LNG NEWS WEEKLY 22ND DECEMBER 2024

NEW METHANE RULES TO DIVIDELNG CARGO MARKET INTO TIERS

Not everyone in Berlin was happy to see the World LNG Summit & Awards roll into town for its first visit to Germany. Protesters from the evocatively named Last Generation sprayed the Hotel Adlon Kempinski, the conference venue, with green paint before police ramped up security to a degree that made it difficult for delegates to gain access to the event. Some on stage for the annual event acknowledged the protesters outside, who chanted into the chilly darkness. One of these on stage was Simon Culkin, managing director of the UK's Grain LNG, the world's 10th-largest import terminal. He told a session on the European Union's incoming methane regulation and how this might affect the LNG market: "There are lots of people outside this hotel who want gas not to exist, and you have to have some empathy for their position and understand where they are coming from." Culkin added that others think this is not a problem the summit should be trying to solve. The fact that the conference was devoting more sessions and questions to decarbonisation indicates a sea change in the industry that is likely to become more evident as new regulations kick in. Speakers said a two-tier cargo market is increasingly likely to emerge, comprising shipments of LNG whose emissions have been certified and others that have not, and buyers will want to see the profile of the whole gas supply chain, including shipping. Poten & Partners manager for LNG & gas consulting Graeme Wildgoose said that, looking ahead, whether it is carbon or methane, emissions are one of the main policy and regulatory challenges for LNG

suppliers. The EU adopted its first methane regulation this year, but from 2027 energy producers will be obliged to complete inventory, emissions monitoring and mitigation plans that will become increasingly stringent into the next decade.

What buyers want

Georges Tijbosch, chief executive of not-for-profit emissions verification company MiQ, said there is no target methane rate and there are no penalties yet. Tijbosch said currently the EU methane regulations — which he dubbed "a bit clunky" — look only at gas production and do not include liquefaction or shipping. But he added that the sector already has LNG utility buyers who want to see the emissions profile of the full supply chain. Engie head of global LNG and biomass Ralf Dickgreber said it is difficult to know yet how to comply with the incoming regulations. He compared LNG with the biomass sector, where volumes are certified. Dickgreber said the gas industry can do "a bit more" to reduce carbon emissions and methane intensity. He accepted that it would cost more but said some European buyers are prepared to pay. "LNG is a super-important product in the energy transition," the Engie head said. "By 2030, the industry is going to be trading certified and uncertified cargoes." Although at the beginning, this might be more complex and cause bottlenecks, overall, "I see this as a positive development". Tijbosch said that many LNG buyers want this information. "If you think about it, they have at least a moral right to know the upstream emissions when they buy gas," he said. "These emissions can be addressed and what is missing is an ecosystem to allow a seller to shine if a low-emission producer."

Industry first

But back to Grain LNG, which this year had its emissions certified by MiQ in what was claimed as a first for a facility of this type. Culkin, who spoke with passion about what the industry should be doing, said the answers to big problems are not necessarily big. He described how Grain LNG has been hunting down and sorting out its methane leaks, bringing 5% improvements each year. "It's not very sexy. It's not very exciting going to hunt down data and stop leaks from an LNG plant. It's not going to get in the news," he said. Following its audit, Grain LNG has emerged with a B grade and a methane intensity of 0.02%. Culkin said the company will be trying to improve on this. "We just need to get cleaner. You can't afford to ignore this issue," he said. "Morally it is the right thing to do." Source: www.tradewindsnews.com

MONJASA FIXES LNG BUNKER VESSEL FOR NEW DUBAI BUSINESS

Danish bunker supplier Monjasa has chartered an LNG bunker vessel from Japanese owner NYK that looks set to become the first LNGBV to be deployed in the Middle East region. Monjasa confirmed market talk that it fixed the 5,000-cbm Green Zeebrugge (built 2017) in November. The company said the vessel — which was one of the first LNGBVs built — is now en route to the United Arab Emirates and is estimated to arrive in Dubai before the New Year. Dubai is home to the 150,900-cbm floating storage and regasification unit Explorer (built 2008). Kpler data indicates the vessel is laden and last called at the Gate LNG terminal in the Netherlands. "Green Zeebrugge is expected to undergo safety and quality inspections by the local authorities before the New Year and supply Monjasa's first-ever LNG in January 2025," the company said. Monjasa's

spokesman declined to comment on the charter-hire period and said the company is not yet ready to give details about its planned operations out of Dubai. LNG bunker market sources have told TradeWinds that the LNGBV has been fixed on a multi-year charter. The deployment of the Green Zeebrugge is a first for Monjasa, which has been trading and delivering LNG but has yet to supply it using vessels from its own fleet. The ship will also be a first for the region, which has been a noticeable gap on the LNG-fuelling map for owners of LNG dual-fuelled vessels looking at their bunkering options. Monjasa said in a statement that it is introducing the UAE's first dedicated LNGBV as a response to increasing alternative fuel demand. The company said it comes at a time when recent DNV data shows there are now 1,262 LNG-fuelled vessels in the global fleet, of which 613 are trading and a further 649 are on order. It compared this to just 62 LNG-fuelled ships in 2015. Monjasa Group chief executive Anders Ostergaard said: "Monjasa's role is to keep challenging the status quo and providing new market opportunities to shipowners who are increasingly looking for ways to decarbonise their vessels." Ostergaard said: "Deploying the Green Zeebrugge is the first important step in introducing LNG as a new marine fuel option in the UAE. "Looking ahead, continued close collaboration with our local maritime partners is crucial in further exploring new supply chains and positioning the UAE as a leading shipping hub in alternative fuels too." Monjasa said it started its maritime operations in the Middle East in 2005 and became the first marine fuels supplier to deliver biofuels in the UAE in 2022. "To establish a viable local LNG bunkering option, port authorities, energy companies and shipowners are currently working together with Monjasa to finalise the development of adequate LNG bunkering infrastructure," the company said. The Green Zeebrugge was originally contracted by NYK, Engie and Mitsubishi Corp, with Fluxys also having a stake in the vessel. On its delivery, it ranked as the world's first purpose-built LNGBV. The ship had an anchor customer but was initially under-utilised and has mainly been deployed in north-west Europe. NYK took over the ownership of the LNGBV in late 2020. Today, the industry's gas fuelling body, SGMF, lists 114 ports worldwide that can supply LNG bunkers, 65 LNGBVs in operation and a further 23 on order. Major market players have identified a gap of at least 40 LNGBVs needed by 2030 to serve the rapidly emerging LNG dual-fuel fleet. Source: www.tradewindsnews.com

MERCURIA LINKED TO CHARTER OF JP MORGAN NEWBUILDS

Trader Mercuria has been named as the party behind the charter of two LNG carrier newbuilding's ordered by JP Morgan interests. Brokers said the two vessels have been fixed to Mercuria from their deliveries early in 2025 for a firm period of one year. The fixtures are also said to include an option to extend the hire by at least an additional 12 months. Market talk indicates the two ships have been fixed under an index-linked floating rate structure. TradeWinds has contacted both Mercuria — which in June employed ex-Shell executive Steve Hill to build out its LNG business — and JP Morgan Asset Management for comment and further details. JP Morgan has ordered a raft of LNG carrier newbuilding's over the past five years. But the investment bank has been careful not to give too many details on its vessel interests and refused to give exact numbers on ships when asked. Clarksons' Shipping Intelligence Network lists JP Morgan's Bermuda affiliate, Global Meridian Holdings, as

the owner of two, apparently uncommitted LNG carrier newbuilding's on order at Samsung Heavy Industries in South Korea. These vessels are due for handover this month and in January and there is speculation these are the ships Mercuria is chartering. The newbuilding is Hull No 2595 and is listed as the Orion Sirius with the second as Hull No 2601. The two ME-GA-fitted LNG newbuilding's were contracted in the fourth quarter of 2021 at prices in the range of $206m to $207m each. This compares to recent LNG newbuilding prices in the high $250m range. In the first quarter of 2024, JP Morgan, which has chartered out new LNG tonnage to BP, Shell and Qatar Energy, was named as having made a quick profit on three of its on-order LNG newbuilding's, selling them to US producer Venture Global LNG for $270m each. The LNG shipping market has been experiencing one of its weakest winter charter markets on record at a time of year when modern vessels and some older cousins have been earning six-figure day rates over the past few years. Brokers currently peg 12-month rates for modern 174,000-cbm two-stroke LNG carriers at about $32,000 per day. They said spot levels for these ships will likely be in the range of $20,000 per day. Looking at this week, shipbroker said: "We expect spot rates for the prompt fixing period to strengthen as the list of available modern tonnage remains skimpy." Source: www.tradewindsnews.com

YPF, SHELL SEAL ARGENTINA LNG DEAL

Argentina's state-owned oil and gas company YPF and UK-based LNG giant Shell have signed a project development agreement (PDA) for the first phase of the Argentina LNG export project. YPF president and CEO Horacio Marin, and Shell's executive VP of LNG, Cederic Cremers, signed the deal in The Hague, Netherlands, according to a statement by YPF on Thursday. The PDA means that Shell will join the LNG project. YPF said the parties commit to mature the development of the first phase of the Argentina LNG project towards a decision to enter the front-end engineering and design (FEED) stage. The first phase has a liquefaction capacity of 10 million tons per year (mtpa). "We are proud to have Shell, with its world-leading LNG business, join the project. As a pioneer in the LNG market, Shell's knowledge and experience will be instrumental in helping position Argentina as a reliable and competitive global energy provider," Marin said. Marin recently revealed that YPF was in negotiations with supermajors to become equity partners in the planned Argentina LNG project. He said the company also held many meetings with potential offtakers.

Petronas no longer part of Argentina LNG project

With Shell entering the development of the first phase of the Argentina LNG Project, Petronas' participation as a partner of YPF has come to an end, YPF said in the statement. Both will continue working on the development of the La Amarga Chica area in Vaca Muerta. "YPF acknowledges Petronas' valuable contribution during the last two years, sharing with YPF's teams its technical and commercial experience in the LNG market," the company said. The joint work has contributed to the development of the LNG project to its current stage and will allow further steps to be taken, YPF added. YPF and Malaysia's Petronas recently decided to build the $30 billion Argentina LNG export project in the Patagonian province of Río Negro. YPF and Petronas decided that the project would be in Sierra Grande, Río Negro instead of the initial Bahia Blanca, Buenos Aires

plan. The Sierra Grande area appears to be the best option due to the shorter length of the pipelines needed to transport shale natural gas from Vaca Muerta. YPF said the full project would have a capacity of 30 mtpa. In March this year, YPF launched a tender for engineering work for floating LNG units as part of its planned Argentina LNG export project. A presentation posted on YPF's website previously showed that during its first phase, Argentina LNG would have two floating liquefaction units with a production capacity of around 9 mtpa. The following phases of the project entail the construction of an onshore modular plant which would progressively expand to achieve a final capacity up to 30 mtpa.

PAE project

Last month, Marin also announced that YPF will join a floating LNG project developed by Pan American Energy and Golar LNG. In July, Golar LNG entered into definitive agreements with Argentina's PAE for a 20-year deployment of FLNG Hilli, curretnly located offshore Cameroon's Kribi, in Argentina. The FLNG project will monetize Argentine gas, tapping into the vast resources from the Vaca Muerta shale formation in the Neuquen basin, the world's second-largest shale gas resources. London-listed oil and gas firm Harbour Energy and Argentina's Pampa Energia also joined this project. Golar expects the project to start LNG exports within 2027. Source: www.lngprime.com

AUSTRALIAN LNG EXPORT REVENUE DROPS IN NOVEMBER

Australian liquefied natural gas (LNG) export revenue decreased by 7.2 percent year-on-year in November, according to EnergyQuest. The consultancy estimates Australian LNG export revenue reached A$5.31 billion ($3.31 billion) in November. EnergyQuest said this was lower than A$5.57 billion in October and lower compared to November 2023, when revenue was A$5.72 billion. Western Australia projects earned export revenue of A$3.07 billion, Queensland projects brought in A$1.76 billion, and NT projects earned A$0.48 billion.

West coast shipments down

According to the consultancy, Australia's November 2024 shipments were 80.9 Mtpa on an annualized basis. This compares to 81.1 Mtpa for the 2023 calendar year, and 83.4 Mtpa for October 2024. EnergyQuest said November 2024 shipments represented represented 91.3 percent of nameplate capacity. The consultancy said west coast (WA and NT) shipments were lower at 4.65 Mt in November, down from 4.76 Mt in October. There were 63 cargoes in November, compared to 67 in October. A year ago, the west coast shipped 69 cargoes totaling 4.73 Mt. West coast projects operated at 86.5 percent of nameplate capacity during November, the consultancy said. EnergyQuest said Queensland LNG shipments came down from the record of 2.33 Mt in October to ship 2.20 Mt during November, which also compares to shipping 1.99 Mt in September. There were 32 cargoes during November compared to 34 cargoes during October, and compared to 29 cargoes in September, and compared to 29 cargoes of 1.96 Mt in November 2023. EnergyQuest said the Queensland projects operated at 102.6 percent of nameplate capacity during November. Source: www.lngprime.com

GLOBAL LNG IMPORTS DOWN IN NOVEMBER

Global liquefied natural gas (LNG) imports fell by 3.4 percent year-on-year in November, the Gas Exporting Countries Forum said in its latest monthly report. In November, global LNG imports decreased by 1.20 Mt y-o-y to 34 Mt, Doha-based GECF said. GECF said this represents the weakest level of LNG imports for the month since 2021. This decline is largely attributed to a significant reduction in floating LNG cargoes during October 2024 compared to the previous year. In October 2023, a steep contango in LNG prices led to a high number of floating cargoes, a trend that was less pronounced in 2024. As a result, LNG imports saw a sharp increase in October 2024, followed by a subsequent decline in November, GECF said. According to GECF, the overall decrease in global LNG imports was driven by a notable drop in Europe, while the Asia Pacific region recorded a modest increase. For the period January to November 2024, global LNG imports rose by 1.5 percent (5.58 Mt) y-o-y, reaching 374.01 Mt driven mainly by higher imports in the Asia Pacific, which offset a sharp decline in Europe. GECF said global LNG imports are on track to grow by 2 percent in 2024.

European LNG imports continue to decrease

In November 2024, despite an increase in its gas consumption, Europe's LNG imports fell for the 17th straight month, decreasing by 14 percent (1.47 Mt) y-o-y to 9.09 Mt, GECF said. The decrease was primarily driven by a substantial price gap between spot LNG prices in Asia Pacific and Europe throughout most of the month. The decline was particularly evident in Belgium, France, Italy, Spain, and the UK, while Türkiye experienced a significant increase, GECF said. Stronger gas storage withdrawals mainly compensated for the drop in LNG imports. GECF noted that Belgium switched from being a net pipeline gas exporter to the Netherlands to a net importer, driven by reduced LNG imports. In France, the decline in LNG imports led to lower pipeline gas exports to Germany and Switzerland. Italy offset its drop in LNG imports with increased pipeline gas imports from Algeria, GECF said. Similarly, Spain compensated for its reduced LNG imports with stronger pipeline supplies from Algeria, France, and Portugal. Despite the UK experiencing a decrease in LNG imports, its November imports reached their highest level since February 2024, GECF said. Meanwhile, Türkiye's rise in LNG imports was fuelled by a surge in imports from the US. From January to November 2024, LNG imports in Europe dropped by 20 percent (22 Mt) to reach 90.21 Mt, GECF said.

Asia Pacific LNG imports slightly up

In November 2024, LNG imports in Asia Pacific increased slightly by 0.2 percent (0.04 Mt) y-o-y to 22.94 Mt, which is the weakest LNG imports since June 2024, GECF said. According to GECF, the small increase in LNG imports was mainly attributed to tight LNG supplies during the month. Bangladesh, India, and Taiwan recorded significant increases in LNG imports, offsetting lower imports in China and Thailand. GECF said Bangladesh's LNG imports increased due to stronger spot LNG demand driven by higher gas demand for electricity generation and declining domestic gas production. Similarly, India's LNG imports rose, supported by growing gas demand and reduced domestic production. In Taiwan, higher gas demand for electricity generation contributed to the increase in LNG imports. Conversely, China's LNG imports declined due to high gas and LNG

storage levels, stronger pipeline gas imports, and increased domestic production. In Thailand, the reduction in LNG imports primarily came from lower imports from Malaysia, Mozambique, and Qatar, GECF said. For the period January to November 2024, Asia Pacific's LNG imports grew by 9.4 percent (22.25 Mt) y-o-y to 258.38 Mt, it said.

Latin America and MENA

In November, LNG imports in the Latin America & the Caribbean region stood at 1.28 Mt, representing an increase of 2.2 percent (0.03 Mt) y-o-y, GECF said. The uptick in LNG imports came mainly from Jamaica and Puerto Rico, which offset weaker imports in the US Virgin Islands. GECF said Jamaica's LNG imports rose, supported by stronger supplies from Mexico and Nigeria, while Puerto Rico saw an increase in imports from Trinidad and Tobago. Conversely, the decline in LNG imports to the USVI was primarily attributed to lower imports from Trinidad and Tobago. For the period January to November 2024, LNG imports in the LAC region jumped by 18 percent (2.12 Mt) y-o-y to reach 14.02 Mt, GECF said. In November, LNG imports in the MENA region continued to expand, increasing by 43 percent (0.20 Mt) to reach 0.68 Mt, GECF said. Egypt led the rise in the region's LNG imports, compensating for a decline in Kuwait. GECF said Egypt's higher LNG imports were driven by reduced domestic gas production, while Kuwait's decline was primarily due to lower imports from Oman and Russia. For the period January to November, LNG imports in the MENA region rose by 47 percent (3.39 Mt) y-o-y to 10.63 Mt, GECF said.

LNG exports up 3 percent

GECF said that global LNG exports rose significantly by 3 percent y-o-y (1.04 Mt) to reach 35.69 Mt in November, marking a record high for the month. The increase was primarily driven by GECF member countries. Non-GECF countries maintained the largest share of global LNG exports at 51.9 percent, though this was a slight decrease from 53 percent in November 2023. In contrast, GECF members' share grew from 45.3 percent to 46.9 percent, while LNG re-exports dropped from 1.7 percent to 1.3 percent over the same period, GECF said. The top three LNG exporters in November 2024 were the US, Australia, and Qatar. For the period January to November 2024, global LNG exports increased by 1.4 percent y-o-y (5.17 Mt), reaching 376.28 Mt. GECF said this growth was supported by stronger exports from both GECF and non-GECF countries, which offset a decline in LNG re-exports. Source: www.lngprime.com

WARTSILA TO SUPPORT GASLOG'S LNG CARRIER QUINTET

A unit of Finland's Wartsila has signed a deal with Greek shipowner GasLog to support the latter's five liquefied natural gas (LNG) carriers. According to a Wartsila statement on Thursday, Wartsila Gas Solutions has signed a three-year service and maintenance agreement with GasLog LNG Services. The agreement covers five 180,000-cbm LNG carriers, all of which are fitted with Wartsila mixed refrigerant (MR) reliq liquefaction plants. Gaslog's 180,000-cbm LNG carriers include GasLog Warsaw, GasLog Wales, GasLog Westminster, GasLog Windsor, and GasLog Wellington. These vessels were delivered between 2019 and 2021, GasLog's website shows, Warstila said the signing took place in December 2024, and the order was

booked in the same month. The tech firm did not provide the price tag of the agreement. By optimizing the operation of the ships' MR reliq plants, the boil-off gas (BOG) from the LNG cargo can be efficiently managed, according to Wartsila. This reduces emissions while also minimizing cargo losses, thereby improving the vessels' economic performance, the firm said. The scope of the agreement includes technical support, secured availability of spare parts and specialized field service personnel, as well as performance monitoring of the MR reliq plants. Wartsila digital services will also provide remote technical support and operational data monitoring. GasLog LNG Services has long been a customer of Wartsila, and the company's fleet operates with a range of Wartsila solutions.

GasLog fleet

Singaporean sovereign wealth fund GIC recently entered a deal with a fund managed by BlackRock's Global Infrastructure Partners (GIP) to buy the latter's 45 percent stake in GasLog. Blenheim Holdings, which is wholly owned by the Livanos family, and the Onassis Foundation will maintain their respective shareholdings of about 55 percent in GasLog. GasLog recently took delivery of a new LNG carrier from Hanwha Ocean in South Korea. This followed the successful delivery of its sister vessel, GasLog Italy. GasLog ordered these vessels and two other 174,000-cbm LNG carriers at Hanwha Ocean in December 2021. According to GasLog, the fleets of both GasLog and GasLog Partners consist of 36 LNG carriers, with two vessels under construction. GasLog also has a 20 percent share of the recently launched Alexandroupolis FSRU. Source: www.lngprime.com

HUDONG-ZHONGHUA DELIVERS 8TH LNG CARRIER IN 2024

China's Hudong-Zhonghua has delivered its eighth large LNG carrier this year, setting a record for the Chinese shipbuilding industry. Last year, Hudong-Zhonghua delivered a record six LNG carriers. Earlier this month, the shipbuilder broke this record with the delivery of a new LNG carrier as part of the massive QatarEnergy shipbuilding program. On Wednesday, Hudong-Zhonghua delivered the 174,000-cbm LNG carrier, Greenergy Pearl, further boosting this yearly delivery record of large LNG carriers. The newest LNG carrier was handed over to Japan's MOL, COSCO Shipping's unit CSLNG, and CNOOC eight months ahead of schedule, according to the shipbuilder. This vessel is a sister ship to the world's first fifth generation "Changheng" series LNG carrier, Greenergy Ocean, delivered in May this year and equipped with GTT's NO96 Super+ containment system. In January, Hudong-Zhonghua completed the world's first LNG tanks fitted with GTT's NO96 Super+ containment system. Hudong-Zhonghua is the first to complete tanks with this technology, Besides GTT's NO96 Super+ containment system, the 299 meters long vessel features WinGD 5X72DF2.1 dual-fuel main engine. Greenergy Pearl is the second of six LNG carriers MOL, in a partnership with COSCO Shipping's unit CSLNG, ordered by the shipbuilder in January 2022. MOL also said that CNOOC is part of the JV which owns the vessels. All the ships will serve CNOOC's gas and power unit under long-term charter deals and are expected to be delivered by 2026. Source: www.lngprime.com

VENTURE GLOBAL'S PLAQUEMINES LNG ACHIEVES FIRST LNG PRODUCTION

Venture Global has reached first LNG production at the company's second facility, Plaquemines LNG, in Port Sulphur, Louisiana. Achieving this milestone for a 20 million tpy nameplate capacity project 30 months from its final investment decision (FID) makes Plaquemines LNG one of the two fastest greenfield projects to reach first production, along with Venture Global's first facility Calcasieu Pass. Once fully operational, Plaquemines LNG will be among the largest facilities in the world. "Venture Global is proud to have a world-class team wholly dedicated to our company's mission of innovating to provide reliable, low-cost, LNG to the world. Because of their hard work and commitment, Venture Global is executing on our promise to deliver much-needed LNG to our allies and strengthen global energy security and reliability. Reaching first LNG at Plaquemines at this pace will enable the US to remain the top exporter of LNG in the world. Between current and planned facilities, Venture Global is prepared to invest US$50 billion in energy projects based in the US which will create jobs, support local economies, strengthen the balance of trade and unleash much needed US LNG supply to our allies," said Venture Global CEO & Co-Founder Mike Sabel. Source: www.lngindustry.com

SEA-LNG STUDY FINDS LNG DUAL-FUEL VESSELS LOWEST COST COMPLIANCE SOLUTION TO DECARBONISE SHIPPING

SEA-LNG analysis shows that LNG dual-fuelled vessels provide the lowest compliance cost for meeting EU and IMO decarbonisation regulations. Using Z-Joule's POOL.FM, SEA-LNG has undertaken analysis based on a modelled mid-sized, 14 000 TEU container vessel. This analysis is in the form of both a single vessel and an eight-vessel fleet operating the Rotterdam – Singapore trade route over the period 2025 – 2040. The analysis focuses on the LNG, methanol, and ammonia fuel pathways and compares their compliance costs against the default of using very low sulfur fuel oil (VLSFO). The analysis uses the specifications for main and auxiliary engines published by the main marine engine manufacturers MAN ES, Wärtsilä, and WinDG. The study indicates that LNG, methanol, and ammonia dual-fuel engine technologies can reduce compliance costs compared with VLSFO, with LNG dual-fuel vessels providing a significantly lower cost compliance solution. The basis for this is that the LNG pathway offers immediate greenhouse gas reductions now and, in the future, compared with the other fuel choices. The use of LNG also dramatically reduces SOX, NOX, and particulate matter (PM), thereby avoiding the use of relatively expensive marine gas oil (MGO) for emission control area (ECA) compliance. In terms of fleet operations, for an eight-vessel fleet with two alternatively-fuelled 'balancing vessels', the overall cost of compliance with LNG will be between US$5 – US$17 million/y lower than other alternative fuels such as methanol and ammonia. Further, as FuelEU Maritime is implemented from 2025 onwards, fleet operators using ammonia and methanol dual-fuel vessels are likely to need significant quantities of expensive green fuels to avoid very high penalty charges. Steve Esau, Chief Operating Officer at SEA-LNG, said: "It's our mission to provide objective data and analysis to support owners and operators in decision-making at this critical juncture for shipping. As greenhouse gas emissions become subject to increasingly stringent regulation, the industry needs

cost-effective solutions to meet its decarbonisation goals. Today, this study clearly illustrates that the LNG pathway is a cost-effective way to meet regulatory compliance targets now and in the future." Fernando Alvarez, Founder of Z-Joule, added: "Intuition and simple rules of thumb are no longer sufficient when developing optimal regulatory compliance strategies. Sophisticated decision-support tools are needed to model the complex interaction between recent and forthcoming regulations, vessel operations, and commercial drivers. Z-Joule's software provides the industry with a robust platform to explore and optimise their decarbonisation journey." POOL.FM is a fuel-agnostic model which utilises an advanced optimisation algorithm to determine the optimal fuel mix, pooling strategy, and target speed for each vessel in a fleet (or vessel pool). The regulations currently modelled include CII, ECAs, EU ETS, FuelEU Maritime and onshore power supply (OPS) mandates. Functionality to model possible IMO Market Based Measures (MBM) is already in place and will be refined as more details about the forthcoming regulations emerge." Source: www.lngindustry.com

AXPO CELEBRATES 100 LNG CARGOES TO EUROPE

Axpo has achieved a new milestone in its LNG business with the delivery of 100 LNG cargoes to Europe in less than four years. LNG continues to be an important component of Axpo's trading & sales business, providing security of supply to Axpo customers in Switzerland and internationally. One hundred LNG cargoes were delivered by Axpo to Europe between January 2020 and September 2024, with the bulk going to terminals in Spain, France, Italy, and Portugal. The total volume of LNG amounted to 76.07 TWh, enough to provide power to the equivalent of around 4.7 million homes in a year. During the 2023/24 financial year alone, Axpo imported 25 LNG cargoes into Europe, equivalent to 16.2 TWh, representing the annual gas consumption of one million European homes. Axpo's Head of Trading & Sales Domenico de Luca said: "Axpo's natural gas and LNG activities have continued to thrive over the past years and play an important role in providing a secure energy supply to our customers. Gas is a key bridging fuel, providing the diversification needed during the energy transition as renewable energy technologies gain scale." Axpo is active across the midstream and downstream natural gas and LNG sector in Switzerland and abroad. For nearly 20 years, the company has actively traded and transported gas across Europe. For more than a decade, these activities also included LNG. Customers range from small and medium-sized enterprises (SMEs) to large energy-intensive industrial companies. Axpo's LNG unit has extensive experience supplying LNG to industrial clients. The company is currently expanding its LNG operations into bunkering, chartering small scale vessels for this purpose. LNG bunkering allows the ship-to-ship and ship-to-truck transfer of LNG and represents an efficient and cost-effective solution for reducing greenhouse gas emissions, especially in the shipping industry. Bunkering is an increasingly important growth area for Axpo as LNG offers a cleaner and more competitive alternative to fuels traditionally used in the maritime sector. Source: www.lngindustry.com

HONDURAS TURNS TO LNG TO MEET ENERGY NEEDS

Honduras is addressing its growing energy demand with a strategic LNG-to-power initiative centred on the Brassavola Thermal Power Plant in San Pedro Sula. As the country grapples with a shortfall in power supply exceeding 250 MW, Genesis Energías is spearheading efforts to introduce a reliable and cost-effective energy source by importing liquefied natural gas (LNG). The LNG carrier Bilbao Knutsen, built in 2004 for and operated by the Knutsen Group, will play a pivotal role in this project. A turbine engine vessel capable of transporting 138,000 m3 of LNG, the ship will be converted into a floating storage unit (FSU) by HD Hyundai Marine Solution. Once operational, the FSU will serve as the backbone of LNG storage at a new terminal under construction in Puerto Cortes on Honduras' Caribbean coast. The project represents a step towards diversifying the nation's energy mix and reducing its reliance on traditional fossil fuels. Genesis Energías noted the initiative aims to lower production costs and stimulate industrial growth, with natural gas seen as a bridge fuel in Honduras' energy transition. The stored LNG will be transported to the Brassavola Thermal Power Plant, a 240-MW combined-cycle facility that is expected to supply reliable electricity to the national grid while significantly improving efficiency and reducing emissions. Law firm Watson Farley & Williams advised Genesis Energías on the chartering arrangements for Bilbao Knutsen. The law firm's London maritime team, led by partner Joe McGladdery, noted the innovative nature of the transaction and its contribution to advancing cleaner energy solutions in the region. Source: www.rivieramm.com

STRONG GLOBAL OUTLOOK DRIVES FSRU DEMAND

The global outlook for LNG demand remains robust, with projections indicating strong growth well into 2050. Lansdowne Moritz managing consultant Gary Regan shared this perspective during the LNG Shipping & Terminals Conference. Highlighting the role of floating storage and regasification units (FSRUs), Mr Regan outlined how emerging markets are poised to drive demand for these versatile assets. "From a macro perspective, LNG demand globally is very strong, and we foresee a significant role for new FSRU projects in both existing and emerging markets," he explained. Over the past decade, the market has seen three FSRU projects launched annually. Mr Regan expects this trend to continue through 2030, with an estimated 40 credible projects currently in the pipeline. "Beyond 2030, the potential is enormous, particularly in markets such as Indonesia, Thailand, Malaysia and Bangladesh," he added. Meeting this growing demand will require a mix of newbuild FSRUs and conversions of existing LNG carriers. "At present, the prompt market has only one or two FSRUs available for immediate deployment," noted Mr Regan. He stressed the need for continued investment, pointing to the viability of converting steam turbine and dual-fuel diesel-electric vessels for FSRU use. "These conversions, particularly of larger vessels, offer a compelling economic case compared with newbuilds," he said, though he acknowledged that high-capital projects backed by well-funded governments may still opt for newbuilds. Mr Regan also touched on the broader LNG market, discussing trends in LNG bunkering and shipping transactions. He noted a surge in infrastructure investment for LNG bunker vessels, with an estimated US$3Bn needed by 2030. The year has also seen notable transactions in LNG shipping, including BlackRock's sale of its GasLog stake and

Morgan Stanley Infrastructure Partners divesting its share in the Höegh FSRU business. With a strong foundation of demand and evolving market dynamics, the outlook for LNG infrastructure remains promising. However, the path forward will depend on balancing investment strategies to address varying market needs. Source: www.rivieramm.com

JAPAN'S NOVEMBER LNG IMPORTS DROP 5.3 PERCENT

Japan's liquefied natural gas (LNG) imports decreased 5.3 percent in November compared to the same month in 2023, according to provisional data released by the country's Ministry of Finance. The country's LNG imports decreased to 5.05 million tonnes last month. LNG imports also dropped compared to 5.29 million tonnes in October and 5.43 million tonnes in September. Japan imported 5.72 million tonnes in August, which marked a year-on-year increase for the fifth month in a row. The country's LNG terminals took 5.62 million tonnes in July, 4.57 million tonnes in June, 4.87 million tonnes in May, 5.28 million tonnes in April, 5.55 million tonnes in March, 6.02 million tonnes in February, and 6.1 million tonnes in January. Japan's coal imports for power generation increased in November compared to the last year. The data shows that coal imports were up by 2.2 percent to 8.48 million tonnes, and Japan paid about $1.3 billion for these imports, a drop of 10.2 percent compared to last year.

LNG import bill down

The November LNG import bill, which was about $3.15 billion, decreased by 2.5 percent compared to the same month last year. JOGMEC said in a report last week that the average price of spot LNG cargoes for delivery to Japan contracted in November and scheduled to be delivered from the month onward (contract-based price) was $13.9/MMBtu. Also, the average price of spot LNG cargoes that were delivered in Japan within the month of October regardless of the month when the contracts were made (arrival-based price) was not disclosed as there were less than two companies that imported spot LNG. JOGMEC previously said that the arrival-based and contract-based prices were at $13.6/MMBtu and $13.7/MMBtu in October.

LNG inventories

METI previously announced that Japan's LNG inventories for power generation stood at 2.05 million tonnes as of November 3, up from 2 million tonnes the previous week. According to METI, inventories stood at 2.14 million tonnes on November 10, 2.20 million tonnes on November 17, 2.06 million tonnes on November 24, 1.89 million tonnes on December 1, 2.12 million tonnes on December 8, and 2.24 million tonnes on December 15.

Deliveries to Japan

As per LNG shipments going to Japan in November, deliveries from Asia increased by 8.3 percent to 1.25 million tonnes, the ministry's data shows. Middle East LNG shipments decreased by 38.1 percent to 475,000 tonnes in November. Moreover, shipments from Russia decreased by 26.9 percent to 479,000 tonnes, while US deliveries increased by 17.8 percent to 524,000 tonnes in November.

Second largest LNG importer

China has overtaken Japan to become the world's top importer of LNG last year and will remain the top importer this year. China's LNG imports rose 12.6 percent to about 71.32 million tonnes in the January-December period, and the country imported 5.17 million tonnes more LNG than Japan in 2023. During January-November this year, China imported 69.61 million tonnes of LNG, a rise of 10.7 percent year over year. Japan imported some 10 million tonnes of LNG less than China during the same period. Source: www.lngprime.com

GTT CEO: LNG CARRIER REPLACEMENT MARKET POISED FOR SIGNIFICANT GROWTH

French LNG containment giant GTT believes the replacement market is poised for significant growth over the next decade, driven by the aging LNG fleet, the demand for greater efficiency, and increasingly stringent environmental regulations, according to CEO Jean-Baptiste Choimet. Choimet officially took over as GTT CEO in June this year and has since then been on the road visiting customers and partners, including taking part in the opening of GTT's new office in Doha. "Out of the current LNG carrier (LNGC) fleet of approximately 700 vessels, more than 300 will surpass 20 years of service within the next 10 years, and around 200 of those will exceed 25 years," Choimet told LNG Prime at the sidelines of DMG's World LNG Summit & Awards which was held in Berlin last week. This creates a "substantial need" for replacement, he said. "Additionally, newer LNG vessels offer significant advantages: they can carry larger volumes of LNG, have vastly improved thermal efficiency, and consume less fuel, making them more economical and sustainable," he said. GTT just secured approval from Lloyd's Register for its three-tank LNG carrier with a capacity of 200,000 cbm. This design challenges traditional LNG carrier design norms, highlighting the importance of speed in reducing emissions.

Environmental regulations, shipyard slots

Chimoet said the replacement market would also be shaped by evolving environmental regulations, such as the anticipated revisions to the Carbon Intensity Indicator (CII). "These regulations will further accelerate the transition to more efficient and environmentally compliant vessels," he said. "However, the current LNGC spot market combined with the high workload of shipyards may be a challenge for the replacement market to significantly grow in the short term," he said. "Finally, while many aging LNGCs will require replacement, the decision to scrap or convert them—such as into floating storage and regasification units (FSRUs)—will depend on vessel-specific conditions and market opportunities," Choimet added. One example of owners getting rid of steam vessels is a recent move by SK Shipping to sell four steam LNG carriers for scrap. Choimet had just returned from Asia, where he visited South Korean and Chinese shipyards. He recently said GTT expects shipyard slots for LNG carriers to increase to about 85 per year by early 2026, mainly due to ramping up of capacity at Chinese shipyards. "Back in 2020, we estimated the capacity to be around 55 slots compared to approximately 70 slots today. We anticipate this rising to around 85 slots by early 2026, mainly due to the ramping up of Chinese shipyards," he said during GTT's third-

quarter earnings call. Chomiet said that GTT believes that the number of slots could keep rising. The number of slots could increase by "10 to 15 slots" in 2028 compared to 2026.

LNG carrier orders

GTT booked orders for 68 LNG carriers in January-September of this year. The company received orders for 73 LNG carriers last year, down from record 162 orders for LNG carriers in 2022 and higher than 68 orders in 2021. Many of these orders are related to QatarEnergy's massive shipbuilding program. Including QC-Max LNG carriers, QatarEnergy's shipbuilding program entails the construction of 128 vessels. As of September 30, 2024, GTT's order book, excluding LNG as fuel, stood at 350 units. This includes 325 LNG carriers, 16 ethane carriers, two FSRUs, two FLNGs, and five onshore storage tanks. The order book for LNG fuel stood at 61 units, all containerships. source: www.lngprime.com

CHINA'S LNG IMPORTS DOWN IN NOVEMBER

China, the world's largest liquefied natural gas importer, reported a drop in its LNG imports in November while its pipeline gas imports increased compared to the same month last year. Data from the General Administration of Customs shows that the country received 6.15 million tonnes last month, down 8.7 percent year-on-year. The data shows that during January-November, China imported 69.61 million tonnes of LNG, a rise of 10.7 percent year over year. This also compares to 71.36 million tonnes China imported during January-November in 2021, which was a record year for China's LNG imports with 78.93 million tonnes. Natural gas imports, including pipeline gas, reached about 10.79 million tonnes last month, down 1.4 percent compared to 10.95 million tonnes in November 2023. China's pipeline imports rose 12 percent year-on-year in November to 4.65 million tonnes. GECF said in its November report that China's LNG imports declined due to high gas and LNG storage levels, stronger pipeline gas imports, and increased domestic production. According to GECF, LNG imports in Asia Pacific increased slightly by 0.2 percent year-on-year to 22.94 Mt, which is the weakest LNG imports since June 2024. China reported a jump in its LNG imports in October, and the country received 6.55 million tonnes in October, up 28 percent year-on-year. September LNG imports rose by 21.7 percent to 6.84 million tonnes. China's LNG imports rose 12.6 percent in 2023, overtaking Japan as the world's largest LNG importer. The country received about 71.32 million tonnes in the January-December period last year. China will remain the world's largest LNG importer this year. Japan imported some 9 million tonnes of LNG less than China during January-October this year. source: www.lngprime.com

US DOE RELEASES LNG EXPORT STUDY

The US Department of Energy has released its study on the economic and climate impacts of exporting increasing volumes of liquefied natural gas (LNG) from the US. The Biden administration said in January it will pause pending decisions on exports of LNG to non-FTA countries until DOE can update the underlying analyses for authorizations. However, the US LNG industry believes the Trump administration will resume with non-FTA approvals in 2025. On Tuesday, DOE released its multi-volume

study on the potential effects of US LNG exports on the domestic economy, US households and consumers, and the environment and climate. DOE said it intends to use the study to inform its public interest review of, and ultimately decisions in, certain applications to export LNG to countries with which the US does not have FTA requiring national treatment for trade in natural gas, and with which trade is not prohibited by US law or policy (non-FTA applications), future proceedings, and for other purposes. In short, DOE says its analysis "exposes a triple-cost increase to US consumers from increasing LNG exports." DOE also said "special scrutiny needs to be applied toward very large LNG projects" considering their direct life cycle emissions. "Any sound and durable approach for considering additional authorizations should consider where those LNG exports are headed, and whether targeted guardrails may be utilized to protect the public interest," DOE said. The study will have a 60-day comment period that will begin once published in the Federal Register. The effects of this study remain to be seen.

Largest LNG exporter

DOE noted the US LNG export sector has experienced "transformative and unprecedented" growth in just a decade, with the first LNG exports from the lower-48 states commencing in 2016. DOE has authorized 48 billion cubic feet per day (Bcf/d) of natural gas for export, or nearly half of current domestic production. Of this 48 Bcf/day in total authorized exports, 14 Bcf/d of associated capacity is now operating, making the US the largest exporter of LNG in the world. Another 12 Bcf/d is under construction and expected to double present export volumes by 2030, at which time the US will remain the top exporter, DOE said. And a further 22 Bcf/d of capacity exports has been approved by DOE, but has not secured a final investment decision to begin construction. Currently, the US exports LNG via Cheniere's Sabine Pass and Corpus Christi terminals, Sempra Infrastructure's Cameron LNG terminal, Venture Global's Calcasieu Pass, the Freeport LNG facility, the Cove Point LNG facility, and the Elba Island terminal. Venture Global LNG recently started producing LNG at its Plaquemines LNG export plant in Louisiana. With this, Plaquemines LNG becomes the eighth US LNG export facility. Cheniere's Corpus Christi Stage 3 is also expected to begin LNG production by the end of the year. In addition, energy giants QatarEnergy and ExxonMobil are working to launch their Golden Pass LNG export facility in 2025 or 2026. LNG Prime invited the largest LNG exporters in the US, Cheniere, Sempra, Venture Global LNG, and Freeport LNG to comment on the DOE study and its potential impacts on LNG exports. Venture Global LNG and Cheniere did not respond.

Sempra confident in Port Arthur LNG expansion

Sempra Infrastructure, a unit of Sempra, expects to secure DOE's non-FTA export approval for the second phase of its Port Arthur LNG export project in Texas in the first half of 2025.The company previously won approval from the US FERC for the proposed Phase 2 project, and it also secured the FTA approval from the DOE. In July, Sempra Infrastructure and compatriot engineering and construction firm Bechtel finalized a fixed-price engineering, procurement, and construction (EPC) contract for the second phase of the Port Arthur LNG export project. Bechtel is already building the first phase of the Port Arthur LNG export terminal with a capacity of some 13 mtpa under an EPC deal worth about $10.5 billion. The development of the proposed

second phase would increase the total liquefaction capacity of the facility to about 26 mtpa. "We are analyzing the Department of Energy study on the impacts of US LNG exports," a spokesman for Sempra Infarsturcure said. "We remain confident in the merits of our Port Arthur LNG Phase 2 project for our stakeholders and the crucial role it could play in displacing heavier fuels and ensuring access to reliable and secure energy for our customers around the globe, while continuing to support a growing economy in the United States through local jobs and economic development," he said.

"Study results run counter to the actual findings of the report"

A spokeswoman for Freeport LNG, the operator of the 15 mtpa liquefaction plant in Texas, did not comment on the DOE study. She instead referred to a statement issued by the Washington-based organization CLNG. "The Department of Energy's US LNG export "pause" harmed the industry and called into question the role of the US as a global energy superpower. This study, which served as the justification for the pause, has yet again found that US LNG exports provide benefits that serve the public interest," Charlie Riedl, CLNG executive director, said. "As we continue to examine the report, we have found that much of the narrative from the administration on the need for a pause in LNG export authorizations and their framing of the study results runs counter to the actual findings of the report. We are prepared to closely examine this study and compare its results to previous studies commissioned by the DOE on this topic," Riedl said. "We look forward to working with the incoming Trump administration to create lasting regulatory certainty for US LNG exports," he said. source: www.lngprime.com

VITOL CHOOSES LNG BUNKERING VESSEL CARGO AND FUEL EQUIPMENT SUPPLIER

Global energy company Vitol is advancing its liquefied natural gas (LNG) bunkering capabilities with the construction of a 12,500-m3 LNG bunkering vessel at China's Nantong CIMC Sinopacific Offshore & Engineering shipyard. The supply of the vessel's cargo handling and fuel gas supply systems, including the boil-off gas management, integrated fuel supply, custody transfer and bunkering transfer systems, has been contracted to Wärtsilä Gas Solutions. "LNG is today an important marine fuel and is rapidly becoming the preferred choice for owners and operators seeking more sustainable fuel options. The market for LNG bunkering vessels is increasing in line with this trend," commented Wärtsilä Gas Solutions, China sales manager Richie Zhu. The maritime industry is increasingly adopting LNG as a transitional fuel in its decarbonisation efforts. At the LNG Shipping & Terminals Conference in November 2024, delegates were told the shift is driving demand for LNG bunkering infrastructure, with projections indicating that LNG as a marine fuel demand could more than double by 2027, reaching up to 12M tonnes annually. To meet this growing demand, an estimated eight additional LNG bunkering vessels will be required each year. Vitol's investment in LNG bunkering vessels aligns with this industry trend, aiming to provide shipowners with more sustainable fuel options. The company's commitment to expanding its LNG infrastructure reflects the broader maritime sector's efforts to reduce emissions and transition towards cleaner energy sources. Wärtsilä's role in equipping Vitol's new vessel underscores its position in the LNG bunkering segment, offering systems that optimise cargo handling efficiency. This

collaboration between Vitol and Wärtsilä exemplifies the industry's concerted efforts to develop the necessary infrastructure to support the growing adoption of LNG as a marine fuel. Source: www.rivieramm.com

SEATRIUM, GOLAR AGREE TO LET THIRD FLNG CONVERSION CONTRACT LAPSE

Singapore's Seatrium and Golar LNG have decided to let their third FLNG conversion contract lapse. Seatrium, previously known as Sembcorp Marine and renamed as Seatrium following its merger with Keppel Offshore & Marine, revealed this in a statement on Tuesday. Back in July 2015, a unit of Keppel O&M signed a contract worth about $684 million with a unit of Golar LNG to perform the conversion of the 1977-built LNG carrier, Golar Gandria, into a floating liquefaction facility. However, Golar LNG sold the 125,000-cbm Moss-type vessel for demolition last year. Following Golar LNG's sale of Golar Gandria, Seatrium and Golar LNG have decided to let the third conversion contract lapse on December 16, 2024, Seatrium said on Tuesday. As at the date of this announcement, Seatrium has not started any physical work on the vessel. "The above is not expected to have any material financial impact on the earnings per share and net tangible asset per share of Seatrium for the current financial year," the company said. Seatrium said the demand for sustainable gas solutions remains "healthy", underpinned by the energy transition. "With a strong 60-year track record and product expertise, Seatrium is well positioned along the gas value chain to support the development of offshore energy assets," the company said.

Two FLNGs

Seatrium previously delivered two floating liquefaction vessels to Golar LNG. These are the 2.4 mtpa Hilli, which works offshore Cameroon, and the 2.7 mtpa Gimi, which is serving BP's Greater Tortue Ahmeyim FLNG project offshore Mauritania and Senegal. Hilli started operations offshore Cameroon's Kribi in 2018, while BP is working to launch the Tortue FLNG project. In February, the 2.7 mtpa FLNG Gimi, which was converted from a 1975-built Moss LNG carrier with a storage capacity of 125,000 cbm, arrived at the GTA hub. After that, the project's floating production, storage, and offloading (FPSO) unit also arrived at the GTA project off the coasts of Mauritania and Senegal in May. Project partner Kosmos Energy recently said it expects the FLNG to start production around the end of the fourth quarter. In October, the LNG carrier British Sponsor started to introduce gas to the FLNG Gimi. "FLNG commissioning is now underway and will continue to utilize gas from the accelerated commissioning cargo until the BP FPSO is ready to send gas to the FLNG Gimi. Commissioning activity will then further ramp up," Golar said in its recent quarterly report.

New contract

In addition to these units, Golar recently signed an EPC agreement with China's CIMC Raffles to convert its 148,000-cbm Moss-type carrier, Fuji LNG, into an MKII FLNG with a capacity of 3.5 mtpa. Golar said the total EPC price is $1.6 billion, but the total budget for the MK II FLNG conversion is $2.2 billion. The Golar MK II design is an evolution of the MK I design of

FLNG Hilli and FLNG Gimi. Golar expects to take delivery of the MK II FLNG in the fourth quarter of 2027. As part of the EPC agreement Golar has also secured an option for a second MK II FLNG conversion slot at CIMC for delivery within 2028.

Source: www.lngprime.com

INDONESIAN FSRU HITS NEW CARGO MILESTONE

Pertamina's unit Nusantara Regas has received a milestone LNG cargo at the FSRU Nusantara Regas Satu in Indonesia's Jakarta Bay, according to US-based shipowner Energos Infrastructure. Energos Indonesia, a unit of Apollo's Energos Infrastructure, and Nusantara Regas celebrated the FSRU's 400th LNG cargo on December 11. Since 2012, a total volume of 21 million tonnes of LNG has been regasified on the 125,000-cbm FSRU, Energos Infrastructure said. "This represents a significant milestone and demonstrates Nusantara Regas Satu's reliability as a competitive supplier of regasified LNG to Indonesia," the company said. This unit is a "significant" contributor to the supply of natural gas to Indonesia's largest island, Java, and capital, Jakarta, Energos Infrastructure said. The FSRU is owned and operated by Energos Infrastructure, while Nusantara Regas charters the unit. This is Indonesia's first FSRU project, and it has a capacity of 3 mtpa. The project saw the existing 1977-built LNG carrier Khannur converted into a floating storage and regasification unit. Since 2012, the unit has delivered natural gas to state electricity company PLN's power plant in Jakarta, West Java. The utilization of the vessel continues to grow as Indonesia further transitions away from coal/diesel to cleaner natural gas, according to Energos Infrastructure. Pertamina said in a statement in May this year that Nusantara Regas reported revenue of $81.08 million for the 2023 financial year from LNG regasification services using the FSRU in West Java. Pertamina said that in its operational performance, Nusantara Regas distributed 89.54 million MMBtu of gas from 32.45 LNG cargoes for vital power plants in Jakarta and West Java. For business expansion, Nusantara Regas will be focusing on expanding the company's steps as a provider of LNG retail gas infrastructure, it said. Source: www.lngprime.com

DSIC STARTS WORK ON FIRST LNG CARRIER FOR COSCO AND SINOPEC

China's Dalian Shipbuilding Industry (DSIC) has officially started building the first LNG carrier for a joint venture consisting of units of Cosco Shipping Energy Transportation and Sinopec. According to a statement by DSIC, the shipbuilder held a steel-cutting ceremony on Monday for the LNG carrier with a working name G175K-9. DSIC said the LNG carrier will be 299.7 meters long and 46 meters wide, with a design draft of 11.5 meters and a design service speed of 19.5 knots. The vessel's tanks will feature GTT's Mark III Flex tech. This is the first of three LNG carriers DSIC will build for China Energy Shipping, the Hong Kong-based JV in which Sinopec's unit Kantons Investment holds a 49 percent stake and Shanghai Cosco Shipping LNG holds a 51 percent share. In August 2023, the JV and DSIC entered the shipbuilding contracts for these vessels. The deals are worth about $700 million or some $233.3 million per vessel. The delivery of the vessels is expected to take place on or before March 31, 2027, June 30, 2027, and April 30, 2028, respectively. Following delivery, the vessels will serve

Sinopec under long-term charter deals to ship US LNG volumes Sinopec contracted from Venture Global LNG in November 2021, Sinopec previously said. Under the 20-year sales and purchase agreements, Venture Global will supply a total of 4 million tonnes per annum of LNG from its Plaquemines LNG export facility in Louisiana to Sinopec. Source: www.lngprime.com

INDIA'S MONTHLY LNG IMPORTS CONTINUE TO INCREASE

India continues to boost its monthly liquefied natural gas (LNG) imports compared to the previous year, preliminary data from the oil ministry's Petroleum Planning and Analysis Cell shows. The country imported 2.94 billion cubic meters, or about 2.2 million metric tonnes, of LNG in November via long-term contracts and spot purchases. This marks a rise of 21.7 percent compared to the same month in 2023, PPAC said. PPAC's data previously showed that LNG imports rose in October, September, August, July, and June this year compared to the previous year. During April-November, India took 24.79 bcm of LNG, or about 18.7 million metric tonnes, up by 21 percent compared to the same period last year, according to PPAC. India paid $1.2 billion for November LNG imports, up from $1.1 billion in November last year. The country paid $10 billion in the April-November period, up from $8.7 billion in the same period last year, PPAC said. Moreover, India's natural gas production reached about 2.97 bcm in November, a drop of 2.3 percent from the corresponding month of the previous year. Natural gas production of 24.24 bcm in April-November was up by 0.7 percent compared to the same period in 2023. India imports LNG via seven facilities with a combined capacity of about 47.7 million tonnes per year. These include Petronet LNG's Dahej and Kochi terminals, Shell's Hazira terminal, and the Dabhol LNG, Ennore LNG, Mundra LNG, and Dhamra LNG terminal. The Chhara LNG import terminal in Gujarat should receive its commissioning cargo soon after it failed to unload the cargo from the 2015-built 159,800-cbm, Maran Gas Mystras. India's Hindustan Petroleum, a unit of state-owned ONGC, aims to launch its delayed Chhara LNG import terminal this month or in January 2025, its management said last month. PPAC said that during April-October this year, the 17.5 mtpa Dahej terminal operated at 102.6 percent capacity, while the 5.2 mtpa Hazira terminal operated at 44.4 percent capacity. The 5 mtpa Dhamra LNG terminal operated at 31.3 percent capacity, the 5 mtpa Dabhol LNG terminal operated at 35.6 percent capacity, the 5 mtpa Kochi LNG terminal operated at 22 percent capacity, the 5 mtpa Ennore LNG terminal operated at 24.1 percent capacity, and the 5 mtpa Mundra LNG terminal operated at 25.6 percent capacity. In October, Petronet launched two 180,000-cbm LNG storage tanks at its Dahej terminal in western Gujarat state. The company is expanding the terminal with about 5 mtpa of new capacity, which should be available by March 2025. Petronet recently said the company is optimistic about LNG demand growth in the country as its Dahej regasification terminal continues to operate at almost full capacity. Source: www.lngprime.com

UAE'S ADNOC, GERMANY'S ENBW FINALIZE LNG SUPPLY DEAL

UAE's Adnoc has signed a sales and purchase agreement with Germany's EnBW to supply the latter with liquefied natural gas from its LNG terminal in Al Ruwais. EnBW said on Monday the SPA converts the previous heads of agreement between the

two firms into a definitive agreement. The contract was signed by Rashid Al Mazrouei from Adnoc and EnBW COO Peter Heydecker during DMG's World LNG Summit & Awards which took place last week in in Berlin. Under the deal, EnBW will buy 0.6 million metric tons per annum of LNG (0.8 billion cubic meters per annum) from Adnoc for a period of 15 years. The deliveries, which will be sourced from the Ruwais LNG plant, are expected to start in 2028, upon commencement of the facility's commercial operations.

Second Ruwais LNG supply deal with German firm

This is the third definitive agreement for the supply of LNG from the 9.6 mtpa Ruwais LNG project and the second deal with a German firm. Last month, Adnoc signed the first SPA with German gas importer Securing Energy for Europe (SEFE). Under the 15-year deal, Adnoc will supply 1 million tonnes per annum of LNG to SEFE Marketing and Trading Singapore, a subsidiary of SEFE. Earlier this month, Adnoc signed a 15-year SPA with Malaysia's Petronas to supply the latter with 1 million tonnes per annum of LNG. To date, over 8 mtpa of the LNG project's production capacity has been committed to international customers through long-term agreements, Adnoc said after the Petronas announcement.

Adnoc boosting LNG business

In June, Adnoc announced the final investment decision on the Ruwais project and the EPC award to a joint venture led by France's Technip Energies. Prior to that, Adnoc issued in March this year a limited notice to proceed for early engineering, procurement, and construction activities to the joint venture. Besides this EPC deal, Adnoc Gas also awarded US energy services firm Baker Hughes a contract for the LNG export terminal. Baker Hughes will provide two electric liquefaction systems (e-LNG) for the Ruwais LNG project. Moreover, BP, Mitsui & Co., Shell, and TotalEnergies agreed to buy a 10 percent equity stake in Adnoc's LNG export terminal. Adnoc will retain a 60 percent majority stake and sell it to its unit Adnoc Gas for about $5 billion. The LNG project will more than double Adnoc's existing UAE LNG production capacity to around 15 mtpa, as the company builds its international LNG portfolio. Adnoc currently owns a 70 percent stake in Adnoc LNG, which currently produces about 6 mtpa of LNG from its facilities on Das Island. Source: www.lngprime.com

CYPRUS FSRU LEAVES CHINESE YARD

ETYFA's converted FSRU, which will serve the first Cyprus LNG import terminal in Vasilikos, has finally left Cosco Shipping Heavy Industry's yard in Shanghai. CHI Shanghai, the unit of Cosco Shipping, said in a statement the 137,000-cbm FSRU, Etyfa Promethea's, left its yard on December 14. In January this year, CHI Shanghai delivered the FSRU, which was converted from the 2002-built LNG carrier Galea. However, due to delays with the construction of the LNG receiving terminal in Cyprus, the vessel has been waiting at CHI Shanghai since then, the company said. CHI Shanghai said this is the first time that a Moss-type LNG carrier was converted to an FSRU in China. The FSRU is 296 meters long, 46 meters wide, and it has four regasification units each with a capacity of 105 mmscfd (million standard cubic feet per day). According to its AIS data, the FSRU should arrive in Singapore from China later this week. The FSRU will not sail to Cyprus yet as the jetty in Vasilikos has

not been complete. Local media reports suggest that the infrastructure of Vasilikos is now expected to be completed by the end of 2025, while the government of Cyprus is considering chartering the unit in the meantime.

CPP-Metron

In September, ETYFA, a unit of state-owned DEFA, invited bids for the provision of project management services for the completion of the LNG import terminal. The work included architectural, construction, engineering, and inspection services. Cyprus announced the start of construction of its first LNG import facility at Vassilikos in July 2020. ETYFA previously signed an EPCOM (engineer, procure, construct, operate, and maintain) contract with a Chinese-led consortium, CPP-Metron, for the project. The terminal includes the jetty and the converted FSRU. The consortium comprises state-owned China Petroleum Pipeline Engineering, a unit of CNPC, Metron Energy Applications, Hudong-Zhonghua, and Wilhelmsen Ship Management. However, the consortium has withdrawn from the contract in July this year after a long dispute saying that it "has found itself with no alternative but to terminate its contract with ETYFA." The consortium said it "has still not received any payment whatsoever for its work in 2024." The European Public Prosecutor's Office (EPPO) said in a statement in July it has opened an investigation into the LNG import terminal in Cyprus, on "suspicion of procurement fraud, misappropriation of EU funds, and corruption." This project aims to create an entry point for natural gas to Cyprus, enabling the country to connect with the wider European gas market, and involves a cost of 542 million euros ($570 million) - of which approximately 101 million euros was financed by the Connecting Europe Facility (CEF) program, EPPO said. Source: www.lngprime.com

SINGAPORE LNG BUNKERING VOLUMES UP IN NOVEMBER

Singapore's monthly LNG bunkering sales rose year-year in November, according to Singapore's Maritime and Port Authority. Preliminary bunkering data on MPA's website shows LNG bunkering sales in the world's largest bunkering port reached 27,501 mt last month. This marks a 292 percent increase compared to 7,015 mt in November 2023. However, November LNG bunkering figures were the third lowest this year and were significantly lower than 50,577 mt in October. October LNG bunkering volumes were slightly lower than the record month of June with 51,662 mt of LNG. LNG bunkering volumes also dropped compared to 36,907 mt in September, 45,590 mt in August, 43,176 mt in July, 51,662 mt in June, which was a record month. LNG bunkering sales in January this year reached 10,420 mt, 26,883 mt in February, 38,618 mt in March, 35,552 mt in April, and 48,752 mt in May. During January-November, LNG bunkering volumes reached 415,638 mt. This marks a 275 percent increase compared to 110,850 mt during the entire last year when LNG bunkering sales jumped compared to 16,300 mt in 2023 and 49,190 mt in 2022. LNG bunkering volumes in Singapore continue to increase due to new bunkering vessels working in the Singapore port, the growth of the global fleet of LNG-powered vessels, and lower LNG fuel prices. MPA is currently looking for ways to scale up use of LNG as a marine fuel in the Port of Singapore. It recently launched an expression of interest (EOI) to invite interested parties to submit a proposal(s) that would allow MPA to better understand the potential for scaling up of sea-based reloading of LNG for use as a marine fuel. Singapore currently hosts three LNG bunkering vessels

which provide ship-to-ship fueling operations. The 7,500-cbm FueLNG Bellina, owned by a joint venture consisting of Shell and Seatrium, is Singapore's first LNG bunkering vessel. It started operations in 2021. Besides this vessel, the 18,000-cbm FueLNG Venosa completed its first LNG bunkering operation last year. This is FueLNG's second bunkering vessel, and the JV charters it from Korea Line LNG, a unit of SM Group's Korea Line. In addition to these two vessels, Singapore's Pavilion Energy, which will become a part of Shell, completed the first bunkering operation with MOL's LNG bunkering vessel, Brassavola, in February this year. The 12,000-cbm vessel is on charter to Pavilion LNG Bunker I, a wholly owned subsidiary of Pavilion. Since receiving a license from MPA in 2016, both FueLNG and Pavilion have completed hundreds of truck-to-ship LNG bunkering operations in Singapore. TotalEnergies Marine Fuels, a unit of France's TotalEnergies, is also among three licensed suppliers of LNG bunkering fuels in the port. Under a long-term agreement with Pavilion, Brassavola will supply its customers. Source: www.lngprime.com

BP AND ADNOC LAUNCH NEW EGYPTIAN JV

Energy giants Adnoc and BP have reached financial close and completed formation of their new joint venture in Egypt that will focus on natural gas. Announced in February 2024, Arcius Energy is 51 percent owned by BP and 49 percent by XRG, Adnoc's investment company. Adnoc recently launched XRG, with an enterprise value of over $80 billion, to invest in gas and LNG, chemicals, and low-carbon energies. BP said in a statement on Monday new joint venture in Egypt will combine the pair's deep technical capabilities and proven development track records as it aims to grow a highly competitive gas portfolio. Arcius Energy, initially to operate in Egypt, includes interests assigned by BP across two development concessions, as well as exploration agreements. The concessions assigned to Arcius Energy in Egypt are Shorouk (BP 10 percent interest), which contains the producing Zohr field operated through Belayim Petroleum (Petrobel), and North Damietta (bp 100 percent interest) m which contains the producing Atoll field operated through Pharaonic Petroleum Company (PhPC). In addition, the North El Tabya, Bellatrix-Seti East, and North El Fayrouz exploration concession agreements have been also added to the JV. Senior Arcius Energy leadership were also appointed as part of the company's formation. Naser Saif Al Yafei was appointed as CEO while Katerina Papalexandri was appointed as CFO. Both executives, from Adnoc and BP respectively, bring decades of experience in the energy sector, BP said.

Strengthening cooperation

"Arcius Energy brings together the strengths of our two companies to create a dynamic new platform for international growth in natural gas in the region," Murray Auchincloss, chief executive of BP said. BP and Adnoc, and now XRG, have worked together for over five decades. The cooperation includes LNG as BP has a 10 percent stake in Adnoc LNG, the operator of the liquefaction and export terminal on Das Island in the Persian Gulf. Also, BP confirmed its intent earlier this year to take a 10 percent interest in Adnoc's planned Ruwais LNG project. Egypt is an LNG exporter and hosts the Eni-led Damietta liquefaction plant and the Shell-led Egyptian LNG export terminal (ELNG) in Idku. However, Egypt currently imports LNG via

Hoegh Evi's 170,000-cbm FSRU, Hoegh Galleon, which is in Ain Sokhna. Egypt's EGAS also just signed a deal to charter deal with US LNG player NFE for the 160,000-cbm FSRU, Energos Eskimo. Source: www.lngprime.com

MATSON'S LNG-POWERED CONTAINERSHIP ENTERS SERVICE

Matson's containership Kaimana Hila is back in service after completing its conversion to be able to use liquefied natural gas (LNG) as fuel. Kaimana Hila is Matson's third vessel to operate on LNG, joining its sister ship, Daniel K. Inouye, and Manukai, Matson said in a statement. The vessel now also has a new bow windshield for improved aerodynamics and fuel conservation. According to its AIS data provided by Vessels Value, the 2019-built 3,600-teu containership left Cosco Shipping Shipyard (Nantong) in October. Earlier this year, the US shipping firm awarded a retrofit contract to Cosco Shipping Shipyard (Nantong) for the containership to enable the vessel to use LNG as fuel. The shipbuilder said the project included the installation of the LNG fuel gas supply system for the main engine and four auxiliary engines, the installation of three 1,350-cbm LNG fuel tanks, and other equipment. Germany's MAN said last year that Matson exercised an option from the original contract in June 2022 to convert the main engine aboard its Kaimana Hila. The contract included converting one MAN B&W S90ME-C10.5 unit to a dual-fuel ME-GI unit capable of running on LNG.

Costs climb

Matson previously said it expects to invest about $35 million in the conversion of Kaimana Hila, the same as for Daniel K. Inouye. However, Matson said in its second-quarter results report that Kaimana Hila LNG installation is estimated to cost about $47 million, $12 million more than previously expected. Besides these two vessels, Matson replaced the main engine on its containership Manukai with a dual-fuel engine and previously said this will cost about $60 million. However, the results report shows that the Manukai project was worth $72 million. This means that Matson spent about $166 million on these three projects. This is $36 million more compared to previous estimates. In addition to these vessels, Matson ordered in 2022 three new 3,600-teu LNG-powered Aloha Class containerships at compatriot Philly Shipyard for about $1 billion. Philly Shipyard recently started building the first of these three new LNG-powered containerships. Matson will take delivery of these Jones Act compliant vessels in the fourth quarter of 2026 with subsequent deliveries in 2027. Source: www.lngprime.com

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