



#### TMS CARDIFF BUYS GASLOG STEAMSHIP IN FRISKY MARKET

Talk emerges of likely Greek buyer of 17-year-old vessel that is currently being used as storage unit. George Economou-led TMS Cardiff Gas has been revealed as the buyer of GasLog's last fully owned steam turbine LNG carrier in what is turning into a busy first quarter for sales of secondhand vessels in this sector. Brokers reported that the 145,000-cbm steam turbine vessel GasLog Athens (ex-Methane Lydon Volney, built 2006) has been sold for \$55m to Economou's LNG arm.

#### Greece fills up its new FSU as Europe bolsters LNG import options

The details emerged as TMS Cardiff Gas is rumoured to have agreed the sale of its oldest ship — the 149,172-cbm Fuji LNG (built 2004) - to Golar LNG. GasLog said in a results statement that it has signed a memorandum of agreement with an unrelated third party on the sale of the vessel. The transaction is due to be completed on delivery of the ship from its current charter, which is understood to be in June. The GasLog Athens is the last steamship in the company's fleet in which the organisation had full ownership. The company retains a 25% shareholding in the 145,000-cbm Methane Nile Eagle (built 2007). The GasLog Athens is currently working as a floating storage unit in Greece. In November last year, the ship took in a first cargo at the Pachi anchorage of Greece's only land-based receiving terminal, Revithoussa LNG. TradeWinds had earlier reported that the vessel had been fixed for 12 months to Greece's Hellenic Gas Transmission System Operator to increase storage capacity at the terminal to 360,000 cbm. GasLog and US-listed GasLog Partners, which its parent is



trying to take private, have been slowly weeding out the LNG steamships in their fleets. In 2022, GasLog Partners sold the 145,000-cbm steamship Methane Shirley Elisabeth (built 2007) for approximately \$54m to Indonesia's Silo Maritime. The company said it also completed the sale and leaseback of the 145,000-cbm steamship Methane Heather Sally (built 2007) for \$50m. It emerged that the vessel had been sold to China's Huaxia Financial Leasing and is on charter to Pacific Gascontrolled Shandong Marine Energy in Singapore. During its fourth-quarter results call in January, GasLog Partners chief executive Paolo Enoizi said the company will convert one of its 145,000-cbm steam turbine LNG carriers into a floating storage and regasification unit for the Venice Energy project in Adelaide, Australia.

#### Twenty-year-old LNG steamship put up for sale as S&P market hots up

GasLog is not alone in shedding steam turbine LNG carriers. Companies are keen to sift out the older and least-efficient vessels as the International Maritime Organization's Carbon Intensity Indicator rating system kicks in this year. But brokers said the lack of prompt LNG newbuilding berths, available term tonnage and growing demands for vessels to act as storage units is helping push up the value of secondhand vessels — traditionally an illiquid market in this sector. Source : www.tradewindsnews.com

## SINDKOR SENDS AGEING CARRIER FOR SCRAP AFTER YEARS IN LAY-UP

Sector sees a brisk start to ship recycling as second vessel of 2023 heads to breakers. South Korean shipowner Sinokor Merchant Marine has finally called time on one of its long laid-up steam turbine LNG carriers and sold it for demolition.

#### First LNG carrier of 2023 sold for demolition

Brokers reported that the shipowner has sold the 126,911-cbm, Moss-type Adriatic Energy (ex-Echigo Maru, built 1983) to cash buyers for demolition in either India or Bangladesh. One gives a lump sum price of between \$21.3m and \$21.8m on the 32,303-ldt vessel, which is among the 10 oldest ships in the global LNG carrier fleet. He detailed that the seller has not given details of the special materials on board, leaving this to the cash buyer to determine. Moss-type LNG carriers traditionally have attracted higher prices due to the high quantity of aluminium alloy in their cargo tanks. Those following the company said Sinokor previously offered the vessel for recycling several years ago and received bids of around \$27m on the ship. But at the time it opted not to sell. Brokers said the vessel was put back on the market around the new year, with negotiations on the ship being conducted in an on-off manner in the intervening period. Sinokor does not typically comment on its commercial activities. Including the Adriatic Energy, the media-shy shipowner is listed as having eight LNG carriers in its fleet, of which six are idle or laid up, one is under repair and another vessel is trading. The company is also understood to have a single LNG carrier newbuilding under construction at Samsung Heavy Industries and has recently been reported as being in talks with TotalEnergies about the purchase of a secondhand LNG vessel. Sinokor bought the Adriatic Energy from Japan's NYK Line in 2017. Shortly after the purchase, it emerged that the company was considering selling the ship for scrap. But the market improved and the shipowner canned the sale. In 2019, there was talk Sinokor was planning to



reactivate and sell off several of its laid-up LNG carriers, including the Adriatic Energy. But the vessel has remained parked since the company bought it. Clarksons' Shipping Intelligence Network currently lists the ship as laid up. The Adriatic Energy is the second LNG carrier sold for demolition since the start of this year. In February, the 89,880-cbm Seapeak Arctic (ex-Arctic Spirit, built 1993) was sold for scrapping in India. Its 3,678 tonnes of aluminium content helped achieve a strong price of just over \$15.2m for the 23,667-ldt vessel.

#### Single LNG carrier scrapped in 2022 with slim pickings forecast ahead

This already doubles the single-ship total for recycling in the sector over 2022, when a lone LNG carrier went for scrap. The tougher environmental regulations, particularly the new Carbon Intensity Indicator ratings, are expected to accelerate the renewal of the LNG carrier fleet, particularly as steamships redeliver from term contracts. In 2021, a record seven LNG carriers were sent for recycling in a sector that has traditionally seen few vessels scrapped, partly due to the non-corrosive nature of their cargoes but also ships' employment on long-term contracts. Source: www.tradewindsnews.com

# LNG CARRIER S&P MAKES BRISK START TO 2023 AS DEALS STACK UP

Deals worth close to half-a-bil-lion dollars concluded or lined up in first two months with more to come. Sales of secondhand LNG carriers are booming — in relative terms that is.

#### Sinokor finally sends 40-year-old LNG carrier for demolition

From what had traditionally been something of a rare oddity, 2022 witnessed a rash of business that included newbuilding resales, the disposal of Russian-owned tonnage and the first signs of some shipowners starting to weed out older steam turbine ships from their fleets. Twenty-four LNG carriers were bought and sold in deals totalling more than \$4bn, making it what market players said was the busiest year on record for the sale of newbuildings and secondhand vessels. So far in 2023, at least nine LNG carriers have been sold for prices that total up to over \$497m. They include 2023's first two sales of LNG carriers for demolition. The remaining seven sales include a mix of tonnage, ranging from two small-scale LNG carriers priced at under \$30m each to a 10-year-old tri-fuel diesel-electric (TFDE) vessel that attracted a six-figure sum as a potential conversion candidate. There has also been movement on steam turbine tonnage, with the 154,982-cbm Trinity Arrow (built 2008) heading to Chinese trader Jovo and MISC offloading its 21-year-old, 137,489-cbm Puteri Intan Satu (built 2022) to Capital Gas. Brokers said prices are firming for both steamships and their dual-fuel diesel-electric (DFDE) and TFDE cousins. For steam turbine ships, capacity and condition are key price-setting factors, with the larger 150,000-cbm vessels attracting higher levels than 138,000-cbm carriers.

## Golar LNG bags 2025-delivery yard slot for next-up FLNG conversion job

Golar LNG's agreed price of \$77.5m on a 19-year-old vessel — named widely as the 149,172-cbm Fuji LNG (built 2004) — was described as "punchy" by one market expert, who also pointed out that the buyer was specifically looking for a large Moss-type ship, so was limited in its choice of vessels. TFDE and DFDE vessels are also attracting higher prices. Brokers



said the ongoing firm period market has mopped up almost all modern two-stroke tonnage of 174,000 cbm to 180,000 cbm with the number of open vessels remaining in single figures. In addition, LNG newbuilding berths for 2026 have evaporated, with shipyards playing hardball on price — the last concluded deal priced the ships at \$255m — for the limited slots available for 2027 deliveries. This is pushing charterers to seek out the larger and most efficient TFDE and DFDE tonnage, one said. Market players also observed that there is just a hint of asset play starting to emerge.

#### Twenty-year-old LNG steamship put up for sale as S&P market hots up

As TMS Cardiff Gas apparently agreed on a sales deal with Golar LNG on a Moss-type vessel for conversion to a floating production unit, the Greek owner is said to have bought a ship that is two years younger and over \$20m cheaper than the one it has agreed to sell. Market talk had also indicated that the former MISC ship, which has been fitted with a ballast water treatment system, renamed Trader III and is being put through special survey, is already back on the market at \$10m more than for what it was sold. But later reports indicated the buyers are still planning to trade the vessel. The unusually frisky LNG carrier sales market is expected to remain active in 2023 as shipowners increasingly turn their attention to fleet renewal in the face of tougher emissions regulations. Sales talks are believed to be close to concluding on TotalEnergies' last remaining owned LNG carrier, the 154,472-cbm LNG Alliance (ex-Gaselys, built 2007), which is co-owned with NYK Line.

#### TotalEnergies shifts into sales talks on last of its 'legacy' LNG carriers

Last month, TradeWinds reported that Elcano's 138,000-cbm steam turbine vessel Castillo de Villalba (built 2003) has been put up for sale by its financier, Santander, in advance of ending the Spanish tax lease on the ship. Market chatter continues to circulate about the possible sale of some of Nigeria LNG's steamships and Sovcomflot's 174,100-cbm SCF La Perouse (built 2020), which was redelivered early to the Russian owner by its energy major charterer in 2022. There are whispers of other vessels, particularly steamships, being groomed for possible sale with some of the more vintage among them earmarked for possible recycling. But there is also a raft of import and production projects that may yet deploy some of the older LNG tonnage, either as storage units, some in combination with regasification units, or as conversion candidates. Source : www.tradewindsnews.com

#### EXCELERATE FSRU TIME CHARTER EXTENDED THROUGH 2030

Explorer had a remaining firm charter period of approximately three years, and the terms of the new agreement will extended the charter by five additional years from the end of the existing contract in Q4 2025. Explorer was chartered initially to DUSUP in 2015 to complement existing supply sources and support the Dubai Emirate's seasonal demand requirements. The 150,990-m3 vessel is located at Dubai's Jebel Ali LNG import terminal, where DUSUP imports and regasifies natural gas, and is an integral element of Dubai's integrated supply infrastructure, supporting the overall security of natural gas supply and providing flexibility in Dubai's natural gas network. "Reaching an agreement on the extension of our time charter agreement with DUSUP highlights our ongoing efforts to develop and grow our existing, diversified regasification business,"



said Excelerate chief commercial officer, Daniel Bustos. "Our current markets are essential to maintaining our solid foundation of revenues and providing new opportunities for downstream growth. We look forward to continuing our partnership with DUSUP and remain committed to providing Dubai with the critical energy security it needs." Excelerate owns and operates a fleet of 10 FSRUs, operating offices in North America, the Middle East, the subcontinent and Asia Pacific. source : www.rivieramm.com

## GASLOG SELLS ONE, INKS CHARTER DEALS FOR THREE MORE SHIPS

GasLog's Q4 2022 results showed its vessel-owning entity GasLog Hellas-2 Special Maritime Enterprise entered into a memorandum of agreement to sell the ship to an unnamed third party. The transaction is expected to be completed upon redelivery of the vessel from its current charterer, Greek natural gas transmission system operator DESFA. The company has also agreed charters for three other vessels. 155,000-m3 GasLog Salem has clinched a three-year extension with Clearlake Shipping, a subsidiary of Gunvor, that will keep the vessel employed until March 2026. GasLog Partners also extended the time charter agreement of Methane Becki Anne with a Shell subsidiary, exercising their five-year option to extend, with the contract now due to expire in 2029. Texan LNG firm Cheniere extended the time charter of Methane Jane Elizabeth, exercising their option to extend for another year and entered into a one-year time charter agreement for GasLog Seattle with a Switzerland-headquartered energy trading company. GasLog attributed the increase in revenues to higher spot and short-term rates in the LNG market. The company noted, "This increase was partially offset by a decrease in revenues due to the sale of the Methane Shirley Elisabeth in Q3 2022 and the off-hire days due to the scheduled drydocking of one of our vessels in Q4 2022." The company chalked up US\$68.7M in profits in Q4 2022 and the board of directors has declared a quarterly cash dividend of US\$0.15 per common share held which works out to approximately US\$14.3M in dividends. Revenues for Q4 2022 stood at US\$244.8M, an increase on the corresponding figures for Q4 2021 (US\$223.1M). And as Riviera Maritime Media reported last month, GasLog is examining an offer by parent company GasLog Partners to take the company private. Source : www.rivieramm.com

## LNG-ASIAN SPOT LNG PRICES HIT 20-MONTH LOW, INCENTIVISES CHINESE RETURN

Asian spot liquefied natural gas (LNG) this week hit its lowest level since July 2021 on muted demand, but such low levels have incentivised the return of some Chinese players to the market, which if sustained could fuel competition with Europe. The average LNG price for April delivery into northeast Asia <LNG-AS> was \$13.50 per million British thermal units (mmBtu), down \$1, or 6.9%, from the previous week, industry sources estimated. Prices have fallen nearly 52% year-to-date and around 81% from the August 2022 peak at \$70.50/mmBtu. "Pricing in Asia is now sufficient to bring Chinese activity, with two cargoes booked to a state-owned enterprise, one for its own program in China and another on a FOB (free on board) basis, both at attractive pricing with one below \$12/mmBtu," said Toby Copson, global head of trading at Trident LNG. "While sentiment has been on the bearish side for some time, this should firm the



market with the potential for more spot activity from other Chinese players and perhaps cautious front-running from the Europeans with the potential competition for volume now evident," he added. Samuel Good, head of LNG pricing at commodity pricing agency Argus, said that many traders continue to eye potential Chinese demand for this summer with European underground gas storage looking set to enter the injection period very well stocked. He added that sustained lower prices have pulled players from southeast Asia and South America back for spot supply. In Europe, gas prices recouped some early-week losses due to a cold snap with snowy weather across the UK and other parts of the continent, coupled with shutdown at French LNG import terminals since March 7 due to a strike action. The nationwide, one-week strike is expected to reduce French LNG send-out of gas to the grid by around 0.5 billion cubic meters. At least four LNG ships heading to France have changed course to other terminals in the UK, Netherlands and Spain, according to Alex Froley, LNG analyst at data intelligence firm ICIS. "Despite this, onshore gas stocks in Europe are still high for the time of year, so the brief cold snap and diversions won't pose a serious threat to security of supply," Froley said. In a few weeks time, the start of the filling season will arrive with the continent in a relatively favourable position with high inventories and relatively low demand, according to Hans Van Cleef, chief energy economist at PZ - Energy Research & Strategy. "This will most likely keep natural gas prices in Europe around current price levels. Upside risks will mainly come from an increase in competition for LNG inflows in Asia, triggering supply issues in Europe," he said. S&P Global Commodity Insights assessed its daily north-west Europe LNG Marker (NWM) price benchmark for cargoes delivered in March on ex-ship (DES) basis at \$12.796/mmBtu on March 9, a discount of \$1.3/mmBtu to the April gas price at the Dutch gas TTF hub, according to Allen Reed, managing editor, Atlantic LNG. Argus' assessment for Northwest Europe DES LNG price was at \$12.65/mmBtu on March 9. LNG spot freight rates remained stable, with Atlantic at \$59,750/day on Friday and Pacific rates at \$80,250/day, according to Henry Bennett, global head of pricing at Spark Commodities. Source: www.naturalgasworld.com

#### PETRONAS, TIGER GAS COLLABORATE ON LNG BUNKERING

Petronas has inaugurated the LNG bunkering business with partner Tiger Gas following the completion of the maiden shipto-ship LNG bunkering operation of approximately 500 metric tons of LNG for the latter's Tiger Maanshan dual-fuel deck cargo ship, it said on March 8. Tiger Gas has become the first Chinese customer of Petronas LNG bunkering business. The partnership between the companies began in 2020 when they signed a sale and purchase agreement to supply the Chinese market with LNG via ISO tanks. Petronas delivered the first cargo in April 2021. "Today, offshore ship-to-ship LNG bunkering has greatly shortened the turnaround of LNG carrier vessels, laying a solid foundation for a more efficient and greener LNG supply chain. In the future, Tiger Gas will continue to work together with Petronas to facilitate the energy transition," Tiger Group chairman Gerry Wang said. Petronas said it will work with its Chinese partners and create a green and sustainable future together. Source: www.naturalgasworld.com

### ARGENTINA SEES 'LAST BIG PURCHASE OF LNG' THIS YEAR

Argentina plans to spend about \$1.8 billion on imports of liquefied natural gas (LNG) in coming months, its last big purchase before a key gas pipeline to be inaugurated from its massive Vaca Muerta shale region brings balance to domestic gas supplies, Energy Secretary Flavia Royon said on Wednesday. Argentina sits on one of the world's largest shale gas reserves, but the country has in recent years imported high volumes of fuels including LNG to generate electricity mainly due



to lack of transportation for its own production. Its energy deficit, estimated at some \$5 billion last year, is set to ease with less requirements for LNG imports. The Argentine government also has begun removing energy subsidies to industrial and commercial customers to meet commitments with the International Monetary Fund. "This will be the last year that Argentina makes a big purchase of LNG, which has already been agreed," Royon told journalists on the sidelines of the CERAWeek energy conference in Houston. "In the coming years, (it will import) only to cover demand peaks." The country expects to pay an average price of \$20.80 per million British thermal units (Btu) for the LNG imports this year, compared with up to \$40 per million Btus in 2022, which forced a switch to power generation using other fuels, according to the secretary. The South American country is in talks with funds from Saudi Arabia and China for financing the second phase of the gas pipeline from Vaca Muerta. The gasline's first phase, needed to transport domestic gas to customers, is planned to be inaugurated in June. "The energy transition is an opportunity for Latin America and particularly for Argentina," Royon said. Argentina also is engaged in talks with Brazil over gas supplies, both via pipeline and possibly by liquefied natural gas (LNG) cargoes in the future, as the Brazilian governments looks to diversify its sources and types of gas imports. Argentina's state-controlled YPF and Malaysia's Petronas are negotiating the first phase of a massive natural gas project that will include LNG production and exports, with final investment decision planned for 2024. Source: www.naturalgasworld.com

# ALASKA'S QILAK LNG TARGETS ASIA WITH \$5 BLN PROJECT TO COMPETE WITH RUSSIA

Qilak LNG plans to invest \$5 billion in a proposed liquefied natural gas (LNG) facility in Alaska's North Slope to compete with Russia's Yamal project for Asian customers towards the end of this decade, its chief executive said. Major LNG importers such as Japan, South Korea and Taiwan are rethinking Russian supplies after sanctions on Moscow after it invaded Ukraine and more natural gas could be needed to produce lower emission and alternative fuels as nations try to reduce their carbon emissions. Qilak is 2,000 nautical miles (3,700 km) closer to Asian markets than its biggest competitor, the Novatek-led Yamal LNG in the Russian Arctic. The Alaskan projects aims to ship a LNG cargo to Asia in 14 days, about twice as fast as shipments from the U.S. Gulf Coast, Mead Treadwell, Qilak's CEO and chairman, told Reuters in an interview this week. "This project could open up a whole new province of supply for LNG, ammonia and hydrogen... There are geopolitical advantages and diversifying Arctic gas supplies away from Russia is generally a well received concept," Treadwell said. The company is banking on producing LNG at a lower cost compared with Yamal LNG. Yamal LNG, which shipped its first cargo in 2017, cost \$27 billion to liquify 16.5 million tonnes of LNG per annum, company data shows. That is about \$1.6 billion per 1 million tonnes, according to Reuters calculations. Qilak's annual output is set to be 4 million tonnes and at a cost of \$5 billion, should be \$1.3 billion per tonne, according to Reuters calculations. Qilak LNG is working with Lazard as investment bank to attract financing and also plans to offer an ownership stake to Alaska entities including indigenous investment groups, said Treadwell, a former Alaska governor. "We are speaking to potential investors inside and outside Japan, as well as firms that can help us reduce the carbon footprint of the project," he said, without providing further details. The project, equal to 1% of global LNG demand, should be launched by 2030 when potential buyers see a shortage



coming up, a delay from 2027 because of the COVID-19 pandemic, Treadwell said. "We are focusing on the northeast Asian market - there are countries beyond the north-east Asia who are considering involvement to step up their LNG purchases," he said, adding that Japan's current and future LNG receiving terminals could be also used for transhipment further. Qilak LNG is yet to chose engineering, procurement and construction, as well as shipping companies, but Nana Worley and Aker Arctic Technology are expected to lead the feasibility study, Treadwell said. "If we stay on schedule then the feasibility study would be done this year and with front-end engineering design in 2024," he said, adding that a final investment decision is possible in 2025, depending on a number of conditions. The project plans to use gravity-base structures - special weighted legs that support offshore platforms - set off the Arctic shore of Alaska and would deliver three to five tankers per month to Asia, according to Dubai-based Lloyds Energy, the project's owner. It plans to use the Arc7 type of LNG tankers able to seal in the Arctic waters, the same ones Yamal operates, Treadwell said. Source : www.naturalgasworld.com

#### HONG KONG'S FIRST LNG IMPORT TERMINAL NEARING LAUNCH

CLP Power and HK Electric confirmed that they have issued a tender to buy a commissioning cargo for Hong Kong's first LNG import terminal, which includes the world's largest FSRU. Hong Kong LNG Terminal is a joint venture consisting of power firm HK Electric and Castle Peak Power, in which CLP Power Hong Kong holds 70 percent and China Southern Power Grid International has 30 percent. A spokeswoman for HK Electric told LNG Prime on Friday that the JV has issued a tender to purchase an LNG cargo for the commissioning of the terminal. The spokeswoman did not provide any additional information regarding the tender. Reports suggest that the tender for one LNG cargo in May closed this week. Spot LNG prices have dropped considerably this year when compared to the year before. The JKM for April settled at \$14.310/MMBtu on Thursday.

#### Commercial ops in mid-2023

The spokeswoman confirmed that the target for the offshore LNG terminal in Hong Kong to go into commercial operation in mid-2023 remains unchanged. Moreover, the spokeswoman said that the 263,000-cbm MOL FSRU Challenger, to be renamed Bauhinia Spirit, would arrive in Hong Kong by the second quarter of this year. "The facility will further improve Hong Kong's long-term natural gas supply stability by diversifying supply sources and enable procurement of LNG from the international market at competitive prices," the spokeswoman said. The LNG import terminal project forms part of Hong Kong's initiative to reduce emissions. The city and special administrative region of China aims to replace about half of its power generation fuel with natural gas. Besides the giant FSRU, the facility includes a double berth jetty and subsea pipelines. Regasified LNG coming from the FSRU will supply two power plants and these include the Black Point power station located in the New Territories and Lamma power station located at Lamma Island. Also, Shell will supply LNG as part of a long-term deal signed with the two utilities in 2019.



#### **FSRU**

According to its AIS data provided by VesselsValue, the FSRU was on Friday still located at the Singapore LNG import terminal. The unit now has a larger regasification capacity following completion of upgrade works at Keppel Shipyard in Singapore. Previously, the vessel had a nominal capacity of 540 million cubic feet per day, with a maximum capacity of 720 million cubic feet per day. Following the upgrade, this increased to nominal 600 million cubic feet per day with a maximum capacity of 800 million cubic feet per day, Japan's MOL said. This modification not only contributes to regasification capacity, but also increases equipment redundancy, enabling more stable operation and energy supply, MOL said. To remind, MOL and Dutch Vopak signed a deal in 2021 to jointly own the giant FSRU which will serve the new LNG terminal in Hong Kong. Under the deal, Vopak will buy 49.99 percent of the shares from MOL in the vessel owning company of the 2017-built, 345 meters long FSRU. MOL and Vopak will provide the FSRU as well as jetty operations and maintenance and port services to the LNG import project. The two firms also joined forces for the development of the project's jetty and maintenance services. Source: www.lngprime.com

## TOTALENERGIES, EXXONMOBIL, SANTOS LAUNCH PAPUA LNG FEED

Operator TotalEnergies and its partners ExxonMobil and Santos have launched fully-integrated front-end engineering and design (FEED) for the Papua LNG project in Papua New Guinea. TotalEnergies has a 40.1 percent operating stake in the LNG export project, ExxonMobil has 37.1 percent, and Santos owns a 22.8 percent interest. In July last year, the Papua LNG joint venture launched the first phase of front-end engineering and design (FEED) studies for the LNG project's upstream production facilities. After that, Technip Energies, leader of a consortium with Australia's Clough, won a contract to perform the front-end engineering design (FEED) for the project's upstream production facilities. The upstream production facilities cover the development of the Elk and Antelope onshore gas fields including the well pads and the central processing facility. It also incorporates a carbon capture and sequestration (CCS) scheme to remove the fields' native CO2 and reinject it into the reservoirs.

#### FIRST PRODUCTION BY END OF 2027 OR EARLY 2028

Australia's Santos announced the launch of fully-integrated FEED in a statement on Tuesday. Papua LNG would have liquefaction capacity of up to six million tonnes of LNG per year with first production expected by the end of 2027 or early 2028, it said. Following pre-FEED studies, the Papua LNG partners have selected a concept using four electric LNG trains (e-trains) with a combined capacity of four million tonnes per annum, Santos said. The trains will be built within the existing PNG LNG terminal in Caution Bay, operated by ExxonMobil. Also, selecting e-trains and re-injection of reservoir CO2 will reduce the carbon intensity of the project, the firm said. Papua LNG has also secured access to up to two million tonnes of existing liquefaction capacity from PNG LNG. Integrating the Papua LNG midstream development within PNG LNG maximizes the value of both projects and delivers increased capital efficiency by reducing upfront capital expenditure and



maximizing integration synergies, Santos said. PNG LNG will receive an access fee, pro-rata opex sharing and ongoing processing toll revenue that compensates PNG LNG for making the capacity available.

#### FID

The partners expect that the selected concept for Papua LNG would have a lower capital expenditure outcome than the previous concept. Costs will be refined during the FEED phase and the project participants intend to explore project finance opportunities for a portion of the project cost, Santos said. Santos said that the government of Papua New Guinea may exercise a back-in right for up to a 22.5 per cent interest in the LNG project at the final investment decision. Should PNG exercise its full back-in right, Santos' interest in the project would reduce to 17.7 percent. Santos also has a 42.5 percent interest in PNG LNG and announced a conditional agreement to sell a five per cent interest in PNG LNG to Kumul Petroleum. ExxonMobil holds a 33.2 percent operating interest in PNG LNG. The Papua LNG partners plan to take FID by the end of 2023 or early 2024, according to the firm.

#### FIRST PRODUCTION BY END OF 2027 OR EARLY 2028

According to a separate statement by TotalEnergies issued later on Tuesday, the firm signed a head of agreement with JX Nippon to sell a 2 percent interest (post Kumul back-in right) in Papua LNG. JX Nippon is an affiliate of Eneos and already holds a 4.7 percent interest in PNG LNG. TotalEnergies also said that the construction and operation of the Papua LNG electrical liquefaction trains will be delegated to ExxonMobil. Source: www.totalenergies.com;www.lngprime.com

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