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BATTLE FOR ARCTIC LNG HOTS UP AS US AND UK TOP UP SANCTIONS LISTS BUT CONSTRUCTION OF SIX ARC7 LNG CARRIERS TO SERVE ARCTIC LNG 2 ROLLS ON TOWARDS COMPLETION

Russia is closing in on the start-up of Arctic LNG 2 — its next planned liquefaction project — as the US and UK ramp up sanctions against vessels, companies and individuals linked with the business. The US updated its sanctions list on 14 September, adding two giant floating storage units (FSUs) that were installed at either end of the Northern Sea Route (NSR) this year. The 361,600-cbm Saam FSU and Koryak FSU, which were put into place in Ura Bay off Murmansk and in Bechevinskaya Bay on the eastern side of Russia's Kamchatka Peninsula, respectively, are now named on the Office of Foreign Assets Control's list, along with other associated entities. Those following Russian LNG business said their sanctioned status may mean some third-party LNG carriers will now be unable to load at the new storage units. The FSU behemoths, which have yet to be used, have been put in place to take on LNG cargoes shipped into them by Russia's specialised Arc7 LNG carrier fleet with lesser ice-classed vessels then able to load at the FSUs, freeing up the ice-breaking Arc7 fleet to work in the harsher, sometimes ice-bound waters. The additions to the US sanctions list also included names of companies working

on business in the Russian Arctic, where domestic energy company Novatek is pushing to complete and start operations by the end of the year on the first of its three liquefaction trains for the 19.8-million-tonnes-per-annum Arctic LNG 2. On Friday, the UK added Novatek chairman of the management board Leonid Mikhelson to its list of sanctioned individuals. But Mikhelson is not yet sanctioned by the European Union, which is continuing to import LNG cargoes from Russia's Yamal LNG project. The tougher sanctions come as South Korean shipbuilder Hanwha Ocean started trials of its soon-to-be-completed three Arc7 LNG carrier newbuildings, which were originally ordered and later cancelled by Russian shipowner Sovcomflot. Ship tracking data has shown the 172,600-cbm Pyotr Kapitsa and sistership Lev Landau off the Okpo shipyard, with a third vessel — the Zhores Alferov — yet to undergo trials. Hanwha Ocean — then named Daewoo Shipbuilding & Marine Engineering — opted to continue building all three Arc7 vessels after the yard moved to cancel its contracts for them in 2022 as sanctions prevented foreign contractors from supplying equipment for and completing work on the units. Sovcomflot has since launched arbitration over the newbuilding trio and is claiming damages of more than $877m over the cancelled contracts. The ships are due for delivery at the end of this year. There is widespread speculation throughout the LNG industry that the vessels will be sold on to a company with links to Novatek. The Russian gas giant originally contracted 21 Arc7 vessels to serve the Arctic LNG 2 project. But plans for these have been thrown into some disarray. Novatek is still set to receive three of the ships, which are being built by Mitsui OSK Lines at Hanwha Ocean against long-term contracts with the Russian energy company's interests. Aside from these six Hanwha Arc7 newbuildings, the first of 15 Arc7 LNG carriers contracted at Russia's Zvezda Shipbuilding Complex was named this month in the presence of Russian President Vladimir Putin. Sovcomflot's 172,600-cbm Alexey Kosygin was originally due to sail through the NSR earlier this year to mark the start of the now-delayed Arctic LNG 2 project. The remaining 14 vessels were ordered by Novatek-Sovcomflot joint venture Smart LNG. All 15 vessels were covered by an agreement with South Korean shipbuilder Samsung Heavy Industries, which would build the hulls and float them over to Zvezda for outfitting. But, to date, just five hulls have been delivered, with the agreement on the remaining 10 now looking set to end. Earlier in 2023, Russian state nuclear agency Rosatom, which controls Zvezda, said it plans to develop its own design of ice-class LNG carriers — 170,000-cbm Arc8 vessels — that would be capable of operating year-round in the ice-challenged waters of the NSR. source : www.tradewindsnews.com

MISC BERHAD SELLS TWO LNG CARRIERS TO NISSEN KAIUN IN SALE AND LEASEBACK DEAL

Kuala Lumpur-based shipowner hints similar transactions to come with new Japanese partner. MISC Berhad has sold two LNG carriers to Japanese ship owner Nissen Kaiun in a deal that will see the Malaysian shipping giant time-charter them back for an unspecified period. MISC president and group chief executive officer Captain Rajalingam Subramaniam said in a media statement that the transaction, the first sale and leaseback deal done by the company in the LNG sector, enhances its financial flexibility and its ability to maximise returns from its gas shipping portfolio. "I am happy that we are able to enter into this

partnership with Nissen Kaiun and look forward to growing this collaboration for current and future business potentials," he said, describing the deal as a partnership agreement. The identity of the vessels involved in the deal signed on Tuesday was not disclosed, but MISC indicated that the first is expected to be delivered to Nissen Kaiun in the fourth quarter of 2023. Eaglestar, MISC's ship management subsidiary, and Synergy Marine, have been lined up as managers of the ships. MISC, with a fleet of 29 LNG carriers, is one of the world's largest players in the LNG shipping sector. The company has a further four 174,000-cbm LNG carriers on order at South Korean shipbuilders at Hanwha Ocean and Samsung Heavy Industries for delivery in 2026. In addition, MISC is a partner in a consortium that includes NYK, K Line and China LNG Shipping that is building a series of LNG carriers that will be chartered to QatarEnergy. Nissen Kaiun, although a large shipowner with a fleet of 175 ships, only has a minor footprint in the LNG sector. The family-owned company owns one LNG carrier, the 170,000-dwt Methane Julia Louise (built 2010), which is chartered to Gaslog. However, the company has a larger presence in the LPG sector through the ownership of nine VLGCs and another one on order. "We are very proud and excited to start our first time-charter business of LNG carriers for MISC. With support from Synergy Group and Eaglestar, we will strive for the safe operation of LNG carriers. Following this memorable first step, we hope to expand the relationship with MISC in LNG carriers and other segments too," said Nissen Kaiun president Captain Katsuya Abe. Source : www.tradewindsnews.com

CHEVRON ACCEPTS FWC'S OFFER TO END LNG STRIKE

Chevron has accepted the recommendations made by Australia's Fair Work Commission to end an ongoing dispute with unions representing its workers on the Gorgon and Wheatstone LNG export terminals in Western Australia. Australia's workplace tribunal FWC provided the recommendation to Chevron Australia on Thursday. Chevron has accepted the recommendation to resolve all outstanding issues and finalize the enteprise agreements, a Chevron Australia spokesperson told LNG Prime. "We have informed the Commissioner of our position and written to the unions and other employee bargaining representatives confirming our acceptance," the spokesperson said. The strikes will end if the Offshore Alliance, which includes the Maritime Union of Australia and Australian Workers' Union, accepts FWC's recommendation. Also, if the unions decline the offer, FWC will hold a meeting on Friday as Chevron previously applied for intractable bargaining declarations for the Gorgon and Wheatstone downstream facilities and the Wheatstone platform with Australia's workplace tribunal.

PIA started on September 8

Earlier this week, Chevron's unit in Australia and unions have failed to reach a deal and end the strike actions. Workers at Chevron's Gorgon and Wheatstone LNG plants and the Wheatstone platform have started protected industrial action on September 8 after talks between the energy giant and unions ended without an agreement. Moreover, the Offshore Alliance, which includes the Maritime Union of Australia and Australian Workers' Union, provided Chevron with a notice that work bans may apply for up to 24 hours a day from September 14. The Offshore Alliance said last Friday that PIA has escalated on the

Chevron facilities and would continue to escalate over the coming days and weeks. The Gorgon LNG plant on Barrow Island has three trains and a production capacity of some 15.5 mtpa, while the Wheatstone LNG plant near Onslow has a capacity of about 8.9 mtpa. These two projects have a combined capacity of about 25.4 mtpa. source : www.lngprime.com

MSC ORDERS TWO MORE LNG-POWERED CRUISE SHIPS AT FINCANTIERI

MSC's cruise division confirmed firm orders for two LNG-powered vessels for its luxury travel brand Explora Journeys with Italy's Fincantieri. The deal completes a total investment of 3.5 billion euros ($3.73 billion) in six luxury ships for Explora Journeys, according to a joint statement issued on Thursday. Also, the contracts are subject to access to financing as per industry practice, the statement said. The two new ships will pursue the use of liquefied hydrogen with fuel cells for their hotel operations while docked in ports to eliminate carbon emissions with the vessels' engines switched off. Moreover, the ships will also feature a new generation of LNG engines that will further tackle the issue of methane slip with the use of containment systems, the statement said. They will also be capable of using alternative fuels such as bio and synthetic gas and methanol, it said. Fincantieri will deliver Explora V and Explora VI in 2027 and 2028.

Fleet of LNG-powered cruise ships

Back in July 2022, Explora Journeys and Fincantieri signed a memorandum of agreement for the construction of these hydrogen and LNG-powered luxury cruise ships. Explora Journeys also said at the time that the previously announced vessels Explora III and IV will be powered by LNG. The Italian shipbuilder recently started budling the LNG-powered cruise ship, Explora III, for MSC's luxury travel brand. Scheduled to enter service in the summer of 2026, this will be the first ship in the Explora fleet to be powered by LNG. In addition, the Italian shipbuilder also launched Explora II, just two months after the delivery of Explora I, and expects to deliver this vessel next year. These ships are not LNG-powered. Fincantieri said that it plans to begin construction on LNG-powered Explora IV in January 2024 and complete it in early 2027. Besides these vessels, MSC Cruises held a naming ceremony for its second LNG-powered cruise vessel, MSC Euribia, in the Danish capital Copenhagen on June 8. France's Chantiers de l'Atlantique delivered MSC Cruises' first LNG-powered vessel, MSC World Europa, in October last year. Earlrier this year, the shipbuilder also held a coin ceremony for the third LNG-powered ship, MSC World America. Source : www.lngprime.com

INDIA'S LNG IMPORTS ROSE IN AUGUST

India's liquefied natural gas (LNG) imports rose in August compared to the same month last year, according to the preliminary data from the oil ministry's Petroleum Planning and Analysis Cell. The country imported 2.23 billion cubic meters, or about 1.7 million tonnes of LNG, in August, a rise of 10.1 percent compared to the same month in 2022, PPAC said. During April-August, India took 12.21 bcm of LNG, or some 9.3 million tonnes, up by 3.5 percent, PPAC said. India paid $1.3 billion for August LNG imports, down from $1.5 billion last year, while costs dropped from $8 billion in the April-August period last year to $6 billion during the same five months this year, it said. As per India's natural gas production, it reached 3.16 bcm, up by 9.3 percent compared to the corresponding month of the previous year. During April-August, gas production rose by 3.6 percent to 14.85 bcm, PPAC said. At the moment, India imports LNG via seven facilities with a combined capacity of about 47.7 million tonnes. India's Adani and France's TotalEnergies started supplying natural gas in April to the grid from their 5 mtpa Dhamra LNG import facility located in Odisha, on India's east coast. During April-August, Petronet LNG's 17.5 mtpa Dahej terminal operated at 93.4 percent capacity, while Shell's 5 mtpa Hazira terminal operated at 36 percent capacity, PPAC said. The Dhamra LNG terminal operated at 18.9 percent capacity, it said. Source : www.lngprime.com

POLISH LNG TERMINAL GETS 250TH CARGO

Poland's Orlen has received the 250th cargo of liquefied natural gas (LNG) at the Swinoujscie terminal since the start of operations. The 173,400-cbm LNG carrier Energy Endeavour delivered the milestone shipment to the President Lech Kaczynski LNG terminal in Swinoujscie from the US, Orlen's PGNiG said in a social media post on Wednesday. The 2021-built Energy Endeavour, owned by Greece's Alpha Gas, will unload about 77,000 tonnes of LNG. These volumes are part of a long-term agreement with US LNG exporting giant Cheniere Energy, PGNiG said. Orlen completed in November 2022 its merger with Poland's dominant gas firm, PGNiG, which is in charge for all of the LNG supplies coming to the Swinoujscie facility operated by Gaz-System. The Swinoujscie LNG terminal received its first commercial cargo in June 2016. Prior to that it also received two commissioning LNG cargoes. Orlen previously said that the 50th LNG cargo arrived at the facility in January 2019, the 100th delivery landed in July 2020, while the 200th cargo arrived in December last year.

Qatar and US

Poland's LNG imports via the Swinoujscie terminal rose 57 percent in 2022 to 58 LNG carriers, boosted by shipments from the US. The growth of LNG imports was possible due to the expansion of Gaz System's facility in Swinoujscie, where PKN Orlen booked a regasification capacity of 6.2 bcm per year since last year. This is some 1.2 bcm more than before. Thanks to further investments, the capacity will increase to 8.3 bcm of gas per year in 2024 and Orlen booked all of these volumes as well. In addition, Orlen recently booked 6.1 bcm per year of regasification capacity at Gaz-System's planned FSRU-based LNG import facility in Gdansk. Qatar and the US are the leading suppliers of LNG to Poland as part of long-term contracts, while the US is the dominant supplier in the last two years. Since 2016, Qatar supplied 126 LNG cargoes to the terminal,

while 103 deliveries arrived from the US, according to PGNiG. Other suppliers includes Norway, Nigeria, Trinidad and Tobago, Equatorial Guinea, and Egypt. These 250 cargoes total about 19.7 million tonnes of LNG, PGNiG said. Source : www.lngprime.com

COVE POINT LNG UNDERGOING SCHEDULED MAINTENANCE

The Cove Point LNG facility in Maryland, operated by Berkshire Hathaway's unit BHE GT&S, has started its annual maintenance. BHE GT&S said in a notice on Wednesday that "the Cove Point liquefaction facility is undergoing its annual maintenance." "This maintenance only affects the export liquefaction facility and does not impact the provision of FERC jurisdictional services," it said. The Cove Point terminal operator did not reveal in the notice how long the maintenance would last. A separate notice to customers suggest that the maintenance could last until September 29. Last year, the plant's maintenance took place from October 1 to October 28.

Berkshire Hathaway now has 75 percent stake in Cove Point LNG

Warren Buffett's Berkshire Hathaway Energy recently completed the previously announced $3.3 billion deal with Dominion Energy, boosting its stake in the Cove Point LNG terminal. Dominion sold its 50 percent noncontrolling limited partner interest in Cove Point LNG, to Berkshire Hathaway Energy, which operates the facility and owns a 100 percent general partner and 25 percent limited partner interest. Berkshire Hathaway Energy, via BHE GT&S, now has a total ownership interest of 75 percent. A subsidiary of Brookfield Infrastructure Partners holds the remaining 25 percent limited partnership interest in Cove Point LNG. The plant has a storage capacity of 14.6 billion cubic feet and a daily sendout capacity of 1.8 bcf, or about 5.25 million tons of LNG per year coming from one liquefaction unit. Last year, the Cove Point LNG plant shipped its 300th cargo since it started commercial liquefaction operations in April 2018. The Cove Point facility produces LNG for ST Cove Point, a joint venture of Japan's Sumitomo Corporation and Tokyo Gas, and for India's Gail under 20-year contracts. Source : www.lngprime.com

NEXTDECADE GETS $356 MILLION LOAN FOR RIO GRANDE LNG

US LNG firm NextDecade has secured a loan worth $356 million to finance a portion of the first phase of its Rio Grande LNG export project in Texas. NextDecade said in a statement on Thursday it had entered into a credit agreement with a group of lenders for $356 million of senior loans. The senior loans were disbursed in one advance for the full amount of $356 million on September 15. Also, this resulted in a reduction in the commitments outstanding under RGLNG's existing term loan facilities for Phase 1 from $11.1 billion to under $10.8 billion, according to NextDecade. These senior loans will mature in July 2033, will accrue interest at a fixed rate of 6.72 percent, and rank pari passu to RGLNG's existing term loan facilities, the $500

million working capital facility, and also the $700 million of 10-year senior notes issued at FID of Phase 1, it said. NextDecade said this financing transaction aligns with the company's long-term balance sheet strategy for Phase 1, which includes extending and staggering debt maturities, diversifying sources of capital, reducing bank capital over time to provide potential capacity for financing future LNG expansions, and mitigating interest rate exposure. "As of the date hereof, RGLNG's outstanding fixed-rate debt and executed interest rate swaps have reduced its exposure to movement in interest rates for over 80 percent of the debt currently projected to be incurred in support of Phase 1 construction," it said.

Preparing site

In July, NextDecade took the final investment decision on the first three trains of its Rio Grande LNG export project in Texas and completed $18.4 billion project financing. Phase 1, with nameplate liquefaction capacity of 17.6 mtpa, has 16.2 mtpa of long-term binding LNG sale and purchase agreements. These include deals with TotalEnergies, Shell, ENN, Engie, ExxonMobil, Guangdong Energy Group, China Gas Hongda Energy Trading, Galp, and also Itochu. NextDecade awarded the $12 billion EPC contract to Bechtel. According to RGLNG's latest construction report filed with the US FERC, the focus in August was on the set up of temporary facilities, preparing onsite parking lots, deliveries of construction equipment and material, as well as the ongoing ramp-up of contractor personnel. Moreover, Bechtel performed land clearing and general civil site preparation activities along with commencing the development of onsite roadways, it said. Source : www.lngprime.com

CCS TRIAL COMMENCES ON LNG CARRIER

LNG carrier Seapeak Arwa employs revolutionary carbon capture storage system to fight global CO2 emissions. In a milestone for the maritime industry, 2008-built, 165,500-m^3 capacity LNG carrier Seapeak Arwa has been fitted with the EverLoNG carbon capture storage (CCS) system. Owned and managed by Malt LNG, this LNG carrier is chartered to project partner TotalEnergies and will play a crucial role in the ambitious EverLoNG Onboard Carbon Capture Storage Pilot project. The carbon capture unit was built by Carbotreat, a Netherlands-based carbon capture service provider, as part of the ongoing EverLoNG project which aims to accelerate ship-based carbon capture. EverLoLNG will install and demonstrate ship-based carbon capture on two LNG-powered ships owned by project partners TotalEnergies and Heerema Marine Contractors. By capturing and liquefying CO2 emissions from one of its engines, Seapeak Arwa aims to demonstrate the real-time monitoring of the system's operation in a marine environment over the next three to six months. The aim is to capture 10 tonnes of CO2 on board TotalEnergies' vessel over the 3,000-hour test campaign. Captured CO2 will be stored on board as a liquid in a pressurised vessel and off-loaded and transported to an industrial site or stored permanently in the subsurface. The second installation of a CCS system will take place on Heerema's LNG-powered crane vessel Sleipnir, to run 500 hours of CO2-capture operations. This groundbreaking initiative will contribute to the decarbonisation of the maritime industry, which strives to reduce global CO2 emissions by 50% by 2050. Seapeak is the rebranded evolution of Teekay LNG Partners, following its acquisition by investment

manager Stonepeak in early 2022. The 18 CCS project companies are TNO, TotalEnergies, Heerema, Carbotreat, Conoship International, VDL Carbon Capture, Scottish Carbon Capture and Storage, The University of Edinburgh, Anthony Veder, SINTEF, Bureau Veritas Group, Lloyd's Register, Los Alamos National Laboratory, Forschungszentrum Jülich, DNV, Nexant, Bouman Industries and MAN Energy Solutions. Source : www.lngprime.com

QATARENERGY EYES ORDERS FOR GIANT LNG CARRIERS

State-owned LNG giant QatarEnergy is planning a major order of Q-Max LNG carriers at yards in South Korea and China, according to shipbuilding sources. Sources told LNG Prime on Tuesday that QatarEnergy is looking to order about 15 Q-Max LNG carriers at yards in Korea and China. These deals could be finalized by the end of this year, the sources said.

The orders could be potentially worth billions of dollars as one 174,000 cbm newbuild LNG carrier is currently worth about $260 million in South Korea and about $235 million in China. Currently, the world's largest LNG carriers are Qatar's Q-Max vessels that are about 345 meters long and have a capacity of 263,000-266,000 cbm. Qatar's Nakilat owns 14 Q-Max LNG carriers built by Hanwha Ocean (DSME) and Samsung Heavy between 2008 and 2010, and they all transport LNG from the giant Ras Laffan LNG complex in Qatar to customers around the globe. QatarEnergy LNG, previously known as Qatargas, currently operates 14 LNG production trains with a capacity of about 77 Mtpa in Ras Laffan. However, QatarEnergy is significantly increasing its LNG production from the North Field. This first phase of the North Field expansion project will increase Qatar's LNG production capacity from 77 to 110 Mtpa, while the second phase will further boost capacity to total 126 Mtpa. To secure shipping capacity, QatarEnergy reserved slots back in 2020 with three Korean shipyards, including Samsung Heavy, HD Hyundai Heavy Industries, and Hanwha Ocean, and China's Hudong-Zhonghua. Subsequently, in 2022, QatarEnergy signed multiple time charter parties with various shipowners. Including orders at South Korea's three shipbuilders and Hudong-Zhonghua, QatarEnergy said it concluded construction contracts and long-term time charter agreements for 60 LNG carriers last year. QatarEnergy expects the number to grow to more than 100 LNG carriers in the future and the firm is expected to start awarding new contracts as part of the second phase of the shipbuilding program this year. The second phase could include the construction of up to 40 ships but the total number of vessels remains unclear. The Q-Max vessels are part of the third phase of the giant shipbuilding program, the sources said. They would mainly serve long-term deals tied to QatarEnergy's North Field expansion projects, including with customers from China, the sources said. Hudong-Zhonghua recently received approvals in principle from classification societies for what it says is the world's largest LNG carrier. According to the Chinese shipbuilder, the LNG carrier is 344 meters long, 53.6 meters wide, and has a design draft of 12 meters. It features dual-fuel propulsion, a reliquefaction system, an air lubrication system, and GTT's NO96 Super+ containment tech. The vessel has five storage tanks. Despite its size, the vessel would be able to dock at more than 70 LNG terminals along the main trade route, the shipbuilder said. Source : www.lngprime.com

GERMAN FSRU TERMINAL OPERATOR OFFERS REGAS CAPACITY FOR FIRST TIME

State-owned LNG terminal operator Deutsche Energy Terminal is offering short-term regasification capacity at Germany's FSRU-based terminals for the first time since its establishment in January. Germany's Federal Ministry for Economic Affairs and Climate Action (BMWK) established Düsseldorf-based DET in January to manage FSRU-based LNG import terminals. DET will operate four LNG terminals in the North Sea area. The company is holding auctions for regasification capacities including storage and sendout for the first time. In two digital auction rounds, which are to start on October 16 and October 23, respectively, market players will be able to acquire utilization rights for the first short-term capacities in 2024 at the Brunsbüttel and Wilhelmshaven 1 terminals, DET said. DET said it plans to offer further short-term capacities at the Stade and Wilhelmshaven 2 terminals in a subsequent auction round in December 2023. The PRISMA platform will handle the auctions for DET regasification capacities. Also, the LNG terminal operator added that it plans to market long-term capacities with a term of more than one year in April 2024.

German FSRUs

The German government, helped by Uniper, RWE, and the TES consortium chartered in total five FSRUs and it also signed a deal with private LNG firm Deutsche ReGas for one of the units. Uniper and RWE installed Hoegh LNG's FSRUs in Wilhelmshaven with a capacity of up to 7.5 bcm per year and Brunsbüttel with a capacity of about 5 bcm per year, while the FSRU Transgas Force, owned by Dynagas, recently arrived in Germany's Bremerhaven, where it will be prepared for its upcoming job in Stade. The Stade FSRU-based LNG terminal will have a capacity of some 5 bcm per year. Excelerate Energy's FSRU Excelsior is heading towards a yard in Spain for a planned technical stop ahead of the start of its job in Wilhelmshaven, Germany. The vessel, which has a sendout capacity of 5 bcm per year, will serve the second FSRU-based facility in Wilhelmshaven. E.ON, TES, and Engie are the developers behind this terminal. Moreover, private firm Deutsche ReGas, which officially launched its Lubmin FSRU-based LNG import terminal in January, plans to install the 174,000-cbm FSRU Transgas Power, also owned by Dynagas, to serve the LNG import terminal in the port of Mukran. This FSRU will work along the FSRU Neptune in Mukran as part of the second phase of the LNG terminal. The second phase of the terminal will have a capacity of up to 13.5 bcm per year, Deutsche ReGas said. Source : www.lngprime.com

JAPAN'S MONTHLY LNG IMPORTS CONTINUE TO DROP

Japan's monthly liquefied natural gas (LNG) imports continued to decline in August, according to the provisional data released by the country's Ministry of Finance. The country's LNG imports dropped by 9.6 percent year-on-year in August to about 5.67 million tonnes, the data shows. LNG imports rose compared to 5.09 million tonnes in the previous month, which also marked a drop compared to the previous year. Japan's coal imports for power generation also decreased in August compared to the last year. Coal imports were down by 31.5 percent to 8.38 million tonnes, and Japan paid about $1.75 billion for these imports, a drop of 63.4 percent compared to the last year, the data shows.

LNG import bill down

According to the preliminary data, the August LNG import bill of about $3.38 billion decreased by 43 percent compared to the same month last year. State-run Japan Oil, Gas and Metals National Corp (JOGMEC) recently published the first contract-based monthly spot LNG price since December 2022. The average price of spot LNG cargoes for delivery to Japan contracted in August 2023 and scheduled to be delivered from the month onward was $11.6/MMBtu, JOGMEC said. JOGMEC also said in a report this week that the "Northeast Asian assessed spot LNG price JKM for the previous week (September 11 -15) rose from the low US$ 13s the previous week to the high US$ 13s on September 11 amid rising supply uncertainty due to labor disputes at Australian LNG facilities." "The price subsequently fell to the mid US$ 12s on September 15 as selling interest increased on the back of robust inventories and supply," it said. METI announced on September 13 that Japan's LNG inventories for power generation totaled 1.68 million tonnes as of September 10, up 0.02 million tonnes from the previous week.

LNG deliveries

As per LNG shipments going to Japan in August, deliveries from Asia decreased by just 0.1 percent to 1.24 million tonnes, the ministry's data shows. Middle East LNG shipments dropped by 22.2 percent to 700,000 tonnes in August. Moreover, shipments from Russia dropped by 12.8 percent to 392,000 tonnes, while US deliveries rose by 94.6 percent to 648,000 tonnes in August. Japan was the world's top LNG importer in 2022, overtaking China, but both of the countries took fewer volumes compared to the year before. However, China has overtaken Japan to become the world's top importer of LNG in the first half of this year. China took 33.44 million tonnes of LNG during January-June, up by 7.2 percent compared to the same period last year, while Japan's LNG imports dropped by 13.3 percent year-on-year in January-June to 32.62 million tonnes. During the January-August period, Japan imported some 43.38 million tonnes, down by about 2.18 million tonnes compared to China's 45.51 million tonnes. Source : www.lngprime.com

ROYAL CARIBBEAN'S LNG POWERED GIANT LAUNCHED IN FRANCE

French shipbuilder Chantiers de l'Atlantique has launched a giant LNG-powered cruise vessel it is building for US-based Royal Caribbean International. The 362 meters long and 66 meters wide Utopia of the Seas is now one step closer to its debut in Port Canaveral (Orlando), Florida, in July 2024. According to a statement by Royal Caribbean International, a unit of Royal Caribbean, the Oasis Class ship floated for the first time over the weekend. The key moment in the construction of the vessel took 17 months to reach and follows the steel-cutting ceremony that took place in the shipyard in Saint-Nazaire on April 5 last year and the keel-laying ceremony that took place on July 1. This is the first of six Oasis Class ships with LNG propulsion. It will have a total power installed in the ship of more than 90 MW using 6 engines. By introducing the first LNG-powered Oasis Class ship, the cruise line said it took yet another step toward a "clean-energy future" after its first LNG ship, Icon of the Seas, which debuts in January 2024. Source : www.lngprime.com

GTT BAGS DSIC TANK ORDER FOR LNG CARRIER TRIO

France's GTT has secured a tank design order from China's Dalian Shipbuilding Industry (DSIC) for three 175,000-cbm LNG carriers. DSIC will build the three LNG carriers 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. As previously reported by LNG Prime, the shipbuilding deals worth about $700 million, or some $233.3 million per vessel, were signed on August 31. GTT said that the vessel's tanks will feature the Mark III Flex membrane containment system. DSIC will deliver the vessels between the first half of 2027 and the first quarter of 2028. Following delivery, the vessels will serve Sinopec under long-term charters 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 of a total of 4 million tonnes per annum of LNG from its Plaquemines LNG export facility in Louisiana to Sinopec. Prior to this contract, GTT secured an order from DSIC for two 175,000-cbm LNG carriers. DSIC will build these two LNG carriers for Sea Jade Investment, a joint venture consisting of China Gas, Wah Kwong Maritime Transport, and CSSC Shipping. Source : www.lngprime.com

TOTALENERGIES: FSRU ARRIVES IN LE HAVRE, FIRST GAS SUPPLIES TO GRID EXPECTED IN SEPTEMBER

France's first floating storage and regasification unit (FSRU) has arrived in Le Havre and the unit is expected to start delivering natural gas supplies to the grid this month, according to TotalEnergies. TotalEnergies charters this 2010-built 145,130-cbm vessel from Hoegh LNG, which has a 50 percent stake in Cape Ann and Japan's MOL, which owns a 48.5 percent stake. Tokyo LNG Tanker holds a 1.5 percent share in the unit. LNG Prime reported on September 12 that the FSRU took a cargo off Gibraltar via a ship-to-ship operation with the LNG carrier Seapeak Arwa. Prior to that, Seapeak Arwa loaded the shipment at Equinor's Hammerfest LNG export plant in Norway where TotalEnergies has a stake. A spokesperson for TotalEnergies confirmed that Cape Ann, loaded with a cargo, berthed on Monday afternoon at the "Bougainville Sud" dock in the Le Havre port. Moreover, the spokesperson said that commissioning is "progressing well" and sendout from the FSRU to the downstream grid is scheduled to start in September. France currently hosts four onshore LNG terminals with a capacity of about 26.8 mtpa. These are Elengy's Fos Tonkin, Fos Cavaou, and Montoir-de-Bretagne LNG terminals, and also the Dunkirk LNG facility. The FSRU-based terminal in Le Havre will allow France to increase its regasification capacity by around 5 Bcm per year. TotalEnergies previously said it plans to reserve about 50 percent of this capacity. Besides the FSRU, Paris-based LNG engineering giant Technip Energies won a contract last year from TotalEnergies to provide a marine loading arm for the Le Havre facility. TotalEnergies will operate the FSRU and GRTgaz will operate the connecting pipeline to the gas transmission network. Source：www.lngprime.com

COMMONWEALTH LNG PENS PRELIMINARY DEAL WITH EQT

US natural gas producer EQT Corporation has entered into a heads of agreement for liquefaction services from Commonwealth LNG's proposed facility in Cameron, Louisiana. EQT plans to liquefy 1 million tons per annum of LNG under a 15-year tolling agreement, it said in a statement. However, final terms remain subject to negotiation of a definitive agreement between the two firms. EQT's president and CEO Toby Rice said this deal represents "another step forward in EQT's risk-adjusted LNG strategy, which seeks to diversify a portion of our production to international markets via arrangements that offer the best combination of upside exposure and downside risk mitigation." "Our tolling capacity gives us the flexibility to sell our gas directly to end users globally and we are currently pursuing long-term purchase agreements with prospective international buyers," Rice said.

FID in Q1 2024?

Houston-based Commonwealth LNG said in a separate statement it still anticipates a final investment decision on the project in the first quarter of 2024, with first cargo deliveries expected in 2027. It said that the terms anticipated under the HOA would commence at the start of commercial operation of the facility. "We are very pleased to add a US producer of EQT's stature to

Commonwealth's customer portfolio," Commonwealth LNG founder and executive chairman, **Paul Varello**, said. He added that this agreement "will connect EQT's vast natural gas assets to Commonwealth's LNG facility, thus creating a robust value chain from wellhead to water." The company's 9.3 mtpa plant in Cameron will use gas turbines and other equipment from energy services firm Baker Hughes as part of a deal announced last month. Commonwealth LNG recently entered into a non-binding 20-year supply deal with Switzerland-based energy trader MET Group for 1 mtpa of LNG and it also closed an investment of development capital from private funds managed by Kimmeridge Energy Management. This investment completes the development funding required for the firm to reach FID. The two firms have also agreed in principle on terms for a 20-year, 2 mtpa LNG offtake commitment from the facility along with the associated gas supply. Last year, Commonwealth LNG also finalized a supply deal with Australian LNG firm Woodside. The deals are for the supply of up to 2.5 mtpa of LNG over 20 years to Woodside Energy Trading Singapore from Commonwealth's LNG export facility. Commonwealth LNG is planning to build the liquefaction and export facility on the west bank of the Calcasieu Ship Channel at the mouth of the Gulf of Mexico near Cameron, Louisiana. The facility also includes six 50,000-cbm LNG storage tanks, one jetty with the capacity to service vessels from 10,000 cbm to 216,000 cbm, and a pipeline. An accelerated construction schedule will allow the project to be built in three years using a modular approach with major components being fabricated offsite. Source : www.lngprime.com

WOODSIDE EXPECTS TO RECEIVE FIRST PLUTO TRAIN 2 MODULE IN Q1 2024

Australian LNG producer Woodside expects to receive the first module from Indonesia at the Pluto Train 2 project site in Western Australia in the first quarter of 2024. In November 2021, Woodside took a final investment decision on the Scarborough and Pluto LNG Train 2 developments worth about $12 billion and expects to ship the first cargo in 2026. The projects also include new domestic gas facilities and modifications to the first train. Woodside's Pluto LNG terminal currently has one train with a capacity of 4.9 mtpa and Woodside and US engineer Bechtel started building the second Pluto train last year. Pluto Train 2 will get gas from the Scarborough gas field, located about 375 km off the coast of Western Australia, through a new trunkline long about 430 km. Woodside's CEO Meg O'Neill recently visited the yard in Batam, Indonesia, where Bechtel is building in total 51 modules for the second Pluto LNG train, according to a social media post published on Tuesday.

Singapore's Sembcorp Marine, now Seatrium, joined forces with Bechtel in 2021 to build these modules. "As of last week, the 3000+ staff there had started assembling 42 of the 51 modules we'll need," O'Neill said in the LinkedIn post. "The first module is expected to arrive at our project site in Dampier, Western Australia in the first quarter of next year," she said. Bechtel previously said it expects to complete all of the modules, each weighing up to about 4,500 tonnes, in 2024. Source : www.lngprime.com

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HANWHA OCEAN, BV TO WORK ON LNG FUEL TANKS FOR LARGE CONTAINERSHIPS

South Korean shipbuilder Hanwha Ocean and classification society BV are joining forces on the structural assessment of independent LNG fuel tanks for ultra large container ships. In that regard, the two firms recently signed a deal for a joint development project (JDP). According to a statement by BV, the project aims to enhance the design process of independent LNG fuel tanks. It also aims to accelerate the development of new solutions for the structural assessment of those systems.

Today many vessels feature independent tanks, either for LNG/LPG transportation or for the use of LNG/LPG as a fuel. These independent tanks are not rigidly connected to the hull structure but are instead held by an important number of dedicated supports, which must be designed with consideration of non-linear structural response during operations, including loss of contact and sliding. Accurately solving these contact nonlinearities usually requires large computational time. BV said the method is very sensitive to convergence parameters. Moreover, BV recently developed a new methodology to assess contact behaviour nonlinearities. The method was validated by comparison with simulations, and it was demonstrated that the CPU time is significantly lower, while maintaining the same levels of accuracy, BV said. The proposed solution allows for the fully consistent structural analysis of vessels equipped with independent tanks, it said. Hanwha Ocean is currently building twelve ultra-large LNG-powered containerships for Germany's Hapag-Lloyd. The shipbuilder recently delivered the second vessel in this batch, the 23,660-teu Manila Express. Source : www.lngprime.com

ASIA PRICES NOTCH UP AMID SPOT BUYS, EASING JAPAN INVENTORIES

Asian spot liquefied natural gas (LNG) prices rose $1 this week due to buying activity by China and India, easing inventory levels in Japan and higher oil prices. The average LNG price for November delivery into north-east Asia <LNG-AS> rose to $14 per million British thermal units (mmBtu) from $13 the previous week, industry sources estimated. China's Unipec, the trading arm of top Asian refiner Sinopec, bought over 30 LNG cargoes via a tender for deliveries from October 2023 to the end of 2024 to meet winter demand and boost its trading supply pool. Meanwhile, India's largest gas distributor, GAIL, issued a tender seeking an LNG cargo for October delivery. "The support in Asian prices was due to a combination of factors including the latest LNG buying activity from Unipec and GAIL, (and) lower LNG inventories among Japanese major power utilities," said Ryhana Rasidi, gas and LNG analyst at data and analytics firm Kpler. According to data released by Japan's Ministry of Economy, Trade and Industry (METI), LNG inventories held by major Japanese power utilities fell to 1.62 million tons as of Sept. 17, lower than the 5-year average for the period. The ease in stockpiles was driven by hot weather, said Rasidi, adding that Japan's meteorological agency has forecast a 70% or more probability of above-average temperatures over the next week and into most of October. Higher oil prices may set a temporary floor for LNG prices despite bearish pressure from the strike

resolution at Chevron's facilities in Australia, said Rystad Energy analyst Andre Nilsen. "If oil prices remain high or keep increasing for an extended period, we expect this will act as a bullish factor for gas prices... at the very least, to act as a price floor for gas, preventing further declines." An Australian union alliance on Friday called off strikes at Chevron's two major LNG projects – responsible for about 7% of global supply – after agreeing to resolve disputes, ending two weeks of strike activity which had spurred concerns of supply disruption. In Europe, S&P Global Commodity Insights assessed its daily northwest Europe LNG Marker (NWM) price benchmark for cargoes delivered in November on an ex-ship (DES) basis at $12.864/mmBtu on Sept. 21, a $0.825/mmBtu discount to the November gas price at the Dutch TTF gas hub. "European LNG prices slid on the back of easing supply tightness in Norway as gas production restarted at the 125 million cubic metres per day Troll A platform," said global LNG markets lead Shermaine Ang. Gas production at Norway's Troll A platform in the North Sea resumed on Wednesday following extended maintenance, with full output expected over the next several days as pipelines gradually fill up, operator Equinor said. While much of the Atlantic market has been focused on Norwegian gas supply to Europe over the coming couple of months, weather forecasts for much of northwest Europe suggest a mild start to the winter, said Samuel Good, head of LNG pricing at commodity pricing agency Argus. "(This) could limit any early winter heating demand as the regions' underground gas stocks edge closer and closer to their respective capacities," he said, adding that Argus assessed the north-west Europe DES price at $12.85/mmBtu. Meanwhile, spot LNG freight rates continued to rally this week, said Edward Armitage, an analyst at Spark Commodities, with the Atlantic and Pacific rates climbing to $197,750/day on Friday. Source : www.naturalgasworld.com

CHINA GAS DEMAND SEEN UP 8% ON ECONOMIC RECOVERY, EASING FUEL COST - CNOOC RESEARCH

Imports of liquefied natural gas (LNG) are expected to reach 70.79 million metric tons this year, up 10.9% from last year, while those of pipeline gas is seen reaching 69.5 bcm, 10.7% above the 2022 level, Xie said. The CNOOC forecast for demand growth is higher than that of three other analysts and comes after a rare decline in 2022, when Chinese gas demand slipped 1% amid rigid COVID-19 controls and saw China cede its top LNG importer ranking to Japan. The growth is driven by China's economic recovery and cooling global LNG prices, Xie pointed out. "We're expecting industrial gas demand to recover in the second half. And the normalising global gas prices are also going to stimulate demand," Xie said. Gas demand growth this year was seen at between 5.7% and 7.4%, according to estimates this week by ICIS, Energy Aspects and SIA Energy. China's total gas demand was forecast to peak in 2040 at 700 bcm, Xie added, echoing a previous forecast by state major Sinopec. Part of that growth was met by domestic production, which the CNOOC research team predicted rising 4.6% over 2023 to 227.8 bcm. Imports of both piped gas and liquefied natural gas were both expected to increase to meet rising domestic demand. The country's LNG receiving capacity, seen at 139.3 million tons annually by the end of 2023, is expected to expand

to 181.8 million tons by 2025, Xie said. To cope with "extreme situations", CNOOC proposed the country build at least 15 bcm of emergency LNG reserves by 2025 and a 25 bcm stockpile for 2030. At 15 bcm, that would represent roughly 12% of China's total imports of the superchilled fuel by 2025, or 3.4% of the national gas demand. Xie noted that most of 11% growth in piped gas imports would come from Russia's East Siberian fields via the Power of Siberia pipeline. Imports of Russian piped gas had jumped 54% over the course of 2022, as Russia continues to make deliveries through the Power of Siberia which is expected to reach full capacity of 38 bcm annually by 2027. CNOOC noted that China's dependence on foreign imports was likely to increase in the coming years, with imports of LNG and piped gas expected to account for 46% of domestic demand in 2025 and 49% of domestic demand by 2035. Source : www.naturalgasworld.com

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