second vessel in a

series of new generation Atlanticmax LNG carriers ordered by SCF Group in 2018. The first vessel of the series, 'SCF La Perouse', was delivered in February, 2020.

"All vessels of the series are among the first globally to feature a boil-off gas partial reliquefaction system, ecoSMRT, which significantly reduces cargo losses while on long voyages or awaiting cargo operations.

"Since early days after com-

missioning of the ecoSMRT system on-board 'SCF La Perouse', it has been used whenever operational circumstances permitted. This has already provided a significant reduction in environmental footprint - to date, the vessel has liquefied 750 tonnes of boil off gas," he said.

The system is now operating on five LNGCs, with a further 40 to be delivered in the coming years, Babcock said. ■

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Wison to revamp Nantong shipyard

Engineering group Wison has embarked upon a large LNG equipment upgrade to transform the Nantong Yard in a RMB1.43 bill investment project.

The work is expected to be complete by 2022.

Wison Offshore and Marine (WOM) subsidiary, Wison (Nantong) Heavy Industry Co Ltd, recently held a ground breaking ceremony for the project in Nantong National High-tech Industrial Development Zone.

The aim is to comprehensively upgrade and transform the Nantong yard's infrastructure, production capacity and management, plus control processes.

It is planned to extend the existing dock to 370 m x 68 m, expand the general assembly site of about 20,000 sq m, build an SPB general assembly workshop of about 14,000 cu m and a spray painting workshop of 9,000 sq m, another workshop of about 40,000 sq m and an outfitting dock of about 9,000 sq m.

After its completion, Nantong's production capacity will reach annual deliveries of five FLNGs, LNGCs and floating storage regasification and power generation

barge (FSRP). In addition, annual deliveries of 60,000 tonnes of modules and 20 LNG tanks for floating facilities will be possible.

WOM said that the project will not only help it break through the bottleneck of production capacity, but also further enhance the engineering and construction capacity of its two core products: FLNGs (liquefaction capacity: 0.5 - 5 mill tonnes per annum) and FSRPs (power generation capacity: 100 - 600 MW).

"Wison Offshore & Marine, a leading natural gas monetisation

solutions provider, has been committed to offering the global energy industry with innovative and diversified approaches to monetise natural gas," An Wenxin, WOM COO, said, "We believe that after the completion of the upgrade and transformation project, it will effectively increase the competitive advantages of the WOM's serialised large-scale floating natural gas solutions in the market, and also better meet the needs of global clients for large-scale floating natural gas facilities," he said. ■



Wison is to upgrade the Nantong shipyard for LNG unit construction

Goltens oversees BWTS LNGC retrofit

Goltens Singapore was recently contracted by an undisclosed LNGC shipowner to undertake a ballast water treatment system (BWTS) 3D scanning, design engineering, material supply & installation supervision on a 2004-built LNGC.

The Techross system chosen was one of the world's largest to be installed on board a vessel thus far, being twin ECS-3,200 B units fitted with three 3,100 cu m per hour ballast pumps.

Under the terms of the contract, Goltens Singapore performed 3D laser scanning on board the vessel. Upon completion, the scans were registered and Goltens embarked on the design engineering works with 3D modelling software.

Once the engineering design was developed and upon approval from the owner's representatives & class, the prefabrication & procurement of materials & equipment, respectively started.

From the outset, the primary constraint with the project was the limited area surrounding the ballast pumps, as the TechCross equipment was both large in size and quantity. Despite these constraints, the engineering team went over the designs repeatedly to ensure that the engineers were able to optimise the space management.

During the prefabrication phase, Goltens Singapore team conducted numerous inspections to ensure that the quality & integrity of the prefabricated pipes were up to satisfactory standards. Upon completion of pre-fabrication, Non-Destructive Testing (NDT) was carried out by qualified

Goltens personnel and witnessed by the vessel's representatives.

The installation was carried out in 20 days by Sembawang Shipyard Contractors and was completed successfully.

The installation phase was carried out in five separate stages simultaneously.

1. Remove the existing pipes to install the tie in spools, lift out the existing pipes (demolition) and install the newly fabricated big bore (600A) pipes.
2. Fabricate & install the foundation supports for the equipment (electro chamber unit, power distribution equipment, auto neutralisation unit & TRO

NEWS NUDGE

BW LNG starts FSRU conversion project

BW Group subsidiary BW LNG has issued an update to its El Salvador FSRU conversion project.

At the end of last month, a strike steel ceremony took place at the Keppel Shipyard, which marked the physical start of the 'BW Tatiana' FSRU conversion process for an LNG-to-power project in El Salvador.

BW LNG signed a contract last year to supply an FSRU with US-based private energy company Invenergy that is developing El Salvador's first LNG-to-power project.

Invenergy is the main shareholder of Energía del Pacífico, the company behind the project, which is currently under construction at Acajutla.

Shell is to supply LNG for the project under a long-term deal signed with Energía del Pacífico.

Besides the floating LNG import facility, the project includes the construction of a 378 MW natural gas-fired power plant with transmission facilities. ■

sensor unit).

3. Lifting the equipment safely into the engine room's lowest deck and securing the equipment.
4. Completion of electrical works including - cable pulling, cable termination at main switchboards, power distribution equipment and equipment onsite.
5. Installation of the small-bore piping between the equipment and big bore spools.

Over the entire installation phase, Goltens Singapore oversaw the shipyard contractors to ensure there were no delays to the schedule and that it was completed on time. ■

Alfa Laval and WinGD claim methane slip reduction

With methane slip regulations on the horizon at the IMO, Alfa Laval and Swiss engine developer, WinGD have co-operated on a solution.

Alfa Laval's PureCool system is the main component in WinGD's iCER technology, an option for next-generation WinGD X-DF engines that is claimed to significantly reduce methane slip and thus boost fuel and energy efficiency.

Many shipowners thinking of using LNG as a fuel, are concerned about the possible arrival of methane slip regulations. LNG produces less CO₂ than other fossil fuels when burned, but a small percentage of methane can slip through the engine without being combusted.

Since methane has a higher global warming potential than CO₂, even this small source of emissions may come into focus in meeting IMO's ambitious climate goals, Alfa Laval warned.

"With IMO aiming to cut greenhouse gas emissions by at least 50% compared to 2008 levels, LNG has a major role as a bridge fuel in moving towards a carbon neutral future," said David Jung, Alfa Laval's Business Development Manager. "However, the awareness of methane slip and its influence on global warming is increasing. New regulations are not unthinkable,

and any improvement from today's environmental benchmark is important.

"With or without regulations, WinGD's iCER technology with the Alfa Laval PureCool system will help the shipping industry align more fully with climate goals by minimising methane slip," he added.

iCER concept

Developed by Alfa Laval in close collaboration with WinGD, PureCool is a cascade exhaust gas cooling system at the heart of the iCER concept. Short for Intelligent Control by Exhaust gas Recycling, iCER is the first development presented in X-DF2.0, WinGD's second-generation dual-fuel engine technology.

"The iCER option is a standalone installation adjacent to the engine," Jung said. "During operation in gas mode, it improves combustion by cooling and recirculating about 50% of the exhaust gas through a low-pressure path with full turbocharger capacity. This minimises methane slip, and the PureCool system provides the vital cooling function that makes it possible."

Trials at WinGD's dedicated engine test facility, which were the final step in a two-year testing programme, showed a methane slip reduction of up to 50%.

"This is not fine-tuning or a marginal improvement of LNG technology," Jung claimed. "This is a major environmental gain that truly strengthens LNG's profile. With the PureCool system at its heart, iCER will cut methane slip by as much as half."

Beyond the methane slip reduction, the iCER solution with PureCool offers engine buyers significant operational benefits as when combustion is improved with iCER, fuel consumption in gas mode is reduced by 3%.

"The PureCool system improves a vessel's efficiency along with its emissions," said Jung. "The fuel savings inherent to iCER can have a positive impact on a vessel's Energy Efficiency Design Index (EEDI)." ■



To reduce methane slip, an Alfa Laval system can be connected to WinGD's engine enhancements

NEWS NUDGE

Chevron's Australian export plants to undergo maintenance

Chevron Corp is planning to progressively shut production units at its LNG export plants in Western Australia for maintenance during 2021/2022.

More than one-and-a-half of a train will be closed at its Gorgon LNG export plant from 26th April to 14th July next year, according to a notice on Chevron's website.

The company is also planning to shut more than one LNG train at Wheatstone from 2nd September to 7th October, ■

2021, and more than one-and-a-half of another Wheatstone train from 4th April to 9th May, 2022.

First Q-Max at Montoir-de-Bretagne

A Q-Max recently berthed at Elengy's Montoir-de-Bretagne terminal for the first time.

The 'Al Mayeda' arrived at the terminal, located in the port of Nantes/St Nazaire.

Regularly renovated and modernised, the site can now handle Q-Maxes.

In the past few years, the terminal has been heavily involved in European LNG transshipment operations making use of its two berth layout. ■

LNG rate assessments

Spot market (155,000-165,000 cu m)

Region	This week	Change*
East of Suez	\$74,000	+\$16,500
West of Suez	\$70,000	+\$10,000
12 mos T/C	\$48,000	+\$ 1,000

*Since last report (01/10/20)

Source: Fearnleys (14/10/20)

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	Pelita Energy	18,800	LNG	Malaysia - Japan	Yes	Perbadanan/NYK
2000	Triputra	23,096	LNG	Indonesia - Japan	Yes	MCGC
2003	Pioneer Knutsen	1,100	LNG	Norway	Yes	Knutsen
2003	Shinju Maru No.1	2,540	LNG	Japan	Yes	Shinwa
2005	North Pioneer	2,500	LNG	Japan	Yes	Japan Liquid Gas
2007	Sun Arrows	19,531	LNG	Malaysia - Russia - Japan	Yes	Mitsui
2008	Kakurei Maru	2,536	LNG	Japan	Yes	Hogaki Zosen
2008	Shinju Maru No.2	2,540	LNG	Japan	Yes	Shinwa
2009	Coral Methane	7,551	LNG/LPG/Ethylene	Northwest Europe/Baltics	Yes, sometimes	Anthony Veder
2010	Coral Favia	10,000	LNG/LPG/Ethylene	Worldwide	No	Anthony Veder
2010	Coral Fraseri	10,000	LNG/LPG/Ethylene	Worldwide	No	Anthony Veder
2011	Akebono Maru	3,556	LNG	Japan	Yes	Chuo Kaiun
2011	Coral Furcata	10,000	LNG/LPG/Ethylene	Worldwide	No	Anthony Veder
2011	Coral Fungia	10,000	LNG/LPG/Ethylene	Worldwide	No	Anthony Veder
2011	Vision Spirit	12,000	LNG/LPG/Ethylene	Worldwide	No	Teekay
2011	Unikum Spirit	12,000	LNG/LPG/Ethylene	Worldwide	No	Teekay
2012	Coral Energy	15,600	LNG	Northwest Europe/Baltics	Yes	Anthony Veder
2013	JX Energy TBN	2,500	LNG	Japan	Yes	JX Energy
2013	Kakuyu Maru	2,500	LNG	Japan	Yes	Tsurumi Sunmarine
2013	Coral Antheia	6,500	LNG/Ethylene			Anthony Veder
2015	LNG Barge TBN	3,000	LNG	US Coast	Yes	LNG America
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	PetroChina TBN	30,000	LNG	China		PetroChina
2016	Clean Jacksonville	2,200	LNG	US Coast	Yes	CME
2016	LNG Prime	2,250	LNG	Northwest Europe	Yes	Veka Deen LNG
2016	JS Ineos Indepence	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2016	JS Ineos Innvation	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2016	JS Ineos Inspiration	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2016	Hai Yang Shi You 301	30,000	LNG	Bali FSU	Yes	CETS (CNOOC)
2017	Oizmendi	600	LNG	Bilbao	Yes	Itsas Gas
2017	ENGIE Zeebrugge	5,000	LNG	Northwest Europe	Yes	NYK
2017	Coralius	5,800	LNG	Northwest Europe/Baltics	Yes, for Skangas	Anthony Veder
2017	Cardissa	6,500	LNG	Northwest Europe	Yes	Shell
2017	LNG-Gorskaya TBN	7,300	LNG	Russia	Yes	LNG-Gorskaya
2017	LNG-Gorskaya TBN	7,300	LNG	Russia	Yes	LNG-Gorskaya

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 = 19th August 2020

Built	Name	CBM	Cargo Type	Trading area	Trading in LNG?	Ship Owner / Operator
2017	LNG-Gorskaya TBN	7,300	LNG	Russia	Yes	LNG-Gorskaya
2017	Coral EnergiCE	18,000	LNG	Northwest Europe/Baltics	Yes	Anthony Veder
2017	JS Ineos Invention	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2017	JS Ineos Intuition	27,500	LNG/Ethylene	Markus Hook - Rafnes	Ethane, for Ineos	Evergas
2017	Coral Encanto	30,000	LNG	China	Yes	Anthony Veder
2018	HUA XIANG 8	13,720	LNG	China	Yes	Zhejiang Huaxiang
2018	LNG London	3,000	LNG	Northwest Europe	Yes	Shell
2018	Shell Bunker Barge TBN 2	6,500	LNG	Northwest Europe	Yes	Shell
2018	Shell Bunker Barge TBN 3	6,500	LNG	Northwest Europe	Yes	Shell
2018	Kairos	7,500	LNG	Baltic	Yes	Bernhard Schulte
2018	Bunker Breeze	0	LNG	Barcelona	Yes	Suardiaz Energy Shipping
2019	SM Jeju LNG1	7,500	LNG	Korea	Yes	Korea Line
2019	Stolt TBN	7,500	LNG	Mediterranean	Yes	Stolt-Nielsen Gas
2019	Stolt TBN	7,500	LNG	Mediterranean	Yes	Stolt-Nielsen Gas
2019	Gas Agility	18,600	LNG	NWE	Yes	MOL
2019	Flexfueller 001	1,480	LNG	Amsterdam	Yes	Titan LNG
2020	SM Jeju LNG2	7,500	LNG	Korea	Yes	Korea Line
2020	CNTIC VPOWER Global	28,000	LNG	Myanmar	Yes	Dalian Inteh Group
2020	Q-LNG 4000	4,000	LNG	US Coast	Yes	Q-LNG Transport/Harvey Gulf
2020	Stolt TBN (option)	7,500	LNG		Yes	Stolt-Nielsen Gas
2020	FuelLNG TBN	7,500	LNG	Singapore	Yes	FuelLNG
2020	CLS TBN	3,500	LNG	Japan	Yes	CLS
2020	Elenger TBN	6,000	LNG	NWE	Yes	Elenger
2020	ENN TBN	8,500	LNG	China	Yes	ENN
2020	Flexfueller 002	1,480	LNG	Antwerp	Yes	Titan LNG
2020	Ecobunker Tokyo Bay	2,500	LMG	Japan	Yes	Ecobunkers
2021	Stolt TBN (option)	7,500	LNG		Yes	Stolt-Nielsen Gas
2021	Knutsen TBN	30,000	LNG	Mediterranean	Yes	Knutsen OAS
2021	Gazprom Neft TBN	5,800	LNG	Russia	Yes	Gazprom Neft
2021	PE TBN	12,000	LNG	Singapore	Yes	MOL
2021	JMU TBN	2,500	LNG	Japan	Yes	JMU
2021	TBN	18,600	LNG	Mediterranean	Yes	MOL
2021	TG TBN	500	LNG	Korea	Yes	Trans Gas
2022	Stolt TBN	20,000	LNG	Worldwide	Yes	Stolt-Nielsen Gas
2022	Stolt TBN	20,000	LNG	Worldwide	Yes	Stolt-Nielsen Gas
2022	Clean Cañaveral	5,400	LNG	USG	Yes	PNE
2023	Cryopeak TBA	4,000	LNG	West Canada	Yes	Cryopeak
2024	Stolt TBN (option)	20,000	LNG	Worldwide	Yes	Stolt-Nielsen Gas
2024	Stolt TBN (option)	20,000	LNG	Worldwide	Yes	Stolt-Nielsen Gas
2026	Stolt TBN (option)	20,000	LNG	Worldwide	Yes	Stolt-Nielsen Gas
2026	Stolt TBN (option)	20,000	LNG	Worldwide	Yes	Stolt-Nielsen Gas

For more information please visit <http://small-lng.com>

*Includes multi-gas, ethylene and LNG bunker ships with 40,000 cubic metres LNG cargo capacity or less
TBN = To Be Nominated indicates ships are still at construction/planning stage

** = project shelved † =Data to be verified Data last updated = 19th August 2020

WORLD LNG CARRIER ORDERBOOK

Name	Containment system	Yard	Propulsion	Capacity	Delivery date	Primary Owner
Flex Artemis	GT NO 96	DSME	MEGI	173400	01/07/2020	Flex LNG
Lng Phecda	GT NO 96	Hudong-Zhonghua	MEGI	174000	01/07/2020	MOL
Cool Discoverer	GTT Mark III Flex	Hyundai	XDF	174000	01/08/2020	Thenamaris
Energy Pacific	GT NO 96	DSME	MEGI	173400	01/08/2020	Alpha Gas
Flex Aurora	GTT Mark III Flex	Hyundai	XDF	174000	01/08/2020	Flex LNG
Pearl Lng	GTT Mark III Flex	Samsung	XDF	174000	01/08/2020	TMS Cardiff Gas
Vivit Americas Lng	GTT Mark III Flex	Hyundai	XDF	174000	01/09/2020	TMS Cardiff Gas
Scf Barents	GTT Mark III Flex	Hyundai	XDF	174000	01/09/2020	Sovcomflot
Flex Resolute	GT NO 96	DSME	MEGI	173400	01/09/2020	Flex LNG
Gaslog Galveston	GTT Mark III Flex	Samsung	XDF	174000	01/10/2020	GasLog
Gaslog Georgetown	GTT Mark III Flex	Samsung	XDF	174000	01/10/2020	GasLog
Aristos I	GTT Mark III Flex	Hyundai	XDF	174000	01/10/2020	Capital Gas
Yiannis	GT NO 96	DSME	MEGI	173400	01/10/2020	Maran Gas Maritime
Dorado LNG	GTT Mark III Flex	Samsung	XDF	174000	01/10/2020	TMS Cardiff Gas
Lng Megrez	GT NO 96	Hudong-Zhonghua	MEGI	174000	01/10/2020	MOL
Cobia Lng	GTT Mark III Flex	Hyundai	XDF	174000	31/10/2020	TMS Cardiff Gas
Celsius Copenhagen	GTT Mark III Flex	Samsung	XDF	180000	31/10/2020	Celcius Shipping
Aristidis I	GTT Mark III Flex	Hyundai	XDF	174000	01/11/2020	Capital Gas
Diamond Gas Metropolis	GTT Mark III Flex	Hyundai	XDF	174000	01/11/2020	NYK
Flex Freedom	GT NO 96	DSME	MEGI	173400	01/11/2020	Flex LNG
Flex Amber	GTT Mark III Flex	Hyundai	XDF	174000	01/11/2020	Flex LNG
Celsius Canberra	GTT Mark III Flex	Samsung	XDF	180000	01/12/2020	Celcius Shipping
Global Star	GT NO 96	DSME	MEGI	173400	01/12/2020	Nakilat
Energy Endeavour	GT NO 96	DSME	MEGI	173400	01/12/2020	Alpha Gas
Lng Rosenrot	GT NO 96	DSME	MEGI	180000	01/01/2021	MOL
Samsung 2304	GTT Mark III Flex	Samsung	XDF	174000	01/01/2021	Minerva Marine
Daewoo 2481	GT NO 96	DSME	MEGI	173400	01/01/2021	Minerva Marine
Samsung 2313	GTT Mark III Flex	Samsung	XDF	180000	01/02/2021	Celcius Shipping
Bw Lesmes	GT NO 96	DSME	MEGI	174000	01/02/2021	BWGas
Gail Bhuwan	GT NO 96	DSME	MEGI	180000	01/02/2021	MOL
Cool Racer	GTT Mark III Flex	Hyundai	XDF	174000	01/02/2021	Thenamaris
Scf Timmerman	GTT Mark III Flex	Hyundai	XDF	174000	01/02/2021	Sovcomflot
Flex Volunteer	GTT Mark III Flex	Hyundai	XDF	174000	01/02/2021	Flex LNG
Minerva Limnos	GT NO 96	DSME	MEGI	173400	01/02/2021	Minerva Marine
Marvel Swan	GTT Mark III Flex	Samsung	XDF	173400	01/03/2021	Navigare
Bw Helios	GT NO 96	DSME	MEGI	174000	01/03/2021	BWGas
LNG Ships Express	GTT Mark III Flex	Samsung	XDF	174000	01/03/2021	TMS Cardiff Gas
Hellas Diana	GTT Mark III Flex	Hyundai	XDF	174000	01/03/2021	Latsco Shipping
Lngships Athena	GTT Mark III Flex	Hyundai	XDF	174000	01/03/2021	TMS Cardiff Gas
Lngship Manhattan	GTT Mark III Flex	Hyundai	XDF	174000	01/03/2021	TMS Cardiff Gas
Aristarchos	GTT Mark III Flex	Hyundai	XDF	174000	01/03/2021	Capital Gas
Samsung 2302	GTT Mark III Flex	Samsung	XDF	174000	01/04/2021	NYK

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 = 28th July 2020

Name	Containment system	Yard	Propulsion	Capacity	Delivery date	Primary Owner
Celcius #4	GTT Mark III Flex	Samsung	XDF	180000	15/04/2021	Celcius Shipping
DSME 2485	GT NO 96	DSME	MEGI	173400	15/04/2021	Alpha Gas
Diamond Gas Crystal	GTT Mark III Flex	Hyundai	XDF	174000	01/05/2021	NYK
Flex Vigilant	GTT Mark III Flex	Hyundai	XDF	174000	01/05/2021	Flex LNG
Daewoo 2501	GTT Mark III Flex	DSME	MEGI	174000	01/06/2021	Maran Gas Maritime
Hudong-zhonghua H1827a	GT NO 96	Hudong-Zhonghua	XDF	174000	01/06/2021	CSSC
Daewoo 2495	GT NO 96	DSME	XDF	174000	01/06/2021	Maran Gas Maritime
Daewoo 2500	GT NO 96	DSME	MEGI	174000	01/06/2021	Alpha Gas
Attalos	GTT Mark III Flex	Hyundai	XDF	174000	01/06/2021	Capital Gas
SHI Gaslog CE #1	GTT Mark III Flex	Samsung	XDF	180000	15/06/2021	GasLog
Daewoo 2505	GT NO 96	DSME	MEGI	173400	01/07/2021	MOL
Asterix 1	GTT Mark III Flex	Hyundai	XDF	174000	01/08/2021	Capital Gas
Adamastos	GTT Mark III Flex	Hyundai	XDF	174000	01/08/2021	Capital Gas
SHI Gaslog CE #2	GTT Mark III Flex	Samsung	XDF	180000	15/08/2021	GasLog
Daewoo 2504	GT NO 96	DSME	XDF	174000	01/09/2021	Maran Gas Maritime
Daewoo 2502	GTT Mark III Flex	DSME	XDF	173400	01/09/2021	Nakilat
Samsung 2305	GTT Mark III Flex	Samsung	XDF	174000	01/09/2021	Minerva Marine
Diamond Gas Victoria	GTT Mark III Flex	Hyundai	XDF	174000	01/09/2021	NYK
Hellas Athina	GTT Mark III Flex	Hyundai	XDF	174000	01/09/2021	Latsco Shipping
Asklipios	GTT Mark III Flex	Hyundai	XDF	174000	15/09/2021	Capital Gas
Samsung 2355	GTT Mark III Flex	Samsung	XDF	174000	01/10/2021	NYK
Daewoo 2507	GT NO 96	DSME	XDF	174000	01/10/2021	Maran Gas Maritime
Hyundai Ulsan 2939	GTT Mark III Flex	Hyundai	XDF	180000	01/10/2021	SK Shipping
Samsung 2306	GTT Mark III Flex	Samsung	XDF	174000	01/10/2021	NYK
Hyundai Samho 8025	GTT Mark III Flex	Hyundai	XDF	174000	01/12/2021	H-Line
Hyundai Ulsan 3157	GTT Mark III Flex	Hyundai	XDF	174000	01/12/2021	Tsakos Energy Navigation
Samsung 2336	GTT Mark III Flex	Samsung	XDF	174000	01/12/2021	JP Morgan
Daewoo 2503	GTT Mark III Flex	DSME	XDF	173400	01/12/2021	Nakilat
Samsung 2307	GTT Mark III Flex	Samsung	XDF	174000	01/12/2021	NYK
Daewoo 2508	GT NO 96	DSME	XDF	174000	01/01/2022	Maran Gas Maritime
Hyundai Samho 8032	GTT Mark III Flex	Hyundai	XDF	174000	01/01/2022	NYK
Hudong-zhonghua H1828a	GT NO 96	Hudong-Zhonghua	XDF	174000	01/01/2022	CSSC
Samsung 2315	GTT Mark III Flex	Samsung	XDF	173400	01/03/2022	SinoKor
Samsung 2319	GTT Mark III Flex	Samsung	XDF	174000	01/03/2022	JP Morgan
Elisa Aquila	GTT Mark III Flex	Hyundai	XDF	174000	01/03/2022	NYK
Samsung 2332	GTT Mark III Flex	Samsung	XDF	174000	01/03/2022	Minerva Marine
Hudong-zhonghua H1788a	GT NO 96	Hudong-Zhonghua	XDF	80000	01/04/2022	K-Line
Hyundai Ulsan 3137	GTT Mark III Flex	Hyundai	XDF	178000	01/04/2022	Dynagas
Hudong-zhonghua H1789a	GT NO 96	Hudong-Zhonghua	XDF	80000	01/05/2022	K-Line
Samsung 2316	GTT Mark III Flex	Samsung	XDF	173400	01/05/2022	SinoKor
DSME May19	GT NO 96	DSME	MEGI	174000	15/05/2022	Maran Gas Maritime
Hyundai Samho 8033		Hyundai	XDF	173000	01/06/2022	NYK
Hyundai Samho 8026	GTT Mark III Flex	Hyundai	XDF	174000	01/06/2022	H-Line

Name	Containment system	Yard	Propulsion	Capacity	Delivery date	Primary Owner
Samsung 2337	GTT Mark III Flex	Samsung	XDF	174000	01/07/2022	JP Morgan
Hyundai Ulsan 3138	GTT Mark III Flex	Hyundai	XDF	178000	01/07/2022	Dynagas
Hyundai Samho 8091	GTT Mark III Flex	Hyundai	XDF	174000	01/08/2022	Knutzen
Hyundai Ulsan 3185	GTT Mark III Flex	Hyundai	XDF	174000	01/08/2022	Korea Line
Samsung 2317	GTT Mark III Flex	Samsung	XDF	173400	01/08/2022	SinoKor
Daewoo 2509	GT NO 96	DSME	MEGI	174000	01/08/2022	BWGas
Samsung 2318	GTT Mark III Flex	Samsung	XDF	173400	01/09/2022	SinoKor
Daewoo 2510	GT NO 96	DSME	MEGI	174000	01/09/2022	BWGas
Hyundai Ulsan 3145	GTT Mark III Flex	Hyundai	XDF	180000	01/09/2022	SK Shipping
Hyundai Samho 8092	GTT Mark III Flex	Hyundai	XDF	174000	01/10/2022	Knutzen
Hyundai Ulsan 3186	GTT Mark III Flex	Hyundai	XDF	174000	01/10/2022	Korea Line
Hyundai Ulsan 3187	GTT Mark III Flex	Hyundai	XDF	174000	01/11/2022	JP Morgan
Hyundai Samho 8093	GTT Mark III Flex	Hyundai	XDF	174000	01/11/2022	Knutzen
Cosco PCI #1	GT NO 96	Hudong-Zhonghua	XDF	174000	15/11/2022	China LNG Shipping
Hyundai Ulsan 3188	GTT Mark III Flex	Hyundai	XDF	174000	01/12/2022	JP Morgan
Hyundai Samho 8094	GTT Mark III Flex	Hyundai	XDF	174000	01/12/2022	Knutzen
Samsung 2364	GTT Mark III Flex	Samsung	XDF	174000	01/01/2023	MISC
Cosco PCI #2	GT NO 96	Hudong-Zhonghua	XDF	174000	15/01/2023	China LNG Shipping
Samsung 2365	GTT Mark III Flex	Samsung	XDF	174000	01/02/2023	MISC
Zvezda 041	GTT Mark III Flex	Zvezda SSK	TFDE-Azipod	172600	01/03/2023	Novatek
Cosco PCI #3	GT NO 96	Hudong-Zhonghua	XDF	174000	15/03/2023	China LNG Shipping
Zvezda 042	GTT Mark III Flex	Zvezda SSK	TFDE-Azipod	172600	01/09/2023	Novatek
Zvezda 043	GTT Mark III Flex	Zvezda SSK	TFDE-Azipod	172600	01/10/2023	Novatek
Zvezda 044	GTT Mark III Flex	Zvezda SSK	TFDE-Azipod	172600	01/11/2023	Novatek
Zvezda 045	GTT Mark III Flex	Zvezda SSK	TFDE-Azipod	172600	01/12/2023	Novatek

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 = Data last updated = 28th July 2020



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