



# HANWHA OCEAN TO BUILD FSRU FOR \$413 MILLION

South Korean shipbuilder Hanwha Ocean has secured an order to build one floating storage and regasification unit (FSRU) for about \$413 million. Hanwha Ocean revealed the order on Wednesday, saying it would build the unit for an unidentified Asian owner. The delivery of the FSRU is scheduled to take place by October 2027. Sources told LNG Prime that Japan's MOL is the owner behind the order and that the FSRU would serve Singapore LNG (SLNG). The sources said that the FSRU would have a capacity of 200,000 cbm. Last year, Singapore LNG, the operator of the country's first LNG import terminal on Jurong Island, secured approval from the Singapore government to develop and operate the country's second LNG import facility. State-owned Singapore LNG said at the time it was studying an FSRU concept for the second terminal. The price of \$413 million is the highest ever for a single FSRU. Earlier this year, MOL booked one 174,000-cbm FSRU for the Gdansk project at HD Hyundai Heavy Industries for about \$364 million, while US firm Exclereate booked a newbuild FSRU at HHI in October 2022 and this deal is worth about \$332 million. Including this FSRU order, Hanwha Ocean has won orders this year for 31 vessels worth about \$6.1 billion. This includes 12 LNG carriers as part of the giant QatarEnergy shipbuilding program and four LNG carriers for Adnoc L&S. Last year, the shipbuilder secured orders worth \$3.5 billion. source: www.lngprime.com



# AVENIR LNG PLOTS \$50M OSLO LISTING AS STRATEGY SHIFT UNFOLDS

Small-scale Avenir LNG plans to divest its terminal interests and refocus on LNG shipping and trading while pursuing an Oslo stock listing and boosting its fleet. The company, a joint venture between Stolt-Nielsen, Golar LNG and Hoegh Evi, said on Tuesday that it aims to explore raising capital along with a potential listing on the Euronext Growth Oslo this year. Avenir, which is registered on Euronext NOTC, said it plans to raise about \$50m in new equity, fully underwritten by Stolt-Nielsen, to finance the two 20,000-cbm LNG bunker and supply newbuildings it announced in April. The company is also considering increasing the equity raise to support further fleet expansion. It has signed letters of intent for two additional optional 20,000cbm vessels at Nantong CIMC Sinopacific Offshore & Engineering Co - a subsidiary of CIMC Enric. The additional slots, if confirmed, would boost Avenir's fleet of small-scale LNG bunker and supply vessels to nine. "It is the intention that the Euronext Growth Oslo listing and new equity raise will expand the shareholder base and increase the free float of Avenir's shares," it said. In pursuit of and prior to the listing, Avenir is planning to sell off its ownership of the Higas LNG storage terminal in Sardinia, Italy, to a new vehicle controlled by its three majority shareholders. This will entail a settlement of an existing shareholder loan and the transfer of a portion of the Avenir shares held by the shareholders back to Avenir. The transaction is intended to be structured so that Avenir's net asset value per share will remain at about \$1.10 as valued by independent brokers, the company said. Avenir said that after selling Higas it will operate as a pure-play small-scale LNG shipping and trading company. It said it is poised to capitalise on robust market drivers, including favourable regulatory developments, constrained supply and a substantial increase in the LNG-fuelled fleet, which are expected to boost marine LNG demand significantly beyond 15m tonnes annually over the next five years. Avenir LNG managing director Jonathan Quinn said: "We are very pleased to announce this next chapter in Avenir's history aimed at accelerating the company's growth ambitions. "With the LNG-fuelled fleet set to grow from around 400 vessels in 2023 to over 1,000 vessels by 2028, demand for bunker vessels is set for strong growth over the next decade. "This is a timely opportunity to refocus and consolidate the company's strategy into shipping and trading by divesting from Higas. "This transaction will enhance our position as a leading pure-play owner of LNG bunker vessels and improve operational efficiency, paving the way for a more streamlined and competitive company, which has a strategy to leverage favourable market conditions by growing our fleet." Clarksons Securities and DNB Markets are financial advisers for the listing. source: www.tradewindsnews.com

# LNG BUNKER NEWBUILDS STACK UP IN THIRD QUARTER

At least five LNG bunker vessels were ordered in the third quarter as deliveries of and fresh contracts for LNG-fuelled newbuildings loom. Three newcomers joined the sector between July and September. Trading house Vitol dived into the arena. contracting one 20,000-cbm vessel and another 12,500-cbm unit at Nantong CIMC Sinopacific Offshore & Engineering Co, a subsidiary of CIMC Enric. The trader also snatched at least one more under-construction LNGBV to take on charter. Spain's



Grupo Ibaizabal secured the job of building an 18,600-cbm LNGBV for TotalEnergies Marine Fuels. The ship is reported to have been contracted at a stiff price of over \$90m at Hudong-Zhonghua Shipbuilding (Group) for delivery in 2027. New company Hercules Tanker Management, the private outfit controlled by Peninsula founder and chief executive John Bassadone, also made a break into the sector, with an order for up to two 18,000-cbm LNGBVs at HD Hyundai Mipo priced at around \$92.4m each. Other LNGBV orders are understood to be in the works. Towards the end of September, it emerged that Avenir LNG, which revealed its Oslo-listing intent this week, had signed letters of intent for a further pair of 20,000-cbm LNGBVs at Nantong CIMC, where the company already has two similar vessels on order. Those working in the LNG bunkering sector have highlighted what appears to be a gap of at least 40 LNGBVs needed by 2030 to serve the rapidly emerging LNG dualfuelled fleet. Deliveries of newbuildings that can burn LNG as fuel are scheduled to tick up noticeably next year and jump in 2026. They also highlighted a swing back to choosing LNG as a fuel, which appears to have taken off from mid-2024 amid concerns about the availability of green methanol for alternative fuelling. Elsewhere in the LNG newbuilding sector, the third quarter saw at least eight LNG vessels contracted, bringing the tally for the first nine months of 2024 to almost 80 ships in total. But brokers said prices for conventional 174,000-cbm vessels remain stubbornly high at around the \$260m mark. Shipbroker pegs them at \$261.5m for September. Once again, QatarEnergy made the biggest quarterly splash, turning back to China to advance its swathe of new supersize tonnage there. The company added to its huge tally at Hudong-Zhonghua by contracting another six of its 271,000-cbm QC-Max vessels priced at over \$333m each and bringing its total of this new large breed of vessel at the yard to 24 ships. Delivery dates range from 2028 through 2031. Separately, Hong Kong-listed Cosco Shipping Energy Transportation ordered its first solely owned LNG carriers as the company moved to diversify. It booked two 175,000-cbm ships at Dalian Shipbuilding Industry (Group) in China for 2027 handover dates, source: www.tradewindsnews.com

## UK CRACKS DOWN ON RUSSIAN LNG TRADE

The UK has sanctioned five ships and two companies for their role in shipping Russian LNG, including from the country's expanding Arctic projects. The British government said it is the first time it has used new powers to target individual LNG carriers. It has targeted 25 oil tankers since July. The Foreign, Commonwealth & Development Office said: "The UK has now sanctioned 15 vessels and entities involved in the Russian LNG sector and we will continue to bear down on this important source of funding for Putin's illegal war in Ukraine." The vessels targeted are the 138,000-cbm Pioneer (ex-Pioneer Spirit, built 2005), 137,231-cbm Asya Energy (ex-Trader IV, built 2002), 149,700-cbm Nova Energy (ex-New Energy, built 2007), 174,000-cbm North Sky (ex-North Star, built 2024) and 174,100-cbm La Perouse (ex-SCF La Perouse, built 2020). Some of the blacklisted ships were previously designated in August by the US. The associated ship management companies Ocean Speedstar Solutions of Mumbai, India, and Dubai-based White Fox Ship Management were also named by Britain last Thursday after previously appearing on US sanctions lists. TradeWinds reported last week how the Pioneer was heading into the Red Sea after transferring a cargo loaded at Novatek's Arctic LNG 2 plant in Russia to the Nova Energy in the eastern Mediterranean.



However, it has since been reported by data trackers that the vessel may still have LNG cargo on board. The Nova Energy has returned to Russia with some of the transhipped volumes, which are expected to be discharged onto the 361,600-cbm Saam FSU (built 2023), which is anchored to the north of Murmansk. The listings are an attempt to limit Russian efforts to raise money for its war in Ukraine. The US, European Union and UK sanctioned the Arctic LNG 2 project earlier this year. Russia aims to increase its global LNG market share from 8% to 20%, according to the UK government. source: www.tradewindsnews.com

# TOTALENERGIES LOOKING TO RESTART MOZAMBIQUE LNG BY END OF 2024

France's TotalEnergies and its partners in the giant Mozambique LNG project are working to restart construction on the 12.8 mtpa project by the end of 2024, according to Patrick Pouyanne, CEO of TotalEnergies. Pouyanne discussed the Mozambique LNG project during TotalEnergies' strategy and outlook presentation in New York on Wednesday. According to the company, the giant project is expected to launch operations in 2029. "So, the 2029 target, which is on the slide, is linked to restarting the project by the end of 2024. This is where we are today on this project," Pouyanne said. However, the restart of the project remains subject to security and financing commitments. TotalEnergies declared force majeure on the Mozambique LNG project in April 2021 and withdrew all personnel from the site due to new attacks. Mozambique LNG includes the development of offshore gas fields in Mozambique's Area 1 and a liquefaction plant at the Afungi complex. Besides TotalEnergies, other partners in the project include Japan's Mitsui, Mozambique's ENH, Thailand's PTT, and Indian firms ONGC, Bharat Petroleum, and Oil India.

# Mozambique visit

Mozambique LNG's EPC contractor is CCS JV, a venture between Saipem, McDermott, and Chiyoda. Last year, Pouyanne said the company was "not in a hurry" to resume the project, pointing out that security, human rights, and maintaining costs are the main three elements to make the decision to return to the Afungi site in the province of Cabo Delgado. Asked about potential cost escalations at Mozambique LNG during the company's second-quarter results call on July 25, Pouyanne said that "everything has been settled with the contractors." "On the contractor side, everything has been said, including the costs of the frozen period and the impact on the costs of the project. I think one of our partners mentioned \$3.5-\$4 billion," the CEO said on Wednesday. "But this project remains profitable. We are committed to the project," he said. "On the security side, there is some progress on the ground," Pouyanne said. He noted that Mozambique has an alliance with Ruanda on the matter. Moreover, "there is an election in Mozambique, and the new president will come," Pouyanne said. "I intend to visit Mozambique by the end of the month to meet him to discuss (the project)," he said.

## **Financing**

"And then we are working on the last piece in order to be able to restart the full project," he said. This is the financing of the project. "When we inherited the project from Anadarko, it was quite a big financing package. It was almost \$14 billion," he



said. "I would say 70 or 80 percent of (financiers) are confirmed. We are waiting for three of them to confirm the commitment as well. Because it is important," he said. "Some of them are in Western countries where... I would say the stance towards financing of LNG projects and oil and gas projects has moved," Pouyanne said. "But all of them are telling us that they are committed to the contracts they signed," he said. "So we are waiting for the green light on this financing from these three credit agencies. I hope we will get them soon," Pouyanne said. "As soon as all that is in place we intend to restart the project," he said. Source: www.lngprime.com

#### ALEXANDROUPOLIS FSRU RECEIVES FIRST COMMERCIAL CARGO

Gastrade's FSRU-based LNG import terminal off Greece's Alexandroupolis has received its first commercial LNG shipment. The 2009-built 165,500-cbm, Seapeak Magellan, which is on charter to France's TotalEnergies, was located at the 153,600cbm FSRU, Alexandroupolis, on October 3, its AIS data provided by VesselsValue shows. Seapeak Magellan is loaded with a cargo from Equinor's Hammerfest LNG export terminal in Norway, where France's TotalEnergies is a shareholder. A spokeswoman for Gastrade confined the arrival of Seapeak Magellan, adding that LNG transfer began on Thursday. As previously reported by LNG Prime, TotalEnergies delivered the cargo to Bulgaria's Bulgargaz which previously booked capacity at Gastrade's FSRU-based LNG import facility. Bulgargaz recently awarded a tender to TotalEnergies Gas and Power, a unit of TotalEnergies, to supply one LNG cargo via the Alexandroupolis FSRU. The company sought one LNG cargo of about 150,000 cbm on a DES (delivery ex-ship) basis.

# First Greek FSRU

Gastrade officially launched commercial operations at its FSRU-based LNG import terminal on October 1. Gastrade's shareholders include founder Copelouzou, DESFA, DEPA, Bulgartransgaz, and GasLog. This is Greece's first FSRU and the second LNG import facility, adding to DESFA's import terminal located on the island of Revithoussa. The Alexandroupolis LNG terminal has a capacity of up to 5.5 bcm. On February 18, the 174,000-cbm LNG carrier GasLog Hong Kong delivered the commissioning cargo from the US to the FSRU. The LNG carrier, also chartered by TotalEnergies, brought the shipment from Sempra's Cameron LNG plant in Louisiana. After that, Gastrade planned to launch commercial operations at the end of April and receive the next LNG cargo in mid-May. However, the company postponed the launch because of a problem that was identified during commissioning in the project's pipeline system. Last month, the FSRU-based LNG import terminal off Alexandroupolis completed final tests.

## 14 Greek and international companies

The FSRU is in the sea of Thrace at 17.6 km SW from the port of Alexandroupolis and 10 km from the nearest coast of Makri. In addition to the FSRU, the terminal consists of a subsea and onshore natural gas pipeline that connects the unit to the domestic grid. Gastrade said the terminal will deliver natural gas to Greece, Bulgaria, Romania, North Macedonia, Serbia,



Moldova, and Ukraine in the east, as well as Hungary and Slovakia in the west. According to the firm, 14 Greek and international companies are already participating commercially in the project, committing almost all the terminal's capacity until at least 2030. US LNG exporter Venture Global LNG recentl booked long-term capacity at Gastrade's LNG import terminal. Under the binding terminal use agreement, Venture Global has secured about 1 mtpa of LNG regasification capacity at the terminal for five years, beginning in 2025. Venture Global's capacity will account for about 25 percent of the total terminal capacity or about 12 LNG cargoes annually, it said. Source: www.lngprime.com

#### CHINA'S HUDONG-ZHONGHUA HITS LNG CARRIER RECORD

China's Hudong-Zhonghua has delivered three large liquefied natural gas (LNG) carriers in September, setting a new record for the Chinese shipbuilding industry. CSSC's Hudong-Zhonghua handed over the 174,000-cbm LNG carrier, Umm Ghuwailina, on September 30. The shipbuilder said the vessel, the second of the giant QatarEnergy shipbuilding program, was delivered 2.5 months ahead of the contracted delivery schedule. This was the third large LNG carrier delivery for the shipbuilder in one month, reaching a new monthly record for the delivery of large LNG carriers in the history of China's shipbuilding industry, according to Hudong-Zhonghua. On September 10, Hudong-Zhonghua hosted a naming ceremony for this vessel and its sister LNG carrier, Rex Tillerson. Rex Tillerson is the first LNG carrier built as part of QatarEnergy's massive shipbuilding program. Also, the two vessels are part of 12 conventional-size LNG vessels contracted with Hudong-Zhonghua. State-run LNG giant QatarEnergy signed charter deals in April 2022 for these two LNG carriers with Japan's MOL, completing the first batch of charter contracts awarded under its massive shipbuilding program. The vessels are owned by MOL and China's Cosco Shipping Energy Transportation. The LNG carriers are under long-term charter by QatarEnergy Trading, a unit of QatarEnergy. The vessels, part of Hudong-Znoghua's fifth-generation Changxeng series, are 299 meters long and 46.4 meters wide.

# Cosco's LNG carrier

In addition to these vessels, Hudong-Zhonghua delivered the 174,000-cbm LNG carrier, Kongtong, to compatriot Cosco Shipping Energy Transportation in September. According to Hudong-Zhonghua, the LNG carrier was delivered on September 26, six months ahead of the contracted delivery schedule. This is the sixth LNG carrier Hudong-Zhonghua built for compatriot Cosco Shipping Energy Transportation and PetroChina. The shipbuilder is also building the seventh and eighth vessels under the third stage of the Cosco Shipping-PetroChina project. All eight vessels have WinGD X-DF dual-fuel engines and GTT's NO96 LO3+ containment system. They will serve PetroChina under charter deals. source: www.lngprime.com

## FLEX LNG WRAPS UP \$430 MILLION FINANCING ROUND

Norwegian LNG carrier owner Flex LNG has completed the previously announced financing facilities worth \$430 million. The owner of 13 LNG carriers announced the two facilities in its second-quarter results report. According to a statement by Flex



LNG on Thursday, the completion of the financings resulted in net proceeds of about \$97 million. On September 24, the new \$270 million bank facility financing Flex Aurora and Flex Ranger was completed, and the previous \$375 million bank facility was repaid in full, it said. Consequently, Flex Endeavour was unencumbered at the end of the third quarter of 2024, according to Flex LNG. On October 3, the company closed the new \$160 million JOLCO lease for Flex Endeavour at "very attractive terms." As announced in its second-quarter results, Flex LNG had a cash balance of \$370 million on June 30, 2024, thus with the completion of these refinancings, the company will add to an already "substantial" cash balance, it said. "We highly appreciate the efforts of all involved parties for another smooth closing, and we welcome a new international shipping bank to our banking group," Knut Traaholt, CFO of Flex LNG said. "Our financial strength together with the substantial charter backlog provide us with significant commercial and financial flexibility to further develop the company," he said. The company has 12 LNG carriers on fixed hire time charters, including to US LNG exporter Cheniere, while the LNG carrier Flex Artemis trades in the spot market. In May, the company secured a new charter deal with a "large Asian LNG importer" for the 2019-built 173,400-cbm, Flex Constellation, the company's fourth contract so far this year. In April, Flex LNG clinched a time charter extension from Cheniere for its 2018-built 173,400-cbm LNG carrier, Flex Endeavour. Prior to this, Flex secured two charter extensions from UK-based energy giant BP for the 2019-built 173,400-cbm, Flex Courageous, and the 2020-built 173,400cbm LNG carrier, Flex Resolute. Source: www.lngprime.com

# NFE IN \$3 BILLION DEBT AND EQUITY MOVE

US LNG firm New Fortress Energy revealed two debt and equity transactions totaling about \$3 billion upon completion. On Wednesday, the company issued 46,349,942 shares of its Class A common stock at a public offering price of \$8.63 per share, for a total offering of \$400 million. According to a statement by NFE, Wes Edens, chairman and CEO of NFE, purchased 5,793,742 shares, totaling about \$50 million of the offering, at the public offering price. Additionally, on October 1, NFE entered into a transaction support agreement with certain of its existing noteholders. Under the agreement, NFE is expected to consummate a series of transactions intended to extend the maturity profile of the company's indebtedness while providing additional operating liquidity and financial flexibility. As part of the transactions, the company or its subsidiaries expects to issue about \$2.6 billion of senior secured notes due 2029. NFE said \$1.2 billion aggregate principal amount of new notes will be issued to fully redeem \$875 million of the company's existing 2025 senior secured notes and provide \$325 million of additional operating liquidity. Also, about \$1.4 billion aggregate principal amount of New Notes will be issued in a private exchange for \$1.4 billion aggregate principal amount of the company's existing 2026 and 2029 senior secured notes. Once completed, the transactions are expected to materially extend NFE's maturities across its balance sheet, according to NFE. In addition, upon completing the debt and equity transactions, NFE will have raised \$725 million of new capital, which the company expects will provide sufficient liquidity to execute its capital initiatives and bridge the company to positive free cash flow in 2025. "We are very pleased with the announcement of today's transactions. We believe this paves the way for NFE to



grow into its capital structure and reap the significant benefits from our operations and assets around the world," said Wes Edens.

# First full Altamira LNG cargo

NFE just shipped the first full LNG cargo from its FLNG project off Mexico's Altamira to Europe. According to AlS data provided by VesselsValue, the 138,000-cbm Energos Princess was located offshore the Bahamas on Thursday. NFE recently resumed LNG production at its Fast LNG 1 asset off Altamira after completing scheduled maintenance. This planned outage followed the first partial LNG cargo which occurred on August 9. NFE loaded the partial cargo onboard Energos Princess for delivery to its La Paz, Mexico terminal. Last month, NFE's LNG project off Altamira secured approval from the US DOE to ship LNG cargoes produced from US natural gas to non-free trade agreement nations. NFE's proprietary Fast LNG design pairs the latest advancements in modular liquefaction technology with jack up rigs or similar offshore infrastructure to enable a faster deployment schedule than traditional liquefaction facilities. The company previously said the FLNG project adds more than \$2 billion of infrastructure to its asset base. In addition to this project, NFE closed its previously announced \$700 million loan in July for its second FLNG unit which it aims to install onshore in Altamira. Source: www.lngprime.com

#### TOTALENERGIES BOLSTERS LNG SUPPLY NETWORK WITH SEVERAL WORLDWIDE DEALS

TotalEnergies has bolstered its global liquefied natural gas (LNG) operations through a series of long-term supply agreements with partners in South Korea, China and Turkey. In South Korea, TotalEnergies will supply HD Hyundai Chemical with 200,000 tonnes of LNG per year until 2033. This LNG will be primarily used to support the country's growing industrial sector, particularly in chemical production. As South Korea continues to invest in expanding its LNG terminal capacity, the deal highlights the country's increasing reliance on imported LNG to fuel its industrial activities. TotalEnergies, with its robust fleet of LNG carriers, is well-positioned to ensure consistent and reliable shipments, further cementing its ties with the South Korean market. In China, TotalEnergies has secured a major deal with China National Offshore Oil Corp, one of the country's largest stateowned energy companies. Under this agreement, TotalEnergies will supply 1.5M tonnes of LNG per year, contributing to China's efforts to transition toward cleaner energy sources. China's vast LNG import infrastructure, with its numerous coastal terminals, will play a pivotal role in handling these volumes. TotalEnergies' supply will help meet the increasing energy demand in China, as the country seeks to reduce its reliance on coal. Meanwhile, TotalEnergies announced it had signed a head of agreement with BOTA\$ for the delivery of 1.1M tonnes of LNG per year for 10 years starting from 2027. This agreement allows TotalEnergies to strengthen a long-term presence in the Turkish LNG market. Natural gas plays a crucial role as a transition energy, addressing the intermittency of renewable energy sources and reducing emissions by replacing coal in electricity generation. "We are pleased to initiate a new long-term collaboration with BOTA\$, a key partner for the company in Turkey. This agreement



enables us to secure long-term sales and reduce our exposure to spot market gas price fluctuations," said TotalEnergies senior vice president, LNG Gregory Joffroy. Source: www.rivieramm.com

# US TARGETS MORE TRADERS AND VESSELS IN SANCTIONS CRACKDOWN

The US Treasury Department has imposed sanctions on a network of traders and shipping companies it claims sell and move Iranian petroleum for the benefit of Hezbollah, the Lebanese militant group and Shia Islamist political party backed by Iran. The Treasury Department's Office of Foreign Asset Control (OFAC) said Iran's Islamic Revolutionary Guard Corps-Quds Force (IRFC-QF) routinely uses its access to Iranian oil to finance its proxy forces in Syria, Lebanon and Yemen, OFAC has accused China-based shipping company Star Ocean Shipmanage Ltd of using three of its tankers to facilitate the trade in sanctioned Iranian oil. Star Ocean has been sanctioned and OFAC identified three vessels the company has an interest in: VLCC Eternal Success, and a pair of Aframaxes, Eternal 8 and Eternal Peace. Eternal Success was used by the IRGC as recently as July 2024 when it sailed toward East Asia and completed ship-to-ship transfer of its cargo with another vessel. Marshall Islandsbased shipowning entity Dragon Road Ltd's tanker Serene I was accused of handling Quds Force-owned products on behalf of the already-sanctioned Hezbollah-linked trader Concepto Screen SAL Offshore. Hong Kong-based Tai Feng Hai Shipping Ltd faces identical charges for moving Concepto's oil in Iran and delivering it to mainland China with its VLCC tanker Feng Tai. A member of the prominent Mallah shipping family was also placed to the sanctions list for his role in transporting oil from Iran to Syria. Luay al-Mallah is the brother of Abdul Jalil Mallah who was sanctioned back in June 2021. The family's four ships - Confidence P, Nova, Rival and Tiyara - are all sanctioned. Mr al-Mallah was identified as managing a shipment for Sa'id al-Jamal in 2021 using Nova and Tiyara. Mr al-Jamal is an Iran-based Houthi financier. OFAC said Luay al-Mallah owns the Abdul Jalil Mallah-directed, Turkey-based Oryx Denizcilik Limited Sirketi. "Iran continues to rely heavily on the illicit sale of oil and liquid petroleum gas by the IRGC-QF and Lebanese Hezbollah to fund its terrorist proxies and destabilising activities," said Acting Under Secretary of the Treasury for Terrorism and Financial Intelligence Bradley Smith. "Treasury remains committed to disrupting the networks of shippers, brokers and buyers that facilitate these schemes." Meanwhile, the UK has sanctioned five LNG carriers and two entities involved in the Russian LNG sector and the Arctic LNG 2 project. Pioneer, Asya Energy, North Sky, La Perouse and Nova Energy have all been sanctioned. Pioneer and Asya Energy are listed as 138,000-m3 ships. La Perouse and newbuild North Sky are 174,000-m3 LNG carriers. Nova Energy could not be tracked. VesselsValue lists Pioneer and Asya Energy's beneficial owner as UAE-based NUR Global Shipping but the UK has sanctioned an Indian firm Ocean Speedstar Solutions, naming it as the operator and manager of Pioneer and Asya Energy. UAE-based White Fox Ship Management has also been sanctioned for managing and operating North Sky. Source: www.rivieramm.com



# PRONAV SHIP MANAGEMENT: STEERING CLEAR OF A CREW BIDDING WAR

Hamburg-based Pronav Ship Management has been central to the technical management and crewing of LNG carriers since its foundation in 1995. In 2018, the company became part of the Schulte Group following its acquisition by Bernhard Schulte, further solidifying its role in the LNG sector. Pronav Ship Management managing director, Martin Roolvink, has been in the LNG industry for over 15 years during which he has overseen commercial operations and crewing of large LNG carriers with different cargo containment systems as well as with both steam and diesel propulsion. In 2019, he was appointed as managing director of the Pronav companies, focusing on technical management and crewing of LNG carriers. He explained that managing crew for LNG carriers requires careful planning and foresight. "As the managing director, I focus on both crewing and ship management, which are the cornerstones of our services," he said. "Manning LNG carriers with highly qualified and experienced crews has always been a challenge, and with the rapid growth of the LNG fleet, this challenge has become even more pressing, "The numbers tell the story, Currently, there are around 800 LNG carriers in operation worldwide, with an additional 350 vessels scheduled to be delivered within the next five years. "To properly man these new vessels, we will need approximately 17,500 additional seafarers by 2028," Mr Roolvink stated. The scale of this demand is driven by the continued expansion of the LNG market, particularly with projects like Qatar's LNG mega-projects, which will require more than 120 new LNG carriers over the next five years. However, this growth is not without its challenges. "The LNG industry learned a hard lesson during the 2007-2008 boom when a sudden rise in demand for LNG seafarers triggered a bidding war," recalls Mr Roolvink. "Crew wages skyrocketed in less than 12 months, and as crew wages represent more than 50% of an LNG carrier's yearly operating expenses, this put a tremendous strain on the industry." While no one wants to see a repeat of that scenario, the risk remains if the supply of qualified crew does not keep pace with the expanding fleet. He added it is not just the delivery scenario that will impact crewing: "Do not forget the officer experience matrix for which the requirements set by the charterers are continuously increasing, making it even more difficult for the ship operator to find suitable crew." To prevent another bidding war and the poaching of crews, Mr Roolvink stresses the importance of long-term planning and investment in crew training. "Proper planning is key," he says. "Ship owners need to invest massively in training programmes for cadets and in converting seafarers from other vessel types to LNG."Pronav is addressing the crew shortage with a strategy centered on retention, training, and recruitment. Mr Roolvink emphasises that its crew strategy revolves around these three pillars, with a priority on creating a safe and supportive work environment to maintain crew loyalty. He also highlights how the Schulte Group's structure helps cultivate long-term relationships with employees and clients, aiding in workforce retention. Pronav places a strong emphasis on operational integrity. According to Mr Roolvink, its focus remains on ensuring safe and efficient management of customer assets, and its operational success can be attributed to the dedication and skill of the crew, alongside continuous efforts to minimise environmental impact. Since 1998, Pronav-managed vessels have completed approximately 4,700 LNG cargo operations, operating with minimal disruptions while balancing cost-efficiency and safety. The company takes pride in



its high retention rates, which Mr Roolvink views as evidence of effective management. He highlights that the crew retention rate has consistently exceeded 90%, showing the strength of long-term personnel relationships, a critical advantage amid industry growth and crew shortages. Training remains a cornerstone of Pronav's approach. The company's cadet programme plays a crucial role in helping junior officers become familiar with the operational systems, alongside conversion training for seafarers from other vessel types. Mr Roolvink notes that transitioning from LPG tankers to LNG vessels can take several years, which underscores the importance of planning ahead. Recruitment continues to be a challenge, especially as Pronav diversifies its crew pool. According to Mr Roolvink, expanding recruitment to nationalities not typically involved in LNG crewing is becoming increasingly important. He predicts that the future of LNG crewing will rely on more multinational crews, as is already the case in other shipping sectors. Despite these challenges, Mr Roolvink is optimistic. He observes a growing understanding in the industry that poaching seafarers is not a sustainable solution. Collaboration among ship owners and charterers, alongside investments in training programmes, is crucial to ensuring new vessels are adequately manned. "The best and safest systems in the world are ineffective in the hands of untrained users. Having well-prepared and well-trained seafarers aboard LNG carriers is paramount in upholding the required standards and ensuring safe operations," he said. As the LNG fleet expands, Mr Roolvink believes that the industry must continue to prioritise crew training and development to avoid future bidding wars. "Safety always comes first in the LNG industry. Our industry should not shy away from the responsibility to invest in the people who will be in charge of these assets." He concludes: "In the end, the solution is simple: train and treat your crew well and avoid compromising where it matters most." source: www.rivieramm.com

## TOTALENERGIES SEALS ANOTHER INDIAN LNG SUPPLY DEAL

French energy giant TotalEnergies has signed another long-term liquefied natural gas (LNG) supply deal with an Indian buyer. The new deal was revealed on Wednesday during TotalEnergies' strategy and outlook presentation in New York. Patrick Pouyanne, chairman and CEO, and members of the TotalEnegies executive committee presented during the event. TotalEnergies did not announce this contract before. The company signed the LNG supply deal with an undisclosed buyer in India. According to the presentation, the deal is for 10 years, and TotalEnergies will supply 400,000 tons of LNG per year. The deal is scheduled to begin in 2026.

# Six Asian LNG deals

According to the presentation, this deal is one of six Asian contracts TotalEnergies signed this year for a total volume of 4 Mt/y. This year, TotalEnergies signed LNG supply deals with India's IOCL for 0.8 Mt/y and with Korea South-East Power (KOEN) for 0.5 Mt/y. Moreover, the French firm signed a 16-year deal with Singapore's Sembcorp for 0.8 Mt/y and it announced a five-year extension of its SPA with CNOOC, for the delivery of 1.25 million tons of LNG per year. Most recently,



TotalEnergies signed a head of agreement to supply LNG to South Korea's HD Hyundai Chemical. Under the deal, TotalEnergies will deliver 200,000 tons of LNG per year for seven years starting from 2027.

## \$16-18 billion per year

TotalEnergies says it has de-risked its LNG exposure to spot gas prices by signing long-term LNG sales contracts mainly indexed on Brent and by developing its upstream gas production in the US through two "low-cost" acquisitions. Natural gas is at the core of TotalEnergies' transition strategy through an "outstanding" LNG growth (+50 percent over 2024-2030) and a gas-to-power integration supporting its integrated power strategy to complement the intermittent renewables, it said. TotalEnergies expects oil and gas production average growth of 3 percent per year to 2030, led by LNG, thanks to the launch of six major projects in 2024. The company confirmed net investments between \$16-18 billion per year during 2025-2030, of which around \$5 billion will be dedicated to low-carbon energies. Source: www.lngprime.com

# BANGLADESH'S RPGCL LAUNCHES TENDER FOR TWO SPOT LNG CARGOES

Bangladesh's Rupantarita Prakritik Gas (RPGCL), a unit of state-owned Petrobangla, has released a tender inviting firms to submit bids for two spot LNG cargoes for delivery in October and November. RPGCL issued the tender to "23 organizations that we have signed the MSPA (master sale and purchase agreement) with Petrobangla." According to a tender document posted on RPGCL's website, the delivery windows for the spot LNG cargoes are October 27-28 and November 3-4. The tender will close on October 6. Priot to this tender, RPGCL invited bids for three LNG cargoes with delivery windows October 10-11, October 17-18, and October 27-28. This tender closed on September 29. Bangladesh currently imports LNG via two FSRU-based facilities, both of which feature Excelerate Energy's FSRUs. The 138,000-cbm FSRU Excellence serves Bangladesh's first LNG import facility, Moheshkhali Floating LNG or MLNG, operated by Petrobangla. Launched in 2018, the FSRU-based terminal completed its 100th STS transfer offshore Bangladesh in 2021. Excelerate's 138,000-cbm FSRU Summit LNG serves as the second LNG import facility operated by Summit. Last month, Summit said the FSRU was ready to resume sendout to the grid in Bangladesh. The FSRU sustained damage on May 27 during cyclone Remal and was again damaged on July 10 after it returned from a repair yard in Singapore. Besides chartering FSRUs, Exclerate previously delivered spot LNG cargoes to Bangladesh. Last year, the firm signed a 15-year LNG supply deal with Petrobangla. Under the SPA, Petrobangla has agreed to purchase 0.85 to 1 million tonnes per annum of LNG from Excelerate beginning January 2026. Excelerate joined forces with state-owned LNG giant QatarEnergy to supply Bangladesh with LNG. Qatar is already the largest LNG supplier to Bangladesh.



# AUSTRALIA'S SANTOS TO SUPPLY 20 LNG CARGOES TO TOTALENERGIES

Australian LNG player Santos will supply 20 liquefied natural gas cargoes to a unit of French energy giant TotalEnergies under a new mid-term deal revealed on Wednesday. According to a statement by Santos, the contract with TotalEnergies Gas & Power Asia Private is for up to 0.5 million tonnes of LNG per annum over a period of 3 years plus one quarter. The contract will start in the fourth quarter of 2025. Santos will deliver the LNG supplies from its global portfolio of LNG assets on a delivered ex-ship basis (DES). Santos managing director and CEO Kevin Gallagher said the contract with TotalEnergies is a new LNG relationship for Santos and builds on its existing joint venture partnerships. "This oil-indexed contract, along with the recently executed long-term LNG sales and purchase agreement with Hokkaido Gas in Japan, and the mid-term contract with Glencore, demonstrates Santos' strong LNG portfolio position and customer relationships in the region," he said. "Our portfolio is nicely balanced over the short to medium term with around eighty percent of volumes indexed to oil price and around twenty percent exposed to spot pricing," Gallagher said. He said there continues to be "extremely strong" demand in Asia for high heating value LNG from projects such as Barossa and PNG LNG. "Santos is committed to supporting the energy security of our valued customers across Asia, where gas will play an essential role in decarbonization efforts across the region," Gallagher said.

# LNG projects

Santos recently said the Barossa gas project, which will supply feed gas to the Santos-operated Darwin LNG plant, is almost 80 percent complete and remains on target for first production in the third quarter of 2025. Back in 2021, Santos took a final investment decision for its \$3.6 billion Barossa project. Natural gas will be extracted from the Barossa field, located in Commonwealth waters about 285 kilometers offshore north-northwest from Darwin, and transported via a pipeline to the existing Darwin LNG facility. In addition, Santos operates the 7.8 mtpa Gladstone LNG export plant on Curtis Island near Gladstone. TotalEnergies is also a partner in the GLNG project. The facility shipped 22 LNG cargoes during the second quarter, the same as in the second quarter last year and five less compared to the prior quarter. During the second quarter, the ExxonMobiloperated PNG LNG project in Papua New Guinea shipped 27 cargoes of LNG, the same number of LNG cargoes as in the same quater last year and in the previous quarter. Santos currently has a 42.5 percent stake in the LNG export plant in Caution Bay following the Oil Search merger, and it earlier this year agreed to amend the terms of sale of its 2.6 percent stake in the LNG project to Papua New Guinea's national oil and gas company Kumul Petroleum. ExxonMobil holds a 33.2 percent operating interest in PNG LNG which can produce more than 8.3 million tonnes of LNG annually, an increase of 20 percent from the original design specification of 6.9 mtpa. TotalEnergies and its partners, which include Santos, are also working on the Papua LNG export project in Papua New Guinea. Gallagher recently said the partners plan to take a final investment decision on the Papua LNG at the end of 2025. TotalEnergies has a 37.55 percent operating stake in the Papua LNG project, US-based ExxonMobil has 37.04 percent, Santos owns a 22.83 percent interest, and Japan's JX Nippon holds



2.58 percent. The project calls for the design of about 4 million tonnes per year of liquefaction capacity adjacent to the existing PNG LNG processing facilities and located 20 kilometers northwest of Port Moresby.

# TotalEnergies boosting LNG businesses

TotalEnergies has been very active this year in singning LNG deals. The firm recently signed a head of agreement to supply LNG to South Korea's HD Hyundai Chemical. Under the deal, TotalEnergies will deliver 200,000 tons of LNG per year for seven years starting from 2027. In line with its strategy to grow its long-term LNG sales, TotalEnergies and China's CNOOC recently agreed to extend their existing long-term LNG supply and purchase deal. The company announced a five-year extension of its SPA with CNOOC, for the delivery of 1.25 million tons of LNG per year to China until 2034. Before this, TotalEnergies entered into a head of agreement with Türkiye's state-owned natural gas and LNG firm Botas. Under this 10year contract, Botas will receive 16 LNG cargoes or up to 1.6 billion cubic meters per year from TotalEnergies. In addition, TotalEnergies entered deals to supply LNG to Indian Oil and Korea South-East Power. TotalEnergies says it is the world's third largest LNG player with a global portfolio of 44 Mt/y in 2023 thanks to its interests in liquefaction plants in all geographies. TotalEnergies' ambition is to increase the share of natural gas in its sales mix to close to 50 percent by 2030. Source: www.lngprime.com

### MISC ORDERS LNG CARRIER DUO AT SAMSUNG HEAVY, INKS CHARTER DEAL WITH PETRONAS

Malaysia's LNG shipper MISC, a unit of Petronas, has ordered two liquefied natural gas carriers at South Korea's Samsung Heavy. In parallel, MISC signed a letter of intent with Petronas LNG to charter the two vessels. MISC revealed this deal in a stock exchange filing on Tuesday. According to the firm, the newbuild LNG carriers will be delivered in 2027. MISC did not provide further details regarding the shipbuilding deal with Samsung Heavy. Samsung Heavy announced in a stock exchange on Wednesday that it had won an order from an Asian owner for two LNG carriers scheduled for delivery by April 2027. The order is worth 678.3 billion won (\$514 million) or about \$257 million per vessel. MISC said the new LNG carriers support the strategic intent of rejuvenating its LNG fleet with modern and efficient vessels towards achieving a reduction of greenhouse gas emissions and intensity by 2030. The LNG shipping firm will incorporate new wholly owned subsidiaries to own the two new LNG carriers (SPVs). After that, the SPVs will enter time charters with Petronas LNG Ltd (PLL) for a firm period of 15 years from 2027, it said.

## Termination and new charter

Besides signing a letter of intent for long-term charter, MISC also agreed with Petronas LNG Sdn. Bhd. (PLSB) to the early termination of the time charters of three existing steam LNG carriers, the 2007-built 145,700-cbm Seri Ayu, the 2006-built 145,700-cbm Seri Angkasa, and the 2007-built 153,000-cbm Seri Begawan. In addition, MISC and PLSB agreed to enter into time charters for two LNG carriers, the 2005-built 145,700-cbm Seri Alam and the 2006-built 145,700-cbm Seri Amanah, upon expiry of their existing time charters in 2025 and 2026, MISC said. These time charters will last until March 31, 2028.



MISC said the LoI sets out the salient terms and conditions in relation to the transactions, which will form the basis for the finalization and execution of definitive agreements. According to MISC's website, it operates a fleet of 28 LNG carriers, including 3 as part of joint ventures, and it also has one chartered LNG bunkering vessel. In January 2023, MISC took delivery of two 174,000-cbm LNG carriers from Samsung Heavy. These two vessels serve ExxonMobil's unit Sea River Maritime under longterm charter deals. Besides operational vessels, MISC previously said it has at least 14 LNG carriers on order. (Updated to say that the Samsung Heavy order is worth about \$514 million.) source: www.lngprime.com

# GASTRADE LAUNCHES COMMERCIAL OPS AT GREECE'S **FSRU**

Greece's Gastrade has officially launched commercial operations at its FSRU-based LNG import terminal off Alexandroupolis. Greece's first FSRU is expected to receive its first commercial LNG shipment later this week. Gastrade said in a statement the transformation of Alexandroupolis into a new energy gateway for the entire Central and Southeast Europe begins today with the start of commercial operations of the Alexandroupolis LNG terminal. Gastrade's shareholders include founder Copelouzou, DESFA, DEPA, Bulgartransgaz, and GasLog. This is Greece's first FSRU and the second LNG import facility, adding to DESFA's import terminal located on the island of Revithoussa. The Alexandroupolis LNG terminal has a capacity of up to 5.5 bcm.

# First commercial shipment

On February 18, the 174,000-cbm LNG carrier GasLog Hong Kong delivered the commissioning cargo from the US to the 153,600-cbm FSRU, Alexandroupolis. The LNG carrier, chartered by France's TotalEnergies, brought the shipment from Sempra's Cameron LNG plant in Louisiana. After that, Gastrade planned to launch commercial operations at the end of April and receive the next LNG cargo in mid-May. However, the company postponed the launch because of a problem that was identified during commissioning in the project's pipeline system. Last month, the FSRU-based LNG import terminal off Alexandroupolis completed final tests. A spokeswoman for Gastrade told LNG Prime last week GasLog will launch commercial operations on October, while the first commercial LNG shipment is set for October 3/4. TotalEnergies will provide the cargo to Bulgaria's Bulgargaz which previously booked capacity at Gastrade's FSRU-based LNG import facility. The spokeswoman did not provide further information regarding the shipment. Bulgargaz recently awarded a tender to TotalEnergies Gas and Power, a unit of TotalEnergies, to supply one LNG cargo via the Alexandroupolis FSRU. The company sought one LNG cargo of about 150,000 cbm on a DES (delivery ex-ship) basis. The delivery window is October 4.

## 14 Greek and international companies

The FSRU is in the sea of Thrace at a distance of 17.6 km SW from the port of Alexandroupolis and 10 km from the nearest coast of Makri. In addition to the FSRU, the terminal consists of a subsea and onshore natural gas pipeline that connects the unit to the domestic grid. Gastrade said the terminal will deliver natural gas to Greece, Bulgaria, Romania, North Macedonia,



Serbia, Moldova, and Ukraine in the east, as well as Hungary and Slovakia in the west. According to the firm, 14 Greek and international companies are already participating commercially in the project, committing almost all the Terminal's capacity until at least 2030. At the same time, the start of commercial operations of the project marks the enhancement of the vertical corridor initiative, significantly strengthening its dynamics, it said. The FSRU will receive LNG supplies from the USA, Qatar, and other LNG producers. It is worth mentioning here that US LNG exporter Venture Global LNG just booked long-term capacity at Gastrade's LNG import terminal. Under the binding terminal use agreement, Venture Global has secured about 1 mtpa of LNG regasification capacity at the terminal for five years, beginning in 2025. Venture Global's capacity will account for about 25 percent of the total terminal capacity or about 12 LNG cargoes annually, it said. The firm said the deal enables the regasification and sale of LNG from Venture Global's terminals in Louisiana to markets in Central and Eastern Europe. source: www.lnaprime.com

### AVENIR REPOSITIONS TO BECOME PURE-PLAY LNG SHIPPING FIRM

UK-based small-scale player Avenir LNG plans to divest its ownership of the Higas LNG storage terminal in Italy's Sardinia to three of its existing shareholders, as part of a strategic refocus of its business. The company is also exploring raising capital and a potential listing on the Euronext Growth Oslo. Avenir's shareholders are Stolt-Nielsen, Golar LNG, and Hoegh Evi, previously known as Hoegh LNG. The small-scale LNG firm said on Tuesday the sale of the Higas LNG terminal to its shareholders remains subject to customary approvals and agreement on final legal documentation. The company said that following the divestment of the terminal, Avenir will operate as a pure-play small-scale LNG shipping and trading company. In 2022, Avenir became the sole owner of the Higas terminal after it bought a 10 percent stake from Italian engineering firm Gas and Heat and a 10 percent stake from CPL Concordia. Gas and Heat was also the EPC contractor for the Higas storage, regasification, and distribution facility in the port of Oristano. In May 2021, the facility received its first shipment from the 7,500-cbm Avenir Accolade. After that, Avenir's 7,500-cbm bunkering and supply vessel, Avenir Aspiration, started serving the terminal in Sardinia in January 2021. The facility features six horizontal low-pressure cryogenic type C tank storage tanks with a total capacity of 10,800 cbm.

# \$50 million in new equity, vessel options

As part of Avenir's long-term growth strategy, the company has also begun the process of seeking a listing on Euronext Growth Oslo later this year. In connection with the listing, the company plans to raise about \$50 million in new equity, fully underwritten by Stolt-Nielsen, to finance two newbuild 20,000-cbm LNG bunker and supply vessels announced in April 2024. Avenir ordered the vessels from China's CIMC SOE and chartered the first to Geneva-based trader Vitol. Additionally, Avenir said in the statement it is also considering increasing the equity raise to support further fleet expansion. The company has secured options for two additional newbuilds at "attractive terms". "It is the intention that the Euronext Growth Oslo listing and



new equity raise will expand the shareholder base and increase the free float of Avenir's shares," the company said. Avenir said the divestment of the Higas LNG terminal is proposed to be implemented prior to any listing via a restructuring of Avenir. The indirect equity interests in the terminal will be transferred to a newly incorporated vehicle owned by the company's shareholders. "Consideration for the divestment will be in the form of a settlement of an existing shareholder loan and transfer of a portion of the Avenir shares held by the majority shareholders back to Avenir," the company said. According to Avenir, the transaction is intended to be structured such that Avenir's NAV per share both, prior to, and after the divestment will remain at about \$1.10 per share as valued by independent brokers. Upon completion of the divestment, an opportunity for other Avenir shareholders to acquire interests in the Higas LNG storage terminal will be considered on substantially the same economic terms, it said.

# Next chapter

"We are very pleased to announce this next chapter in Avenir's history aimed at accelerating the company's growth ambitions," Avenir's managing director, Jonathan Quinn, said. With the LNG fuelled fleet set to grow from about 400 vessels in 2023 to over 1,000 vessels by 2028, demand for bunker vessels is set for "strong growth" over the next decade, he said. Quinn said this is a "timely opportunity" to refocus and consolidate the company's strategy into shipping and trading by divesting from Higas. "This transaction will enhance our position as a leading pure-play owner of LNG bunker vessels and improve operational efficiency, paving the way for a more streamlined and competitive company that has a strategy to leverage favorable market conditions by growing our fleet," Quinn said. This new investment program for the two 20,000-cbm vessels marked the second phase of growth for Avenir, increasing the fleet by 40 percent and 80 percent in terms of total capacity. In May 2022, Avenir took delivery of the 20,000-cbm Avenir Achievement, chartered by Shell, from CIMC SOE, concluding its initial asset development program. Avenir Achievement also has a sister vessel, but Avenir sold it to a joint venture consisting of China's terminal operator, Shanghai International Port (SIPG), and Shenergy. The small-scale player also has four 7,500-cbm LNG bunkering and supply vessels in its fleet. source: www.lngprime.com

# MET JOINS FORCES WITH CELSIUS ON ITS FIRST NEWBUILD LNG CARRIER

Switzerland-based energy trader MET Group has entered a partnership with Denmark's Celsius to build and jointly own one liquefied natural gas (LNG) carrier. MET said in a statement on Monday that it has reached a partnership agreement with Celsius to build its first LNG vessel, which is scheduled to be delivered in 2027. According to the trader, the efficient, modern LNG carrier will be constructed by China Merchants Heavy Industry (Jiangsu) and will support the growing LNG activities of MET Group. MET did not provide further details regarding the LNG carrier. Celsius Tankers, a unit of Celsius Shipping, has ordered five 180,000-cbm LNG carriers from China Merchants Heavy Industry in Jiangsu, with deliveries scheduled for 2026 and 2027. Moreover, four of these LNG carriers will go on charter to Clearlake Shipping, a subsidiary of energy trader Gunvor.



In December 2022 Celsius and CMHI signed the 4+2+2 contract for the 180,000-cbm LNG carriers. Last year, Jeppe Jensen, founder and chairman of Celisus Shipping announced that Celsius will order the fifth and sixth LNG carrier at CMHI. The Deltamarin-designed vessels will feature MAN ME-GA engines and GTT's Mark III Flex containment system. Shipbuilding sources told LNG Prime that Celisus signed the shipbuilding deal for the fifth vessel earlier this year. However, the contract for the sixth vessel is expected to be signed soon. According to the sources, this vessel could be the jointly owned LNG carrier by Celsius and MET.

# MET boosting LNG business

MET said the purchase of the LNG vessel supports its strategy to enhance its ability to supply its customers with LNG from various sources, including the recently signed agreement with Shell to purchase US LNG over a period of 10 years starting in 2027. Prior to this contract, MET entered a 20-year non-binding deal with US LNG terminal developer Commonwealth LNG in September last year to buy 1 mtpa of LNG from the proposed 9.3 mtpa plant in Cameron, Louisiana. MET says it has one of the most geographically diverse LNG import structures in Europe, with long-term regasification capacity bookings in Germany, Croatia, and Spain. The group has imported into eight different countries across the Mediterranean (Greece, Italy, Croatia, Spain), Northwest Europe (UK, Belgium, Germany), and the Nordic region (Finland). In 2023, MET delivered more than 30 LNG cargoes to Europe. The company has capacity rights at the Croatian FSRU-based terminal and received the first LNG cargo via the Krk facility in the northern Adriatic Sea in April 2021. In addition, MET booked regasification capacities at the FSRU-based LNG import terminal in Germany's Lubmin, owned by Deutsche ReGas. This FSRU is now part of the Mukran LNG import facility which includes two units. "We are delighted to reach this milestone for our LNG activities in partnership with Celsius. At MET we believe LNG will play an important role in the European energy transition," MET chairman and CEO Benjamin Lakatos said. source: www.lngprime.com

#### ITALIAN FSRU RECEIVE FIRST LNG CARGO IN NOVEMBER AFTER MAINTENANCE

Italy's OLT Offshore LNG Toscana expects its FSRU Toscana to resume operations and receive the first LNG cargo in November following the completion of planned shipyard activities in Marseille, France. In June this year, the FSRU arrived at SGdP's Chantier Naval de Marseille from Italy's Genoa to complete the second and final phase of planned shipyard activities. The shipyard replaced the bearing of the unit's anchoring system, which ensures the rotation of the terminal around the geostationary turret. OLT Offshore said in a statement on Monday that the "extraordinary maintenance activities of the FSRU Toscana terminal have been successfully completed." The FSRU left Marseille on Monday and will be towed back to Italy to reach the site off the coast between Livorno and Pisa where it was previously moored, for its re-installation and reconnection to the gas system, it said. OLT Offshore expects the unit to arrive on October 2. Upon return to Livorno, Olt Offshore will carry out preparatory activities for the reconnection of the anchoring system and systems connecting the terminal to the national



gas grid. "Thereafter, a cooling-down phase of the plant is planned, with the discharge of an LNG cargo, aimed at the resumption of commercial operations of the terminal, currently scheduled for November 24," OLT Offshore said. In addition, OLT Offshore said in a separate statement it aims to launch a tender procedure for 30,000 cbm of LNG (equivalent to about 200,000 MWh), which will be delivered to the FSRU for cool-down and gas-up activities. The FSRU has a maximum regasification capacity of 5 bcm a year and sends natural gas to Italy's national grid via a 36.5 kilometers long pipeline. Italy's Snam holds a 49.07 percent stake in the LNG terminal, while Igneo Infrastructure Partners owns a 48.24 percent share. Also, Golar LNG, that provided the 2003-built 137,100-cbm FSRU, has a minor 2.69 percent stake in the LNG import facility. Source: www.lngprime.com

# WILHELMSHAVEN LNG JETTY READY TO WELCOME EXCELERATE'S **FSRU**

A new jetty in Germany's Wilhelmshaven is ready to welcome Excelerate's 138,000-cbm FSRU Excelsior. DET's second FSRU-based facility in Wilhelmshaven is expected to start operations by the end of this year. Dutch marine contractor Van Oord announced on Monday it had completed the new jetty for its client, state-owned LNG terminal operator DET. The project was managed by FSRU Wilhelmshave, a joint venture between Engie and TES. Besides Van Oord, TES previously contracted Norway's ECOnnect Energy to provide the latter's jettyless IQuay solution for the government-backed FSRU LNG import terminal in Germany's Wilhelmshaven port. Van Oord was responsible for the procurement and construction of the FSRU jetty. To expedite the process, the new 600-meter-long jetty was built on monopiles, mainly used for offshore wind turbines. In total, Van Oord installed 10 monopiles, including scour protection to prevent erosion. Van Oord used the LNG-powered trailing suction hopper dredger Vox Apolonia to dredge the berth pocket and turning basin to the required depth.

## Launch by end of winter

DET recently told LNG Prime it still expects to launch its next two FSRU-based LNG import terminals in Stade and Wilhelmshaven by the end of this year. Excelerate's 138,000-cbm FSRU Excelsior arrived at the Navantia yard in El Ferrol, Spain last year for a planned stopover before its job in Wilhelmshaven. According to its AIS data, the FSRU is still located there. DET did not comment to LNG Prime on when it expects the vessel to arrive in Wilhlelmshaven. The firm currently operates the first Wilhelmshaven LNG terminal which features the 170,000-cbm Hoegh Esperanza and the LNG terminal in Brunsbüttel which features the 170,000-cbm Hoegh Gannet. This FSRU will move to a new dedicated jetty in the port. Also, DET recently announced it has received in total of 100 LNG cargoes at its two FSRU-based LNG terminals in Wilhelmshaven and Brunsbüttel since January 2023. Source: www.lngprime.com

# FORMER US AMBASSADOR JOINS EXCELERATE ENERGY

Former US ambassador Peter Haas has joined Excelerate Energy as a strategic advisor, as the FSRU player continues to expand its business. According to a statement by Excelerate, Haas retired from the US Foreign Service on September 27 after



33 years of US government service, most recently as ambassador to Bangladesh. Haas' State Department assignments also included acting assistant secretary of state for economic and business affairs, consul general in Mumbai, India, and deputy permanent representative to the Organization for Economic Cooperation and Development (OECD). Earlier in his foreign service career, Haas was posted to US embassies in London, Rabat, Berlin, and Port-au-Prince. He will join Excelerate's Washington DC office in October. "I am pleased to have Peter Haas join the Excelerate team. Over the course of his State Department career, he has been a tireless advocate for US businesses and commercial interests," said Steven Kobos, President and CEO of Excelerate. "Peter understands the intersection of geopolitics and markets, and I am confident that his leadership and experience will strengthen our global team," he said. Excelerate operates ten FSRUs, one of the world's largest fleets of such vessels, and these units are located worldwide. These FSRUs are in Bangladesh, Finland, Brazil, Dubai, Pakistan, while one FSRU will also start serving the second FSRU-based LNG import terminal in Germany's Wilhelmshaven later this year. In addition to these 10 FSRUs, Excelerate also ordered one 174,000-cbm FSRU at South Korea's Hyundai Heavy Industries in 2022. The FSRU is scheduled for delivery in June 2026.

# Excelerate in expansion mode

As part of its expansion plans, Excelerate and PetroVietnam Technical Services Corporation (PTSC), a unit of state-owned PetroVietnam, recently signed a strategic partnership agreement to jointly study FSRU-based technical solutions for LNG imports into Vietnam. In June 2024, Excelerate also signed a term sheet with ITECO, a Vietnamese-based private development company, to co-develop a greenfield LNG import terminal in Hai Phong, Vietnam. According to Exclerate, the northern Vietnam LNG terminal (NVLT), which will be constructed in two phases, is anticipated to have a total import capacity of 1.2 million tonnes per annum. Phase one of the terminal is expected to have a capacity of 0.7 mpta, while operations are expected to start in 2027. Besides these facilities in Vietnam, Excelerate is in "advanced discussions" with local utilities in Southcentral Alaska to develop an integrated LNG import terminal in the lower Cook Inlet region. This would be an FSRU-based terminal and Excelerate is expected to own the facility and be responsible for LNG and sell gas to local utilities. In May, Excelerate has revealed a list of 12 prioritized regasification projects saying that a number of these projects will require new FSRUs. Excelerate said 10 of the projects have a price tag between \$50 million and \$400 million, while two projects have CapEx greater than this range, one of which is the planned Payra development in Bangladesh. source: www.lngprime.com

# CELSIUS TAKES DELIVERY OF NEW LNG TANKER

South Korea's Samsung Heavy Industries has handed over a new 180,000-cbm LNG carrier to Denmark's Celsius Tankers, a unit of Celsius Shipping. Celsius Tech, a joint venture of Celsius Shipping and Hong Kong-based Fleet Management, said on Monday via social media the new vessel is Celsius Granada. The JV will manage this LNG carrier, such as the previous newbuild Celsius Greenwhich and other Celsius vessels. Celsius Tech said this marks its tenth vessel since the project began



in 2019. In addition, this is the sixth Celsius vessel of ten on order at Samsung Heavy. It features a MAN ME-GA engine and GTT's Mark III Flex containment tech. The first newbuild in this batch, Celsius Geneva, was named in July 2023. According to its website, Celsius will take delivery of the four remaining newbuilds during 2025-2026.

## 20 LNG carriers

VesselsValue data shows the LNG carrier Celsius Granada will serve a long-term charter deal with UK-based energy giant BP. The data previously showed that BP also chartered Celsius Greenwich. On the other hand, Clearlake Shipping, a subsidiary of energy trader Gunvor, has taken on charter Celsius Glarus, Celsius Geneva, Celsius Giza, and Celsius Gandhinagar. Back in October 2021, the Danish firm signed long-term charter deals for four LNG carriers with Clearlake Shipping. In addition to these charters, Celsius Tankers, also signed long-term charter deals for four more newbuild LNG carriers with Clearlake Shipping. China Merchants Heavy Industry in Jiangsu will build these vessels and deliver them in 2026 and 2027. On top of this, Celsius also said in October last year it will book two more LNG carriers at the Chinese shipbuilder and added four more optional vessels. Shipbuilding sources previously told LNG Prime the construction deal for the second firm vessel in this batch and sixth in the CMHI series had not been signed yet. However, the shipbuilding deal is expected to be finalized by the end of this year. Following deliveries of all of these ships, the Danish firm will have 20 LNG carriers in its fleet. This includes four 180,000-cbm vessels delivered in 2020 and 2021, source: www.lngprime.com

## NFE SHIPS FIRST FULL ALTAMIRA LNG CARGO TO EUROPE

US LNG firm New Fortress Energy has shipped the first full liquefied natural gas cargo from its FLNG project off Mexico's Altamira to Europe. "NFE's FLNG asset has achieved first full cargo and sail away, with its first full LNG cargo fully loaded onto the Energos Princess and setting sail for Europe," NFE said on Monday. The Wes Edens-led company did not provide further information. The 138,000-cbm Energos Princess was on Monday located in the Gulf of Mexico and is expected to arrive at its destination around October 18, according to its AIS data provided by VesselsValue. NFE recently resumed LNG production at its Fast LNG 1 asset off Altamira after completing scheduled maintenance. This planned outage followed the first partial LNG cargo which occurred on August 9. NFE loaded the partial cargo onboard Energos Princess for delivery to its La Paz, Mexico terminal. Earlier this month, NFE's LNG project off Altamira secured approval from the US DOE to ship LNG cargoes produced from US natural gas to non-free trade agreement nations. NFE's proprietary Fast LNG design pairs the latest advancements in modular liquefaction technology with jack up rigs or similar offshore infrastructure to enable a faster deployment schedule than traditional liquefaction facilities. The company previously said the FLNG project adds more than \$2 billion of infrastructure to its asset base. NFE sent its liquefaction rig Pioneer II on September 26, 2023 to Altamira to start serving the FLNG project. Prior to this, NFE's utilities and accommodation rig, Pioneer III, arrived off Altamira, as well as the gas treatment rig. The FLNG project consists of three rigs, Pioneer I, II, and III. Besides the three rigs, the 160,000-cbm



Penguin FSU serves the project as a floating storage unit. In addition to this project, NFE recently closed its previously announced \$700 million loan for its second FLNG unit which it aims to install onshore in Altamira.

# Dividend update

NFE said in a separate statement it has determined to delay the payment of its previously declared \$0.10 per share Class A common stock dividend, with a record date of September 13. The company said it has reached an agreement with its noteholders to address NFE's near-term maturities and liquidity requirements. "The company expects to reach an agreement with its noteholders in the near future, after which the company will reevaluate the payment of the dividend, including with respect to its amount and the timing of any potential payment," NFE said. source: www.lngprime.com

## PETROVIETNAM IN LNG SUPPLY TALKS WITH CHENIERE

PetroVietnam Gas, a unit of state-owned PetroVietnam, is interested in liquefied natural gas supplies from US LNG exporting giant Cheniere. According to PetroVietnam, PetroVietnam Gas and Cheniere officials met in the US to discuss cooperation in supplying LNG to Vietnam to meet the country's growing energy demand. Cheniere "appreciates and values the potential of the Vietnamese market and wishes to build a long-term relationship with PV GAS to ensure stability in supply and price for Vietnam," PetroVietnam said in a statement. The company said the meeting between PV Gas and Cheniere is expected to open up many cooperation opportunities in the LNG sector and contribute to the development of the energy industry in Vietnam. PetroVietnam said PV Gas's search for a US LNG supplier, such as Cheniere, is not only a strategic step to ensure national energy security but also helps promote the development of the LNG market in Vietnam. The statement said that during the meeting, the two companies agreed to continue negotiations to reach official cooperation agreements.

# Largest US LNG exporter

Cheniere is the largest US LNG exporter, and the firm has shipped more than 3,570 LNG cargoes from its Sabine Pass and Corpus Christi terminals. The Sabine Pass facility in Louisiana is the largest LNG terminal in the US and currently has a capacity of about 30 mtpa following the launch of the sixth train in February 2022. In addition, Cheniere aims to build two new liquefaction trains as part of the Sabine Pass Stage 5 expansion project to add up to 20 mtpa of capacity to the giant facility. On the other hand, Cheniere's Corpus Christi liquefaction plant in Texas now has three operational trains, each with a capacity of about 5 mtpa. In June 2022, Cheniere made the final investment decision on the Corpus Christi Stage 3 expansion project, worth about \$8 billion. The project includes building seven midscale trains, each with an expected liquefaction capacity of about 1.49 mtpa. According to the latest construction report, the project is almost 66 percent complete. Besides this expansion, Cheniere plans to build two more midscale trains at its Corpus Christi LNG plant. The CCL midscale trains 8 and 9 project would include two trains, nearly identical in design to trains 1-7 and each capable of producing up to 1.64 mtpa of LNG.



# Vietnam LNG imports

PV Gas launched its Thi Vai LNG terminal on October 29, 2023, after nearly 4 years of construction and commissioning. This is Vietnam's first LNG import terminal. In July 2023, LNG giant Shell delivered the commissioning LNG cargo to the terminal from Indonesia's Bontang LNG plant. PV Gas has received five LNG cargoes at the facility so far and just issued a new spot LNG cargo tender for delivery in October. Besides Shell, PetroVietnam Gas received cargoes from a unit of France's TotalEnergies, QatarEnergy LNG, previously known as Qatargas, and PetroChina. The Thi Vai LNG import facility consists of one 180,000-cbm LNG tank, a jetty, and regas area. The terminal has a capacity of 1 mtpa in its first phase, but PV Gas plans to boost the capacity to 3 mtpa in the next stage. In addition to this facility, the Cai Mep LNG terminal, located in Vung Tau district in South Vietnam, is expected to be launched later this year. It is also worth mentioning here that PetroVietnam Power, a unit of state-owned PetroVietnam, plans to start commissioning its Nhon Trach 3 LNG power plant in October. In November 2021, PV Power broke ground on the Nhon Trach 3 and 4 plants in the southern province of Dong Nai, which are worth about \$1.4 billion. Vietnam's first LNG power plants will have a total capacity of 1.5 GW, according to PV Power. source: www.lngprime.com

# RUSSIAN LNG PRODUCTION UP IN JANUARY-AUGUST

Russia increased its production of liquefied natural gas (LNG) in January-August this year, according to the Russian statistics agency Rosstat. Rosstat's data show that the country's LNG terminals produced 22.4 million mt during January-August, up by 7.3 percent from the same period last year. This compares to 20.9 million mt of LNG in January-August last year. Last month, LNG production reached about 2.8 million mt, according to Rosstat. This marks a rise of 30.3 percent compared to the same month in 2023 and an increase compared to 2.3 million mt in the prior month. Russian Deputy Prime Minister Alexander said last week that the country expects to produce 35 million mt of LNG in 2024, according to a statement by Russia's Ministry of Transport. Rosstat's data shows that LNG production in 2023 amounted to 32.9 million mt.

## **Russian LNG terminals**

Russia currently produces LNG via Novatek and Gazprom-operated LNG terminals. Gazprom operates the Sakhalin-2 LNG terminal with a capacity of 10.8 mtpa and the mid-scale Portovaya LNG complex in the Leningrad region with a capacity of about 1.5 mtpa. Russia's Sakhalin Energy LLC, the operator of the Prigorodnoye LNG export plant controlled by Gazprom, said in a statement on August 5 it has resumed operations at the facility after completing maintenance activities. The LNG terminal operator carriers annual maintenance activities during summer. Besides these facilities, Novatek operates the 17.4 mtpa Yamal LNG plant in Sabetta. In July, Novatek delivered this year's first Yamal LNG cargo via the eastern part of the Northern Sea Route to China. Novatek also operates the mid-scale LNG plant in Russia's Baltic Sea port of Vysotsk with a capacity of more than 660 thousand tons of LNG per year. In addition, Novatek is working on the sanctioned Arctic LNG-2 export plant. Last month, Novatek delivered the second gravity-based structure platform from its yard near Murmansk to the



site of the Arctic LNG 2 project located on the Gydan peninsula. The company completed the second GBS despite sanctions by the US and the EU related to the Arctic LNG 2 project. The first GBS left the Belokamenka yard in July last year and Novatek completed the installation on the underbase foundation on the seabed at the Utrenniy terminal in August. The first and second GBS each have a capacity of about 6.6 mtpa.

# Sanctions

The US government recently imposed sanctions on seven LNG carriers tied to the Novatek-operated Arctic LNG 2 and Yamal LNG projects in Russia. The Department of State said in a statement on August 23 that these new sanctions are targeting shipping companies that loaded and transported LNG from the Arctic LNG 2 project and Russia's procurement of LNG tankers. The UK government also recently imposed sanctions on five LNG carriers and two associated entities linked to Russian LNG exports, including from the Arctic LNG 2 project. Novatek denied it is establishing a "shadow fleet" of LNG carriers to transport LNG from its Arctic LNG 2 project. "The allegations made in the media, namely that the company is involved in the establishment and management of a shadow fleet, as well as in loading products from the Arctic LNG 2 project, are untrue and do not stand up to facts," the company said. Source: www.lngprime.com

# QUEENSLAND LNG PRODUCERS MAY NEED TO COMMIT MORE GAS TO DOMESTIC MARKET

Queensland LNG producers may need to commit more gas to the east coast market to mitigate the risk of shortfalls, according to the Australian Competition and Consumer Commission (ACCC). The gas supply surplus in the Australian east coast gas market is forecast to be between 12 and 27 petajoules (PJ) in the first quarter of 2025, ACCC said in its latest gas inquiry report. ACCC said the exact size of the surplus would largely depend on how much uncontracted gas is exported by Queensland LNG producers. Curtis Island off Gladstone is home to the Santos-operated GLNG plant, the ConocoPhillips-led APLNG terminal, and Shell's QCLNG facility. These are the only LNG export facilities on Australia's east coast. ACC said the new forecast for the supply surplus has fallen from the predicted surplus of 26-35 PJ, in its June 2024 gas report. "This is largely due to an increase in contracted exports for this quarter and reflects the LNG producers' 're-shaping' of export cargoes between the domestic peak and off-peak gas demand periods," it said. The re-shaping of export volumes assists in meeting demand variations, when LNG producers may increase their export cargoes during periods of lower Australian demand for gas and may increase domestic supply during periods of peak demand in the Australian winter months, it said.

# Additional gas

ACCC said surplus gas in the first quarter is needed to help re-fill southern gas storage facilities in preparation for the Australian winter, and to mitigate against unexpected increases in demand for GPG and/or disruptions to supply in the southern states. Moreover, the watchdog said the estimated minimum surplus of 12 PJ (if the LNG producers export all of their uncontracted



gas) will be important for the east coast market to help re-fill storage facilities and provide a buffer for other market risks. Given uncertain demand for GPG and the risk of disruptions to southern states production, the LNG producers may need to commit more gas to the east coast market in the first quarter of 2025 to mitigate the risk of shortfalls, ACCC said. The LNG producers are estimated to have 15 PJ of uncontracted gas available. As part of the heads of agreement requirements, the LNG producers are obliged to offer uncontracted gas that could be sold as spot or additional LNG cargoes to the Australian domestic market first, before offering it to the international market, ACCC noted. The LNG producers' actual exports for the first guarter of 2025, and hence the actual volumes of uncontracted gas available, will likely be finalized by the producers shortly, ACCC said. Source: www.lngprime.com

## NEW TMS LNG CARRIER NAMED IN SOUTH KOREA

Greece-based shipping firm TMS Cardiff Gas has named the first in a series of newbuild liquefied natural gas (LNG) tankers in South Korea. TMS announced the naming ceremony of the 174,000-cbm Athos LNG in a social media post on Friday. Samsung Heavy Industries built the LNG carrier at its Geoje yard. According to TMS, the vessel is equipped with MAN ME-GA propulsion, a shaft generator, and an air lubrication system. Athos LNG is set to embark on a multi-year charter with Osaka Gas International Transport, a unit of Japan's city gas supplier and LNG importer Osaka Gas. VesselsValue data shows that TMS ordered this LNG carrier and another vessel at SHI in May 2022. TMS paid about \$231 million per vessel. The data shows that TMS has seven LNG carriers on order at SHI and Hanwha Ocean scheduled for delivery by 2027. In May 2021, TMS Cardiff Gas took delivery of LNGShips Manhattan, wrapping up its 2020-2021 newbuild program which included eleven 174,000-cbm vessels. The company's website shows that its fleet also includes four 2014-built ships, the 2004-built Fuji LNG, and the 2006-built Condor LNG, source: www.lngprime.com

# PONANT'S LNG-POWERED VESSEL IN NORTH POLE FIRST

Ponant's LNG-powered polar cruise and exploration vessel, Le Commandant Charcot, has recently reached the North Pole of Inaccessibility. French luxury cruise operator Ponant says this is a milestone in the history of navigation. According to Ponant, Le Commandant Charcot reached the location on September 12, becoming the first ship to reach the legendary North Pole of Inaccessibility. While taking the Transpolar route from Nome, Alaska, to Longyearbyen, Spitsbergen, the 150 meters long LNGpowered vessel also crossed the Magnetic North Pole on September 13 and the Geographic North Pole on September 15. On board, 20 international scientists are on a mission to collect critical data in this unexplored area, Ponant said. Ponnant noted the North Pole of Inaccessibility is defined as the point on the vast Arctic Ocean that is furthest from land. First described in 1909 by the Russian polar explorer Alexander Koltchak, the exact geographic coordinates were established in 2013 by Jim McNeill with the help of NASA and satellites: 85°48' North, 176°09' East. It is located at 1,465km from Utqiasuk in Alaska, 1,390km from Franz Josef Land in Russia and 1,070km from Ellesmere Island in Canada. For comparison the Geographic



North Pole is around 700km from land. In 1927, Hubert Wilkins flew over this Pole of Inaccessibility for the first time in a plane, but no-one had ever set foot on it, Ponant claims.

## Delivered in 2021

In July 2021, Norway-based Vard, a unit of Italy's Fincantieri, delivered Ponant's LNG-powered vessel. Vard completed the luxury vessel at its yard in Søviknes, Norway. The ship designed for intense polar explorations previously arrived from Vard Tulcea in Romania. Featuring a 270-passenger capacity, Ponant claims this is the world's first LNG-powered, hybrid-electric passenger vessel to navigate in polar waters. In addition, the BV-classed ship has Icebreaker 3 and POLAR CAT-A service notations and features POLAR CLASS 2. The vessel has Wartsila's dual-fuel engines and two GTT's Mark III membrane technology tanks for a total capacity of 4500 cbm, enabling it to complete its entire voyage on LNG.source: www.lngprime.com

DISCLAIMER: The news, opinions, reports, updates and data or views contained on the Reports page may not represent the opinions or views of CYGNUS ENERGY, ITS OWNERS, ITS employees or its agents or affiliates. CYGNUS ENERGY makes no representation, warranty or guarantee as to the accuracy or completeness of the information contained in any News, Research, Analysis or Opinion provided by this service. the information has been taken and credited and cited to the sources as per the citation given in the report/newsletter herein. Under no circumstances will CYGNUS ENERGY, its owners, employees, gents or affiliates be held liable by any person or entity or institution or company for decisions made or actions taken by any person or entity that relies upon the information provided here. While every care has been taken to ensure that the information in this and do not necessarily reflect the views of any other associated company. NEWS AND SOURCE- I NGWORI DNEWS I NG INDUSTRY NATURAL GAS WORLD I NG JOURNAL RIVIERAMM. THE HINDURIUSINESS. ARGUS MEDIA. PETROWATCH. RELITERS. IGIJ I NG REPORT. TRADEWINDS MONEYCONTROLLING JOURNAL, RIVIERAMM, LNG JOURNAL

# CYGNUS ENERGY GAS & OIL

LEVEL 43/44, CHAMPION TOWER, 3 GARDEN ROAD, CENTRAL, HONG KONG SANDP@CYGNUS-ENERGY.COM (SALE N PURCHASE) GAS@CYGNUS-ENERYG.COM (GAS PROJECTS)