



## **GOLAR'S FLNG LEAVES SINGAPORE TO START TORTUE JOB**

Golar LNG's converted floating LNG producer, Gimi, which will serve the first phase of BP's Greater Tortue Ahmeyim FLNG project offshore Mauritania and Senegal, has finally left Seatrium's yard in Singapore. According to a statement by Golar, the FLNG departed the yard on Sunday. Gimi is now sailing under its own propulsion, supported by an escort tug, toward BP's

*"Estimates for China's gas use this winter vary but under a normal winter temperature scenario, consumption could increase by 8.9% year-on-year in Q4."*

purpose-built Greater Tortue Ahmeyim hub offshore Mauritania and Senegal, it said. Golar expects the voyage to take around 60 days, including refueling stops in Mauritius prior to rounding the Cape of Good Hope and in Namibia prior to its arrival. Upon arrival, Gimi

will notify BP that it is ready to be moored and connected to the hub, which is expected to trigger the start of contractual cash flows under the 20-year lease and operate agreement on the GTA field, Golar said. Back in February 2019, Golar entered into the deal with BP for the charter of the FLNG. Gimi was converted from a 1975-built Moss LNG carrier with a storage capacity of 125,000 cbm. This is the world's second converted floating LNG producer and joins Golar's Hilli, also converted

by Seatrion and currently located offshore Cameroon's Kribi. It will produce up to 2.7 million tonnes of LNG per year, using the Black & Veatch "Prico" liquefaction process. Golar said in August that it expected the 293 meters long converted floating LNG producer to leave Seatrion's yard in Singapore in September and after that it moved the departure to October. "With Gimi soon on site for start-up of operations Golar will double its operating fleet of FLNGs and bring total installed liquefaction capacity up to 5.1 mtpa. We look forward to having FLNG Gimi in operation, and to continued long term cooperation with BP, Kosmos, and the national oil and gas companies of Mauritania and Senegal," Golar CEO Karl-Fredrik Staubo, said.

### **Tortue launch could slip to Q2 2024**

BP's interim CEO Murray Auchincloss recently said the company is "hopeful" that it will launch the first phase of its Greater Tortue Ahmeyim FLNG project in the first quarter of 2024. The company pushed back the start of the project due to a delay in the subsea scope. BP also recently selected Swiss-based offshore contractor Allseas to complete the remaining subsea pipelay scope for the FLNG project, replacing previous contractor Houston-based McDermott. US firm and project partner Kosmos said in its third-quarter report that the delivery of first gas from the first phase of the project has the potential to slip into the second quarter of 2024. Kosmos said in the report that the partners expect sail away of the FLNG during this quarter, with arrival expected early next year. The firm said that the partners are working with Golar to identify ways to advance commissioning of the vessel. Kosmos said the critical path to first gas on phase 1 of the Tortue project is now through the arrival, hook-up, and commissioning of the floating production, storage and offloading (FPSO) unit. The project's FPSO unit left Cosco Shipping Heavy Industry's yard in Qidong, China in January this year. The FPSO is "currently en route to Mauritania/Senegal and is now expected to arrive on location in the first quarter of 2024," Kosmos said. Following completion of commissioning activities at the site offshore Mauritania and Senegal, the FPSO will process natural gas - removing condensate, water, and other impurities - before exporting it by pipeline to the project's FLNG facilities, 10km offshore. With eight processing and production modules, the FPSO will process around 500 million standard cubic feet of gas per day. The FLNG will liquefy majority of the gas, enabling export to international markets, while some of the supplies will help meet growing demand in the two host countries, BP previously said. source : [www.lngprime.com](http://www.lngprime.com)

## **CHINESE LNG IMPORTS UP 30% IN OCTOBER**

Chinese LNG imports in October came in at 5.17mn tonnes, up 29.5% year/year, according to data published by the customs department on November 18. The LNG imports during the 10 months of 2023 were 56.25mn tonnes, up 11.5% year/year. In terms of pipeline gas imports, China received 3.62mn tonnes last month, indicating a 1.2% yr/yr growth. Cumulatively, the country's pipeline gas imports during the year reached 40.26mn tonnes, up 5.3% year/year. Chinese LNG imports for the full year 2023 are likely to see a small increase, according to Reuters market analyst John Kemp. The import rebound could be smaller than some analysts anticipate because domestic gas production is rising strongly and the country has mostly completed its transition to natural gas for urban residents, Kemp wrote. source : [www.naturalgasworld.com](http://www.naturalgasworld.com)

## **GAZ-SYSTEM'S SECOND GDANSK FSRU FAILS TO SECURE SUFFICIENT CAPACITY BOOKINGS**

Poland's Gaz-System said it had not received binding capacity orders at a "sufficient level" to proceed with the implementation of the second FSRU as part of the LNG import project in Gdansk Bay. In July this year, Gaz-System launched a binding season for capacity bookings at the planned second FSRU with a capacity of 4.5 bcm in July this year. Prior to that the firm completed a non-binding market test to assess the demand for additional regasification capacity and the interest in export of regasified LNG towards Slovakia, Lithuania, Denmark, Germany, as well as the Czech Republic and Ukraine. Gaz-System said in a statement that the submission phase for long-term binding offers has ended on October 27. The overall objective of the binding FSRU 2 open season procedure was to confirm the interest of market participants in increasing the regasification capacity of the FSRU terminal which would justify the implementation of the project. However, the procedure "did not result in Gaz-System obtaining binding orders at a sufficient level to proceed with the implementation of the FSRU 2 project," the firm said. "Nevertheless, the interest in the regasification services declared by the participants imply that discussions may be continued in the future," Gaz-System said. The firm said the project will be the subject of further analysis. In addition, the hydroengineering infrastructure that will be built as part of the FSRU 1 terminal project will also provide for the possibility of a second storage and regasification unit development if market demand for the FSRU 2 is confirmed in the future, Gaz-System said.

### **Focus on first FSRU**

Currently, Gaz-System said it continues its efforts aimed at installing the first FSRU in the Gdansk area and designed to provide annual regasification capacity of up to 6.1 bcm. Oslo-based BW LNG, a unit of Singapore's BW, and Japan's MOL have been shortlisted by Gaz-System to provide Poland's first FSRU as part of the Gdansk LNG import project. The provisions of the term sheet do not constitute binding obligations for the parties but set out the 'roadmap' for further negotiations of the charterparty and their essential content will be reflected in the final charter agreement, it said. Gaz-System plans to conclude the deal with one of the two firms for a period of 15 years. Poland's Orlen has booked entire 6.1 bcm per year of regasification capacity at Gaz-System's planned FSRU-based LNG import facility. Orlen is already in charge for all of the supplies coming to Gaz System's LNG import terminal in Swinoujscie, Poland's first such facility, via PGNiG. The firm completed in November last year its merger with Poland's dominant gas firm, PGNiG. Gaz-System plans to launch the FSRU-based project, backed by the EU, in early 2028. source : [www.lngprime.com](http://www.lngprime.com)

## **GASTRADE SEEKS COMMISSIONING LNG CARGO FOR ALEXANDROUPOLIS FSRU**

Greece's Gastrade is seeking a liquefied natural gas cargo for the commissioning of its FSRU-based LNG import terminal in Alexandroupolis. The firm launched a tender on October 31 for the supply of the commissioning cargo and relevant services and the tender closes on December 5. Moreover, Gastrade said the supplies will be delivered to the FSRU which will be located in the sea of Thrace, 17.6 km SW of the town of Alexandroupolis, for the testing and commissioning activities, including supply of gas to the grid via a 28 km long pipeline, which includes offshore and onshore sections. Gastrade told LNG Prime in emailed comments on Monday that the commercial operation date for the project "remains as planned for the first quarter of 2024." "Within December 2023, Gastrade will communicate to the successful tenderer a precise date for the unloading of the commissioning cargo which is likely going to be within the first half of January 2024," the company said. As per the converted FSRU, its AIS data showed on Monday that the vessel has already left Seatrium's yard and was anchored offshore Singapore. "The FSRU is expected to depart from Singapore before the end of this month," Gastrade said.

### **First Greek FSRU**

The Greek company took the final investment decision on the project worth about 363.7 million euros (\$397 million) in January last year and officially started construction in May the same year. The European Commission recently approved a 106 million euro (\$116 million) Greek measure to support the completion of the construction of the LNG terminal in Alexandroupolis. Also, this measure complements the Greek public support that was approved by the commission in June 2021, GasLog said. Gastrade's shareholders include founder Copelouzou, DESFA, DEPA, GasLog, and Bulgartransgaz. Shareholder and LNG shipping firm GasLog told Keppel Offshore & Marine, now Seatrium, in February last year to proceed with the conversion of the 2010-built, GasLog Chelsea, to an FSRU. GasLog will sell this unit to Gastrade for about \$265 million. The vessel entered the yard in February this year and the partners renamed it to Alexandroupolis. In September, Gastrade said that Seatrium's yard in Singapore is finalizing the conversion work on the 153,600-cbm FSRU. The Alexandroupolis LNG terminal will have a capacity of 5.5 Bcm. With this project, Greece will get its first FSRU and also the second LNG import facility, adding to DESFA's import terminal located on the island of Revithoussa. Gastrade is also planning to install a second FSRU offshore Alexandroupolis. Source : [www.lngprime.com](http://www.lngprime.com)

## **GREECE'S DESFA ALLOCATES REVITHOUSSA LNG SLOTS FOR 2029**

Greece's DESFA said that one firm has reserved 17 regasification slots in 2029 at its LNG import terminal located on the island of Revithoussa. Last month, the gas grid and LNG terminal operator controlled by a consortium led by Italy's Snam said that firms have reserved all of the offered Revithoussa regasification slots in 2024 and 2025, while 21 regasification

slots were reserved in 2026. DESFA also completed last week auctions for 2027 and 2028 as part of the annual LNG scheduling auctions for the period 2024–2038. It said that 4 users booked 21 slots in 2027 and 3 users booked 30 slots in 2028. DESFA announced on Monday it held for the first time LNG unloading auctions for 2029. The firm said that 1 domestic user booked a total quantity of 11 TWh, or 17 slots, of the 44 offered slots with a total quantity of 36.5 TWh. DESFA said the reserved capacity for 2029 corresponds to 17 percent of the maximum regasification capacity of the Revithoussa facility. LNG deliveries to the Revithoussa terminal decreased 13.7 percent in the January–September period of this year compared to record 60 cargoes and 27.85 TWh of LNG in the same period last year. Deliveries from US liquefaction plants to Greece reached 9.36 TWh in the period, down 49.9 percent compared to the same period last year. The Revithoussa facility has a storage capacity of 225,000 cbm and a regasification capacity of 1,400 cbm/h. It is currently the only LNG import plant in Greece but it will be joined this winter by Gastrade’s FSRU-based LNG import project in Alexandroupolis. source : [www.lngprime.com](http://www.lngprime.com)

## **SHELL, BP WRAP UP BROWSE STAKE SALE**

A unit of LNG giant Shell has completed its previously announced deal with BP to sell a 27 percent stake in the Woodside-led Browse project in Australia. “Shell Australia has completed the sale of our interest in the Browse project to BP as was announced on April 29, 2023,” the company said in a short statement. Shell’s unit did not provide any further information. The company announced in a statement issued on April 29 that Browse remains “an important Australian resource which if developed will provide much needed energy to customers as the energy market transitions towards lower carbon energy.” “Shell regularly assesses its portfolio to inform capital allocation and maximize returns and performance however, the Browse asset is no longer a strategic fit in the context of Shell’s global portfolio,” it said at the time. The firm did not disclose any financial details regarding the deal. BP Developments Australia, a unit of BP, now has a 44.33 percent stake in the project. Japan Australia LNG, a joint venture of Mitsubishi and Mitsui, owns a 14.4 percent stake, while PetroChina International has a 10.67 percent. Woodside leads the project with a 30.60 percent stake.

### **Sending gas to Karratha plant**

The Australian LNG firm said in September last year that it was progressing with its plans to send natural gas from the Browse Basin offshore Western Australia to North West Shelf’s Karratha gas plant on Burrup peninsula. Woodside and its partners are proposing to develop the Brecknock, Calliance, and Torosa fields located approximately 425 km north of Broome in the offshore Browse Basin. The proposed development concept includes two floating production storage and offloading (FPSO) facilities delivering 11.4 Mtpa of LNG/LPG and domestic gas, and an about 900 km pipeline to existing NWS project infrastructure. The Karratha gas plant in Western Australia, part of the NWS project, shipped its 6000th cargo of LNG in September last year. It has five LNG trains with a capacity of 16.9 million tonnes per year. Also, it features domestic gas trains, condensate stabilization units, and LPG units. Australia’s oldest LNG plant has been liquefying gas from fields located off the north-west coast of Australia since 1989. However, these fields are running out of gas and the project is now shifting its focus towards a

different business model aimed at processing gas from third parties. Woodside CEO Meg O'Neill said during the company's recent investor briefing that the company needs "three things for Browse." "We need a carbon solution; we need kind of clarity on our ability to obtain environmental approvals; and we need commercial agreement to process Browse gas through the North West Shelf," she said. O'Neill said that Woodside has made "really good progress" on a carbon solution and the company continues to work with the governments on environmental approvals. "Those applications have been with the regulators for several years now and we continue to try to move them forward but it is a bit of a challenging environment," she said. "And thirdly, we are in active discussions between the Browse JV and North West Shelf JV on a potential tolling agreement. So, we continue to work on the things that are critical path," she said. source : [www.lngprime.com](http://www.lngprime.com)

## **FREPORT LNG SAYS SECOND LNG JETTY READY TO RETURN TO SERVICE**

Freeport LNG, the operator of the three-train 15 mtpa liquefaction plant in Texas, is ready to place back into service its second jetty. In October, Freeport received approval from the US FERC to start commissioning its second jetty. The commissioning and cooldown included the Loop 2 transfer piping, Dock, 2 and the recirculation piping. In order to continue Freeport's sequential plan to return the LNG export facility to full commercial operations, Freeport now requests authorization from FERC to place Loop 2 and Dock 2 back into service, according to a filing dated November 17. "We anticipate nitrogen cooldown to be completed in the next few days, which will then be followed by introduction of hydrocarbons (i.e., LNG) in order to re-inventory the Loop 2 piping system," Freeport said. Freeport anticipates having the Loop 2 system inventoried on or about November 21st. "Given this, Freeport would greatly appreciate FERC's response to this request on November 21st so that Dock 2 can be returned to service," it said. Any return to service would only proceed after the successful and safe completion of Loop 2 cooldown and re-inventorying, Freeport said.

### **Third tank remains idled**

The LNG terminal operator noted that any authorization pursuant to this request will be limited to returning Loop 2 and Dock 2 to service and will not include the return to service of any other equipment at its facilities that remain idled from the June 8, 2022 incident, such as Tank 3. In February this year, the LNG terminal operator shipped the first cargo from its LNG export plant in Texas since the shutdown in June 2022. Freeport LNG received approvals from both FERC and PHMSA during the first quarter to restart Phase I operations. These consist of three trains, two LNG storage tanks (tanks 1 and 2), and a single LNG jetty (dock 1). source : [www.lngprime.com](http://www.lngprime.com)

## OMAN LNG SEALS SUPPLY DEAL WITH BP

State-owned producer Oman LNG has signed a deal to supply liquefied natural gas to UK-based energy giant BP. Oman LNG announced the signing of the sales and purchase agreement on Tuesday. Under the SPA, Oman LNG will supply 1 million metric tonnes per year of LNG to BP for a period of nine years starting in 2026, it said. The LNG producer did not provide any additional information. Oman LNG, in which the government of Oman hold 51 percent recently signed shareholding deals with international companies, including Shell and TotalEnergies. Based on these agreements, Oman LNG's shareholding structure will continue with Oman Investment Authority, Shell, TotalEnergies, Korea LNG, Mitsui & Co., Mitsubishi, PTTEP, and Itochu. These agreements followed Oman LNG's large marketing campaign aimed at renewing all of its contracts post 2024. In August, Oman LNG signed deals to supply LNG to OQ Trading and Shell, completing the campaign with a total volumes of 10.4 mtpa. Following the signing of the deals, Shell will become Oman LNG's largest off-taker post 2024 and will purchase up to 1.6 mtpa from Oman LNG from 2025 to 2034. Besides these contracts, Oman LNG signed a deal with German gas importer Securing Energy for Europe (SEFE) and a deal earlier this year with China's Unipet, a unit of state-owned energy giant Sinopec. Oman LNG also signed term sheets with Turkey's Botas and its shareholders TotalEnergies and PTT. In addition, Oman LNG signed key term sheets in December to supply LNG to Japan's Jera, Mitsui, and Itochu. The firm operates three LNG trains in Qalhat with a nameplate capacity of 10.4 mtpa sourcing gas from the central Oman gas field complex. Due to debottlenecking, the company's complex now has a production capacity of around 11.4 mtpa. source : [www.lngprime.com](http://www.lngprime.com)

## GOLAR MAKES PROGRESS ON FLNG PLANS

Golar LNG said it continues to progress the company's FLNG growth pipeline, while it is now in detailed commercial discussions to recharter its Hilli FLNG. The LNG firm led by Tor Olav Trøim said in its third-quarter report that it continues to hold talks on recontracting Hilli upon the end of its current charter in July 2026 with a "number of counterparties and gas field owners". Golar said it is now in "detailed commercial discussions for three recontracting opportunities with a 2024 commitment targeted." The FLNG, located offshore Cameroon's Kribi, recently offloaded its 100th cargo of liquefied natural gas since it started operations in 2018. According to Golar, the unit unloaded its 102nd cargo on November 15, 2023, or more than 7 million tonnes of LNG up to date. The floating LNG producer has in total four trains installed onboard with a production capacity of 2.4 mtpa. Earlier this year, US LNG player New Fortress Energy sold its stake in the FLNG to Golar. Golar acquired a 50 percent interest in trains 1 and 2 of the FLNG.

### **Tortue FLNG launch**

Besides this FLNG, Golar owns the 2.7 mtpa Gimi which will serve the first phase of BP's Greater Tortue Ahmeyim FLNG project offshore Mauritania and Senegal under a 20-year contract. This FLNG has just left Seatrium's yard in Singapore and is on its way to the GTA hub site. Golar expects the voyage to take around 60 days, including refueling stops in Mauritius

prior to rounding the Cape of Good Hope and in Namibia prior to its arrival. The firm said that commissioning is expected to take about six months from the commissioning start date with commercial operations (COD) expected thereafter. This means that the commercial launch of the project could be achieved in the second or third quarter of 2024. Golar and the GTA partners are “working on initiatives to further optimize the commissioning period in order to achieve COD as early as possible,” it said. BP’s interim CEO Murray Auchincloss recently said the company is “hopeful” that it will launch the first phase of its Greater Tortue Ahmeyim FLNG project in the first quarter of 2024. The company pushed back the start of the project due to a delay in the subsea scope. BP also recently selected Swiss-based offshore contractor Allseas to complete the remaining subsea pipelay scope for the FLNG project, replacing previous contractor Houston-based McDermott. US firm and project partner Kosmos said in its third-quarter report that the delivery of first gas from the first phase of the project has the potential to slip into the second quarter of 2024.

### **West Africa and Americas**

Golar said it continues to progress the company’s FLNG growth pipeline, including advancing commercial terms with gas resource owners, technical site-specific work, and governmental interaction and approvals across “several West African countries”. “We are also seeing increasing interest for our market leading FLNG solution in other geographies, including the Americas,” it said. Most of the projects under discussion are structures where Golar either participates as an equal partner with the gas resource owner and upstream partner in a gas field development, or commercial structures where Golar is exposed to gas offtake prices, it said. “Golar’s market leading capex per ton and focus on proven gas reserves with attractive lifting costs in geographical areas with shorter shipping distances to end users versus US export projects secures a low break-even LNG production cost with attractive upside to current and forward LNG prices,” the firm said.

### **Fuji FLNG**

In August, Golar signed a heads of terms with Nigeria’s NNPC for joint development of gas fields using floating LNG producers, expanding on their deal signed in April this year. The relevant fields could fully utilize FLNG Hilli following the end of its current contract in mid-2026, or utilize a MKII FLNG with an annual capacity of 3.5 mtpa, Golar previously said. Earlier this year, Golar exercised its option to acquire the 148,000-cbm Moss-type carrier, Fuji LNG, which it aims to convert to a floating LNG producer. The firm said that the cost of a converted Fuji FLNG is expected to be around \$2 billion, equivalent to about \$570 per ton. “We continue to progress construction of long lead item orders for a MKII 3.5 mtpa FLNG project and expect to take delivery of the Fuji LNG carrier intended for FLNG conversion during Q1 2024,” Golar said in the third-quarter report. The company said that engineering and detailed design is “fully developed and ready for project initiation.” However, the complexity of offshore gas developments drives the timeline for these contemplated FLNG growth projects, it said. “Until commitments on a gas field and secured debt financing are in place, we do not plan to take a final investment decision or incur significant incremental MKII FLNG capex beyond current committed levels,” the company said.

### **Golar Arctic**

Golar also said in the report that its remaining LNG carrier, Golar Arctic, has completed a 12-month charter in September and its 5-year drydock in early November. The 2003-built steam LNG carrier has a capacity of 140,000 cbm. “Alternatives for this vessel including conversion projects, chartering, or sale are being considered,” Golar said. The company also finalized the sale of the 1977-built LNG carrier, Gandria, for net consideration of \$15.2 million. Golar reported a net income of \$114 million in the third quarter, and adjusted Ebitda of \$75 million, inclusive of \$39 million of non-cash items. During the quarter, Golar repurchased 0.2 million shares at an average cost of \$21.36 per share, leaving 105.9 million shares issued and outstanding as of September 30, 2023. Golar’s board of directors approved a total third-quarter dividend of of \$0.25 per share to be paid on or around December 11, 2023. source : [www.lngprime.com](http://www.lngprime.com)

## **CNOOC’S FUJIAN LNG TERMINAL HITS NEW MILESTONE**

CNOOC’s liquefied natural gas import terminal in China’s Fujian province has received more than 700 cargoes of LNG since the start of operations in 2008. CNOOC’s gas and power unit revealed this in a statement issued on Tuesday. The 2016-built 174,000-cbm, Maran Gas Achilles, owned by a joint venture of Greece’s Maran Gas and Qatar’s Nakilat, has on November 20 delivered about 70,000 tonnes of LNG to the facility on the southeastern coast of China. With this shipment, the Fujian terminal received more than 700 cargoes since 2018. Moreover, the LNG import terminal received 43 million tonnes of imported LNG, equivalent to about 61.8 billion cubic meters of natural gas, CNOOC Gas & Power said. Earlier this year, the total volumes received exceeded the 40 million tonnes mark. State-owned CNOOC previously said the terminal supplies more than 80 percent of natural gas in the Fujian province and is the only facility that provides gas for gas-fired power plants in the province. The facility has six 160,000-cbm LNG storage tanks and a regasification capacity of 6.3 mtpa. CNOOC’s unit said that it has maintained “high level” of LNG in the storage tanks, laying a solid foundation for securing supply in winter. In addition, CNOOC Gas & Power said that Fujian LNG is preparing to build a new 270,000-cbm LNG storage tank with the largest capacity in the world. In October, CNOOC hydro tested one of the six 270,000-cbm LNG storage tanks at its Binhai LNG import terminal in Jiangsu. The firm is also building five 270,000-cbm tanks at its Zhuhai LNG import terminal in Guangdong. China’s state-controlled energy giant Sinopec recently put in use what it says is the world’s largest LNG storage tank at its Qingdao LNG import terminal in Shandong province. The tank has a storage capacity of 270,000 cbm and is the first such operational tank in China and the world, according to Sinopec. source : [www.lngprime.com](http://www.lngprime.com)

## **WOODSIDE GETS OK FROM EAST TIMOR TO START WORK ON SUNRISE CONCEPT STUDY**

Australian LNG player Woodside and its partners Timor GAP and Japan's Osaka Gas have received approval from East Timor (Timor-Leste) to kick off work on a concept study for the development of the Greater Sunrise fields. Woodside announced this approval in a social media post on Wednesday after the company's CEO Meg O'Neill made her first visit to East Timor. During the visit, O'Neill met with Timor Leste's Prime Minister Xanana Gusmao, President Jose Ramos Horta, and Minister for Petroleum and Mineral Resources, Francisco da Costa Monteiro. "Woodside Energy understands, respects, and wholeheartedly supports Timor-Leste's aspiration for Sunrise to deliver real benefits to its people and we are very excited to collaborate on this important next step for the project," the CEO said. O'Neill did not provide any additional information. Woodside operates the Greater Sunrise fields, located about 450 kilometers north-west of Darwin and 150 kilometers south of East Timor, with a 33.4 percent stake. The nation's oil company Timor GAP has a 56.56 percent stake while Osaka Gas has a 10 percent stake. Earlier this year, Woodside said that the JV partners agreed to undertake a concept select program for the development of the Greater Sunrise fields. A spokeswoman for Woodside told LNG Prime that the February announcement was the SJV commitment to undertake the concept select study. "This week's statement confirmed the Timor-Leste government's alignment to this activity proceeding," she said. Woodside said in February the JV will consider all of the key issues for delivering the gas, for processing and LNG sales, to Timor-Leste compared to delivering the gas to Australia, it said. The Australian firm said the JV is aiming to complete the concept select program "expeditiously" given the benefits that could flow from developing the Sunrise fields.



*Image: Woodside*

The Sunrise development comprises the Sunrise and Troubadour gas and condensate fields. According to Woodside, the fields contain an estimated contingent resource (2C) 5.3 Tcf of dry gas and 226 MMbbl of condensate. Woodside previously preferred the option of sending the Sunrise gas to Darwin as there are two existing LNG plants in the region, namely the Santos-led Darwin LNG facility and the Inpex-operated Ichthys LNG plant. However, O'Neill revealed in November

last year that the firm is willing to consider sending the gas to a new LNG plant in East Timor. In parallel to the concept select program, the Sunrise JV is progressing the negotiation of the new production sharing contract, petroleum mining code, and associated agreements with the Timor-Leste and Australian governments, which upon finalization will provide the fiscal and regulatory certainty required for a development to proceed, Woodside previously said. source : [www.lngprime.com](http://www.lngprime.com)

## FRANCE'S LE HAVRE FSRU GETS SECOND LNG CARGO

France's first floating storage and regasification unit (FSRU) in Le Havre, operated by TotalEnergies, received its second LNG carrier. The 2023-built 174,000-cbm, Maran Gas Marseille, delivered the shipment from Sempra Infrastructure's Cameron LNG export plant in Louisiana and departed from the 2010-built 145,130-cbm FSRU, Cape Ann, on Monday, according to its AIS data provided by VesselsValue. TotalEnergies also confirmed the arrival of Maran Gas Marseille. In August, Greece's Maran Gas, the gas shipping unit of Angelicoussis, took delivery of this LNG carrier. The newbuild serves a charter with TotalEnergies. The French energy giant also charters the 283 meters long FSRU 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. Maran Gas Marseille delivered the second commercial LNG cargo to the FSRU following the first delivery onboard the 2022-built 174,000-cbm, Minerva Amorgos. Miverva Amorgos brought the cargo from Equinor's Hammerfest LNG export plant in Norway, where TotalEnergies has a stake. TotalEnergies also has a 16.6 percent stake in Sempra's Cameron LNG plant.

The Courbevoie-based firm announced on October 26 that the Le Havre FSRU started delivering natural gas supplies to the grid. Prior to starting deliveries to the grid, the FSRU took a cargo off Gibraltar via a ship-to-ship operation with the LNG carrier Seapeak Arwa. This shipment also came from Equinor's Hammerfest LNG export plant. Following this transfer, Cape Ann berthed on September 18 at the "Bougainville Sud" dock in the Le Havre port. The FSRU is expected to receive at least two more LNG cargoes by the end of this year. TotalEnergies has contracted 50 percent of the Le Havre terminal's annual capacity of around 5 billion cubic meters, to supply it with LNG from its global portfolio. The remaining capacity will be marketed according to rules approved by the regulator, it previously said. This is France's first FSRU-based facility and the fifth LNG import terminal. France 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. source : [www.lngprime.com](http://www.lngprime.com)

## **CHEVRON SAYS THIRD GORGON LNG TRAIN RETURNS TO FULL PRODUCTION**

The third liquefaction train at Chevron's giant Gorgon LNG plant in Western Australia has returned to full production, Chevron told LNG Prime on Wednesday. A Chevron spokesperson said that Gorgon Train 3 had returned to full production "over the past few days." The spokesperson did not provide any additional information. Earlier this month, Chevron said that an electrical incident occurred on October 31 in a substation which provides power supply, resulting in the plant's third train to produce at 80 percent capacity. Chevron said domestic gas and the remaining two LNG production trains at the Gorgon plant were unaffected. The Gorgon LNG plant on Barrow Island has three trains and a production capacity of some 15.6 mtpa. Chevron and its workers at the Gorgon and Wheatstone LNG terminals recently agreed on new labor agreements following lengthy negotiations between Chevron and unions representing the workers. In September, Chevron also resumed full production at its 8.9 mtpa Wheatstone LNG terminal near Onslow after a fault reduced about 25 percent of the plant's production. source :

[www.lngprime.com](http://www.lngprime.com)

## **TURKEY'S BOTAS AND ALGERIA'S SONATRACH EXTEND LNG SUPPLY DEAL**

Turkey's state-owned natural gas and LNG firm, Botas, and Algeria's LNG producer, Sonatrach, have extended their liquefied natural gas supply deal for three more years. According to a statement issued by the Turkish energy ministry on Tuesday, Botas will continue to buy 4.4 billion cubic meters (bcm) LNG per year, or about 3.2 mtpa, from Botas for three more years until 2027. Sonatrach and Botas first signed a supply deal back in 1988, and it has been extended since then, the statement said. The ministry said that the existing contract expires in October 2024. Algeria became the world's first LNG producer in 1964 when Sonatrach's Arzew facility came online. According to IIGNL data, Algeria currently has about 25.3 mtpa LNG export capacity at Arzew and Skikda and mostly supplies LNG to France and Turkey. Earlier this year, Sonatrach signed a new supply deal with French energy giant TotalEnergies. On the other hand, Botas operates the Marmara Ereğlisi onshore terminal in Turkey, as well as the FSRU-based Dortyol facility and the FSRU-based Saros terminal. The company signed a deal in January with Oman LNG to buy 1 mtpa for a period of 10 years starting in 2025. Turkey is increasing its LNG import capacity to boost its energy security and to become an international gas hub. In April, Bulgaria's Bulgargaz received the first LNG cargo via Turkey as part of a deal it signed with Botas. Botas and Bulgargaz signed the deal in January, allowing the latter access to Turkish LNG import terminals and the grid. The duration of the agreement is 13 years and includes a gas transfer of up to 1.5 billion cubic meters per year. source : [www.lngprime.com](http://www.lngprime.com)

## **GOLAR LNG HUNTING DEALS IN WEST AFRICA, AMERICAS; FLNG HEADS FOR GTA**

The Asia-West Africa transit FLNG Gimli is undertaking to reach BP's Greater Tortue Ahmeyim (GTA) is expected to take 60 days and two stops for fuel. The vessel has completed its precommissioning and sea trials and is expected to be ready for production once it is connected to the GTA hub, according to Golar. Commissioning is expected to take approximately six months, with commercial operations (COD) to follow, with COD kickstarting a 20-year contract. Golar and the GTA partners are working on initiatives to further optimise the commissioning period to achieve COD as early as possible," the company said in its quarterly earnings report. West Africa is an area of focus for Golar's business development, and the company said it is seeing interest from potential customers across the Atlantic. "We continue to progress the FLNG growth pipeline," the company said. "We are also seeing increasing interest for our... FLNG solution in other geographies, including the Americas." Golar said it is "advancing commercial terms with gas resource owners, technical site-specific work and governmental interaction and approvals across several West African countries". Most of the projects under discussion would see Golar become an equal

partner with gas resource owners and upstream partners in gas field developments, or potential deals that would see the company "exposed to gas offtake prices" as it seeks to find work in areas closer to Europe and Asia than US export projects. The company also said it continues with construction-related orders for a 3.5-mta MKII FLNG project and expects to take delivery of the Fuji LNG carrier intended for FLNG conversion during Q1 2024."Engineering and detailed design is fully developed and ready for project initiation. The complexity of offshore gas developments drives the timeline for these contemplated FLNG growth projects. Until commitments on a gas field and secured debt financing are in place, we do not plan to take a final investment decision or incur significant incremental MKII FLNG capex beyond current committed levels," Golar said. The company said it is also considering conversion as an option for its uncontracted Golar Arctic LNG carrier. source : [www.rivieramm.com](http://www.rivieramm.com)

## INDIA UPS LNG IMPORTS IN OCTOBER

India's liquefied natural gas (LNG) imports rose in October 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 2.34 billion cubic meters, or about 1.71 million tonnes of LNG, in October, a rise of 18.2 percent compared to the same month in 2022, PPAC said. During April-October, India took 17.75 bcm of LNG, or some 13 million tonnes, up by 13.4 percent, PPAC said. India paid \$1.2 billion for October LNG imports, down from \$1.4 billion last year, it said. As per India's natural gas production, it reached 3.16 bcm in October, up by 9.3 percent compared to the corresponding month of the previous year. During April-October, gas production rose by 4.8 percent to about 21 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. In August, the partners completed the first truck loading operation at the facility. During April-October, Petronet LNG's 17.5 mtpa Dahej terminal operated at 94.3 percent capacity, while Shell's 5 mtpa Hazira terminal operated at 39.8 percent capacity, PPAC said. The Dhamra LNG terminal operated at 26.4 percent capacity, it said. source : [www.lngprime.com](http://www.lngprime.com)

## MALAYSIA'S MISC REPORTS HIGHER Q3 LNG EARNINGS

Malaysia's LNG shipper MISC, a unit of Petronas, said its LNG business logged a rise in both revenue and operating profit in the July-September period. The shipping firm said its gas assets and solution business, which includes a fleet of LNG and ethane carriers, posted third-quarter revenue of 860.6 million ringgit (\$184 million), a rise of 8.9 percent compared to the same period last year. MISC said revenue rose due to higher charter rates in the current quarter coupled with higher earning days following deliveries of two LNG carriers in the first quarter of 2023. Revenue also rose compared to 771.8 million ringgit in the prior quarter. Moreover, MISC's gas assets and solution business reported an operating profit of 427.9 million ringgit

(\$91.5 million) in the third quarter. Operating profit rose by 20.5 percent compared to the same period last year mainly due to higher revenue in the current quarter. It also rose from 418.6 million ringgit in the second quarter. MISC is one of the largest operators of LNG carriers and most of them are on long-term charters. It operates a fleet of 31 LNG carriers and two floating storage units. Looking at the overall quarterly results, MISC's operating profit 649.9 million (\$139 million) in the third quarter dropped by 36.9 percent year-on-year. MISC attributed this due to a one-off compensation for a contract renegotiation in the corresponding quarter in the petroleum and product shipping segment coupled with lower profit in the offshore business segment. Group revenue of 3.36 billion ringgit decreased by 6.5 percent mainly due to lower recognition of revenue in the offshore business segment from the conversion of an FPSO following lower project progress in the current quarter, MISC said. MISC expects LNG earnings to remain "stable" Spot rates continued to strengthen in the LNG shipping market in the third quarter of 2023, driven by rerouting of shipments through longer routes due to the geopolitical situation, and seasonal demand, according to MISC. In the near term, prospects "remain positive" backed by growing global LNG demand and additional LNG infrastructure investments which further supports LNG growth, the shipping firm said. Based on this, the gas assets and solutions segment will "continue to pursue available growth opportunities while its operating income is expected to remain stable, underwritten by its portfolio of long-term charters," it said. source : [www.lngprime.com](http://www.lngprime.com)

## **ENI NEARS LAUNCH OF CONGO'S FIRST FLNG PROJECT**

Eni's Tango FLNG is expected to arrive in Angola's Luanda during the weekend as the Italian firm works to launch the first FLNG project in the Republic of Congo, also known as Congo-Brazzaville, according to Belgium's Exmar. In August last year, Eni signed a deal to buy the 144 meters long Tango FLNG from Exmar. The floating LNG producer, delivered in 2017 by China's Wison, has a liquefaction capacity of about 1 billion cubic meters per year of gas, or 0.6 mtpa, and a storage capacity of 16,100 cbm. Last month, officials from Eni, Exmar, Congo's SNPC, and Drydocks World gathered to celebrate the sail away of the FLNG and also the Excalibur FSU from Dubai to Congo. Exmar serves as the engineering, procurement and conversion (EPC) contractor for this project, and has designed the mooring system and performed the refurbishments on both vessels at the Drydocks World yard. Also, Exmar provides the FSU on a long-term charter and will be responsible for all terminal operations on the Congo LNG project. According to its AIS data provided by VesselsValue, the 2002-built 138,034, Excalibur, was on Thursday located offshore Luanda and is expected to arrive in Pointe Noire on Friday. On the other hand, the FLNG is being transported onboard Seaway 7's heavy-lift vessel, Seaway Swan. "Arrival is scheduled in Luanda coming weekend to then have a subsequent wet tow to Pointe Noire, Congo," Exmar told LNG Prime on Thursday. Tango FLNG will be moored three kilometers offshore along with the Excalibur FSU upon their arrival in Congo. Exmar confirmed that the first gas from the Congo LNG project is expected by the end of this year.

### **Two floating LNG producers**

The Congo LNG project leverages Marine XII gas resources and existing production facilities in a new, phased approach that will allow to reach about 4.5 bcm per year of gas liquefaction capacity at plateau, as well as zero routine gas flaring, Eni previously said. A second FLNG vessel with a capacity of about 3.5 bcm per year of gas, or 2.4 mtpa, is under construction in China and is expected to begin production in 2025. Wison Offshore & Marine won a contract from Eni in December last year to build the 380 meters long FLNG and officially started work on the project on January 17, 2023. The unit will be able to store over 180,000 cubic meters of LNG. Eni said the Congo LNG project will help Congo meet its energy needs while seizing the opportunity to exploit surplus gas through LNG production, allowing the country to join the group of global exporters of LNG in record time. According to the agreements recently signed, all LNG produced will be marketed by Eni. source :

[www.lngprime.com](http://www.lngprime.com)

## **CEZ BOOKS CAPACITY AT HEH'S STADE LNG TERMINAL IN GERMANY**

Czech utility CEZ has booked long-term capacity at Hanseatic Energy Hub's planned Stade LNG import terminal in Germany. Starting in mid-2027, CEZ will import 2 bcm per year of liquefied natural gas via the terminal near Hamburg. The capacity at the terminal has been leased for 15 years, with an option to extend this to 25 years in connection with the future use of green hydrogen, according to CEZ. At the same time, the country's Ministry of Industry and Trade supported the transaction by concluding a hedging agreement with CEZ similar to the one for the Dutch Eemshaven terminal. Wit this deal, the Czech Republic, a landlocked country in Central Europe, has taken "another crucial step towards ensuring sufficient gas supplies for the future and replacing supplies from Russia," the firm said. These supplies represent more than a quarter of the country's current annual gas consumption, which dropped from 9.4 bcm in 2021 to 7.5 bcm in 2022, it said. CEZ previously booked regasification capacity at Gasunie's LNG import hub in Eemshaven and received the first LNG cargo via the terminal last year. The company took 3 bcm per year of the terminal's total capacity for a period of five years. "We have leased capacity at the floating terminal in Eemshaven until the end of 2027, and thanks to Stade we will be able to smoothly continue supplying LNG after this date. Another advantage is that we will only have to cross one international border when transporting gas to the Czech Republic," CEZ CEO Daniel Benes, said. Stade LNG capacity fully booked, FID in "coming weeks" HEH is a consortium consisting of Dow, Partners Group, Buss Group, and Enagas. In April, HEH awarded the engineering, procurement and construction deal for its Stade LNG import terminal to a consortium led by Spain's Tecnicas Reunidas. The LNG terminal developer said at the time that the deal remains subject to the firm taking a final investment decision on the project worth about 1 billion euros (\$1.09 billion). Ealrier this year, energy firm EnBW doubled its capacity booking to 6 bcm per year at the planned LNG import terminal. Besides EnBW, Germany's SEFE plans to import at least 4 bcm per year via the terminal. This means that 12 Bcm per year of capacity has been booked while a further 1.3 Bcm will be kept available for the spot market. HEH said in June that it is targeting FID for the terminal with a regasification capacity of 13.3 Bcm per year in 2023.

“With the booking of CEZ, HEH has successfully finalized the long-term commercial marketing of the land-based terminal and is preparing for the final investment decision, which will be taken in the coming weeks,” HEH said in a separate statement.

Prior to the launch of the onshore LNG import terminal, Stade will welcome its first FSRU as part of Germany’s plans to boost energy security and replace natural gas pipeline imports from Russia. State-owned Deutsche Energy Terminal operates this project, as well as other three FSRU-based terminals in Germany. DET plans to launch the FSRU-based facility, which will feature the 174,000-cbm FSRU Transgas Force, owned by Dynagas, in Q1 2024. source : [www.lngprime.com](http://www.lngprime.com)

## CHINESE GAS DEAL STILL ELUDES MOSCOW

The last time Russian president Vladimir Putin visited China he returned to Moscow with the promise of a “no limits” partnership

*“China kept Gazprom waiting for more than a decade before the first Power of Siberia pipeline was agreed and built, and appears to be dragging its feet again.”*

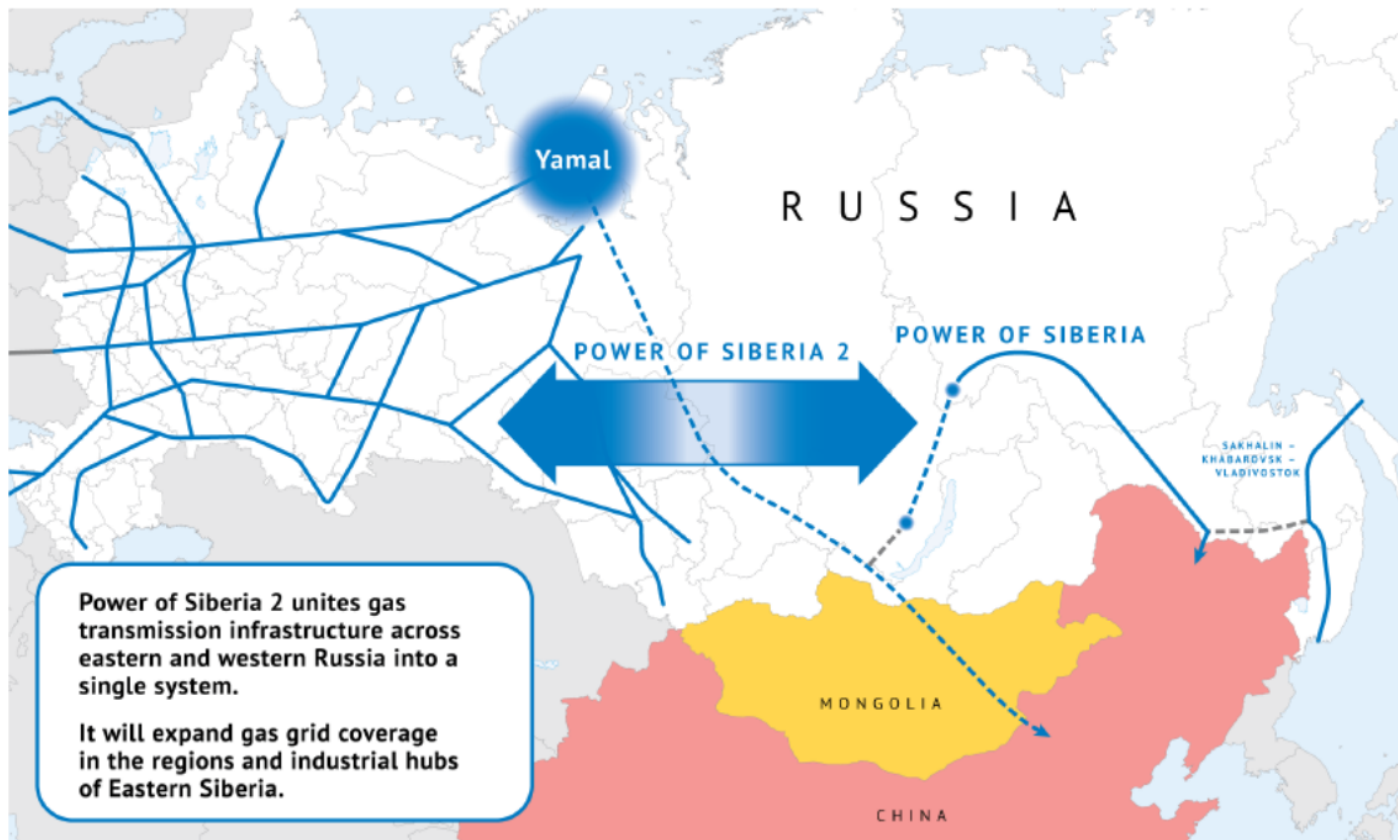
from his Chinese counterpart Xi Jinping. But the latest meeting between the two leaders in Beijing in October revealed a hard edge to the united front, as Gazprom failed again to clinch a highly anticipated deal to build the follow-up to the Power of Siberia (PoS) pipeline. China and Russia’s leaders took centre stage in October at a two-day forum in Beijing attended by 23 heads of state mostly from the Global South. The meeting between Xi and Putin on the sidelines of the third Belt and Road

Forum for International Cooperation was at least their fourth since Russia invaded Ukraine in February 2022, and the second this year after Xi visited Moscow in March in a strong show of support for the Kremlin.

### Limitless friendship?

China-Russia energy cooperation had been in focus in the run-up to the high-profile summit. Russia has been aiming to redirect trade towards Asia after being shut out by Europe over its Ukraine war. One of Russia’s priorities in terms of joint infrastructure projects with China is building the PoS 2 pipeline, which is set to traverse Mongolia and enable Moscow to sell more gas to China. For months Moscow has said talks with China on PoS 2 were “in the final stages”, but there has been little visible progress on key terms such as pricing and volume. Accompanying Putin to Beijing was Gazprom CEO Alexei Miller, and hopes were high of securing a contract to build the pipeline to export 50bn m<sup>3</sup>/year to China. Gazprom is currently contracted to deliver 38bn m<sup>3</sup>/yr through the existing PoS 1 pipeline under a 30-year contract worth \$400bn, and another 10bn m<sup>3</sup>/yr from a separate pipeline known as the Far Eastern Route. Finalising PoS 2 would double Gazprom’s contracted piped gas transmissions to China to nearly 100bn m<sup>3</sup>/yr compared with around 150bn m<sup>3</sup>/yr to Europe before the war.

Map depicting current and planned Russian gas pipelines to China. Source: Gazprom.



While Gazprom did not leave Beijing empty-handed, China’s steady unwillingness to sign up for a second pipeline that would double Russian imports raises questions about the “no limits” friendship touted by Beijing and Moscow – especially after Kazakhstan capitalised on the lack of progress to sign its own supply agreement.

**Beijing demurs**

The proposed pipeline would be a gamechanger for Gazprom, which now pipes only 10–15% of the gas to Europe that it used to before the Ukraine conflict. The decimation of Gazprom’s European sales was unwittingly underlined by Miller, who said in an interview that the company’s pipeline gas supplies to China could soon overtake volumes sent to Europe. The development of PoS 2 has major geopolitical ramifications and would reshape China’s energy landscape, but it has proven hard to close. China kept Gazprom waiting for more than a decade before the PoS pipeline was agreed and built, and appears to be dragging its feet again through long and painstaking negotiations. China has no urgent need for the pipeline and Beijing knows Russia has limited export options for pipeline gas following the collapse in supplies to Europe, so it wants to secure a good price before signing a deal. China’s pragmatic leaders will also have observed Europe’s trouble with overreliance on Russian gas and taken in the lesson of depending heavily on one source. At the same time there are good reasons why China may finally decide to contract for PoS 2. A new pipeline would reduce the need for seaborne LNG imports, which are more exposed to global tensions. For instance China imported 17.23mn tonnes of LNG from the Middle East last year that made up 27.1% of

total imports, according to Chinese energy officials. Most of this volume will have been shipped through the strategic chokepoint of the Malacca Strait that links Asia with the Middle East and Europe. China also needs significantly more gas to decarbonise

*“Everyone approved of this project [Power of Siberia 2] and all parties want to participate. The next step is its implementation. I think we will be moving fast.”*

**Vladimir Putin,**  
RUSSIAN PRESIDENT

its power mix while mitigating the intermittency of renewable energy sources. Gas-fired power generation in China is expected to increase alongside renewable energy generation, from 300 TWh last year to 600 TWh in 2030 and 800 TWh in 2040,

according to the International Gas Union’s annual *Global Gas Report* released on October 19. “The additional gas-fired capacity acts as a backup and dispatchable energy source in the event of a shortage of renewable power generation, enabling China to call on a stable source of energy with quick ramp-up capability,” the report said. Moscow’s inability to clinch a deal on PoS 2 came despite encouraging rhetoric from Putin and Xi at the Belt and Road forum. “Everyone approved of this project and all parties want to participate. The next step is its implementation. I think we will be moving fast,” Putin told Mongolia’s president. Xi meanwhile told Putin in their bilateral meeting that he hoped the pipeline would make “substantive progress” as soon as possible. In the end Putin’s spokesperson Dmitry Peskov told Russian state news agency Tass that “no documents on will be signed this time”. While no contract emerged Gazprom did strike a deal to export more gas than planned to China this year via the existing PoS pipeline, which is scheduled to ramp up to its full capacity of 38bn m<sup>3</sup>/yr by 2025. Gazprom announced it signed an addendum to the sales and purchase agreement for PoS supplies with CNPC for “an additional volume of Russian gas supplies to China until the end of 2023.” Further details were not disclosed but Gazprom had originally planned to export 22bn m<sup>3</sup> to China this year, up from 15.5bn m<sup>3</sup> in 2022. Gazprom’s exports to China for the year to date are up by 46.6% year-on-year, according to the announcement.

### **Kazakhstan capitalises**

Gazprom’s additional agreement with CNPC came shortly after China and Kazakhstan signed a new gas supply contract on Tuesday, one of 30 commercial documents signed between the countries with a total value of \$16.54bn that included investment and trade agreements, technology transfers and new lines of credit. The deal will cover supplies from this year to 2026, according to Kazakhstan’s national gas company QazaqGaz. China started receiving gas from Kazakhstan in 2017 under a five-year supply contract for 5bn m<sup>3</sup>/yr, which was then followed by a commitment to double supply to 10bn m<sup>3</sup>/yr in 2019. The original contract from 2017 was set to expire sometime this winter and it had been unclear if it would be renegotiated or renewed. QazaqGaz CEO Sanzhar Zharkeshov has held a number of negotiations this year with the management of PetroChina International and its parent CNPC, and the Trans-Asia Gas Pipeline Company regarding the terms of a new export contract with China, according to Kazakh media. The Central Asian country presently ranks 15th in the world in terms of gas reserves, according to Zharkeshov. CNPC also signed a separate cooperation agreement with Kazakhstan’s energy minister to extend

“contract 76” of the Aktobe oil and gas production project to beyond 2025. The project in Kazakhstan's Aktobe region is operated by the Chinese major, which agreed to develop it in 1997. The project has produced nearly 150mn mt of oil and more than 80bn m<sup>3</sup> of gas, according to CNPC.

**Central Asian imports**

China presently imports gas from Kazakhstan through the Central Asia–China Pipeline, a multinational project comprising three cross-border gas pipelines that begin in Turkmenistan and transit Uzbekistan, Kazakhstan and Kyrgyzstan before entering China's far western region of Xinjiang. The first two pipelines are known as lines A and B, and each have a capacity of 15bn

m<sup>3</sup>/yr while Line C can transport 25bn m<sup>3</sup>/yr, making for a combined capacity of 55bn m<sup>3</sup>/yr. Beijing signalled in May that it wanted to move forward with a fourth pipeline called Line D with capacity of 30bn m<sup>3</sup>/yr, which could complicate the picture for PoS 2. The Central Asian states – principally Turkmenistan – make up the lion's share of China's piped gas imports, which are also sourced from Russia and Myanmar. The Chinese General Administration of Customs stopped publishing detailed pipeline gas

***“Gazprom’s additional agreement with CNPC came shortly after China and Kazakhstan signed a new gas supply contract.”***

import data last year, but customs data from 2020 and 2021 showed that pipeline gas imports from Kazakhstan were in the middle of the cost range. In 2020 for instance, Kazakh pipeline gas averaged \$256.47/mt or \$4.95/mn Btu compared with \$9.08/mn Btu for pipeline gas from Myanmar, \$4.14/mn Btu from Russia, and \$5.60/mn Btu and \$4.88/mn Btu from Turkmenistan and Uzbekistan respectively, customs data showed. In 2021 Kazakh pipeline gas averaged \$4.70/mn Btu, which was cheaper than Turkmenistan's \$5.46/mn Btu and Uzbekistan's \$4.73/Mn Btu, but considerably more expensive than the \$3.87/mn Btu cost for Russian gas. Myanmar shipments averaged \$8.95/mn Btu. Kazakhstan's peak gas production peaked at 39.2bn m<sup>3</sup> in 2018 and has declined annually since then to 26.0bn m<sup>3</sup> last year, according to the *Statistical Review of World Energy*. Source : [www.naturalgasworld.com](http://www.naturalgasworld.com)

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