# CE CYGNUS ENERGY GAS&DIL LNG NEWS WEEKLY 4<sup>TH</sup> AUGUST '24



# NYK OFFERS 16-YEAR-OLD STEAM TURBINE-DRIVEN CARRIER FOR SALE

Japanese shipowner NYK is offering a middle-aged steam turbine-driven LNG carrier for sale in a market where several older ships are on the sales block. Brokers said the 149,700-cbm Grace Cosmos (built 2008) is open for offers. The South Korean-built, membrane-type vessel is listed as having passed its last special survey in March 2023. The LNG carrier, shown as deployed by Japanese utility Kyushu Electric, is being offered for delivery at the end of this year or early in 2025 on a charter-free basis. Bids on the ship are due on 5 August. Brokers valued the vessel at between \$50m and \$60m. But they said some ships of similar size and vintage have netted premium prices on this after being sold to new Middle East-based entities. It has emerged that Tsakos Energy Navigation achieved \$79.8m on its 149,700-cbm LNG steamship Neo Energy (built 2007). The vessel, which has since been renamed New Energy, is now listed under the control of Dubai-based Nur Global Shipping. The Grace Cosmos is one of three LNG carrier newbuildings ordered on a charter-free basis when the Japanese owner and its key competitors were experimenting with playing the shorter-term and spot charter market. NYK contracted a trio of ships — the Grace Acacia, Grace Barleria (both built 2007) and Grace Cosmos — which were managed under NYK's UK-based subsidiary, formerly known as NYK Energy Transport (Atlantic). The vessel is one of the larger, more modern LNG steamships.

# <sup>□e</sup>Cygnus Energy

Brokers have said there is increased interest from second-hand buyers for vessels offering larger capacities of 150,000 cbm and above, especially for conversion projects. But the ship is still likely to compare as inefficient and small against its more modern cousins. Clarksons' Shipping Intelligence Network gives the vessel an operational estimated Carbon Intensity Indicator rating of E for the past three years, including 2024 to date, compared with a sector average rating of C for 2023. In 2016, NYK put the sister ship Grace Acacia up for sale when the vessel was just 10 years old and had been redelivered by its French charterer. But the vessel remained unsold the following year and today all three LNG carriers appear to remain with NYK. NYK has been particularly active in contracting LNG carrier newbuildings, plunging in vessels for its own account presumably with an eye on upcoming charter business — and in big-picture tenders like those run by QatarEnergy. Company officials have spoken about NYK ramping up its LNG carrier fleet to 120 vessels by 2027. The Grace Cosmos joins a raft of steam turbine LNG carriers that are being tested in the sales market as shipowners move to renew their fleets. Earlier in July, Middle Eastern shipowner Adnoc Logistics & Services offered for sale its Moss-type, 137,500-cbm LNG carrier Ghasha (built 1995). It said the company is open to trading or demolition offers on the Japanese-built vessel, which ranks among the first generation of older and smaller LNG steamships. In June, shipbroker Fearnleys highlighted anticipated "numerous redeliveries" of vessels to independent owners towards the end of this year and into 2025. This primarily involves older steam turbine LNG tonnage seeking new charter coverage. The broker suggested that some of these vessels might be laid up or scrapped. Just two LNG carriers have been sent for demolition so far this year. The Indonesian-controlled 19,474-cbm steam turbine-driven Surya Aki (built 1996) was sold to cash buyers for \$655 per ldt on an "as is" basis in Batam, Indonesia. SK Shipping sold its 127,125-cbm, Moss-type steam turbine-driven YK Sovereign (built 1994) for scrap. The vessel was later resold by its cash buyers and is due to arrive in Alang on 1 August. source: www.tradewindsnews.com

# EUROPEAN WATCHDOG PROBES CYPRUS' DELAYED FSRU

Cyprus' much-delayed €542m (\$587m) floating storage and regasification unit-based import terminal project is to be investigated by the European Public Prosecutor's Office (EPPO) as the FSRU for the development languishes in China. The independent office of the European Union, which investigates and prosecutes crimes against the financial interests of the EU, said it had opened an investigation into the Vasilikos terminal project on suspicion of "procurement fraud, misappropriation of EU funds and corruption". Around €101m of EU funds from its Connecting Europe Facility programme went to the project. The EU has also supplied €230m in loans. The EPPO said construction of the terminal should have been concluded in December 2019 but has not yet been completed. "The investigation was initiated following the publication on 19 January 2024 of a report by the Audit Office of the Republic of Cyprus, regarding possible violations during the procurement procedure and the subsequent execution of the public contract for the LNG project," the body said. "The European Court of Auditors and the European Climate, Infrastructure and Environment Executive Agency (CINEA) also sent reports to the EPPO." It said that after reviewing this information it is opening an inquiry to look into the contracts awarded by the public authorities. The lengthy



delays to Cyprus' import project have become a matter for national debate.In July, it emerged that the Chinese-led consortium building the terminal, China Petroleum Pipeline Engineering Co, comprising Metron Energy Applications, Hudong-Zhonghua Shipbuilding Group and Wilhelmsen Ship Management, had walked off the job. The consortium claimed it had not received payments on time and blamed the developer's lack of experience. Local paper The Cyprus Mail reported that on Saturday Cyprus' energy ministry said it had received a letter from the European Commission demanding it repay almost €68.6m, which had been paid by the EC to Cyprus' Natural Gas Infrastructure Co as part of the €101m in funding. Hudong-Zhonghua has completed the LNG carrier-to-FSRU conversion job for the Cyprus terminal. The FSRU's manager, CNPC CPP, said in a social media post one year ago that the vessel had completed its sea trials. Tracking data appears to show that the FSRU remains near the Chinese yard. Cyprus' Natural Gas Infrastructure Co, which is 70% controlled by the nation's Natural Gas Public Co and 30% by the Electricity Authority of Cyprus, was to own the FSRU, jetty and shoreside infrastructure for the project. Enlink Trading of Dubai is currently listed as the FSRU's owner on the Equasis database. Source: www.tradewindsnews.com

#### WILL THERE BE ENOUGH BUNKERING VESSELS?

The maritime industry faces a critical need for LNG bunkering vessels to meet rising demand and regulatory pressures, necessitating rapid fleet expansion and strategic investment. The maritime industry is undergoing a significant transformation, driven by the increasing adoption of liquefied natural gas (LNG) as a cleaner alternative to traditional marine fuels. As shipping companies transition to LNG to meet stricter environmental regulations, the demand for LNG bunkering vessels has surged. However, this shift raises a critical question: will there be enough bunkering vessels to meet the growing demand? As of 2024, the global fleet of LNG bunkering vessels stands at 59 vessels, with Europe leading the count with 23 vessels, followed by Asia and the Americas. This fleet is expected to expand to 56 vessels by the end of 2024, thanks to 18 vessels currently under construction. However, the current pace of expansion may not be sufficient to keep up with the increasing demand for LNG bunkering services. DNV maritime advisory principal consultant, Martin Wold commented, at the LNG Bunkering & Future Fuel Global Summit 2024 held in Amsterdam, the Netherlands 14-16 May 2024: "The market is coming into a completely new era," with a new LNG vessel entering the market every second day in Asia. Despite this growth, the fleet size needs to triple to meet future demands, particularly in regions with high LNG adoption, like Europe. The variety in tank capacities of these bunkering vessels is striking. The largest vessels boast capacities of up to 30,000 cbm, while the smallest operate with capacities around 160 cbm. This diversity caters to different operational needs, from large container ships that require substantial fuel volumes to smaller vessels needing less. For instance, Crowley Maritime is constructing a 12,000 cbm LNG bunker barge for Shell on the US East Coast, a significant addition to the bunkering infrastructure in the region. Despite the ongoing expansion, there are concerns about whether the increase in bunkering vessels will be enough. Mr Wold highlighted the rapid growth in LNG-fuelled vessels, noting that while the fleet is expanding, it is not fast enough to meet the rising demand. "We expect to see a serious crush and fight for newbuilding slot availability for new LNG bunkering vessels within the next 12

# <sup>ce</sup>Cygnus Energy

months," he stated. This potential shortage is driven by several factors, including high gas prices, regulatory uncertainties, and the slow adoption of alternative fuels, which contribute to the hesitancy in ordering new LNG bunkering vessels. Industry projections indicate that LNG demand will reach 30M tonnes per annum by 2030, necessitating a significant expansion of the bunkering vessel fleet. There are currently 22 LNG bunkering vessels on order and another 21 vessels under discussion, signalling a substantial upcoming fleet expansion. However, even this might not be sufficient to bridge the projected supplydemand gap. The conversion of existing small-scale LNG carriers to bunkering vessels provides some mitigation, but it is unlikely to fully address the gap. Mr Wold also pointed out the key drivers of this demand surge: "The main point is that it is the container ships and pure car carriers that are driving this development right now. But it is noteworthy that the cruise ship fleet is going to double over the next two years." This highlights the sectors within the maritime industry that are rapidly adopting LNG, further increasing the pressure on bunkering infrastructure. Moreover, Mr Wold stressed the critical supplydemand imbalance, noting: "We estimate that LNG bunkering was about 1% of the global marine fuel market in 2023, and it is growing rapidly. We believe it will grow by 400% to reach 11M tonnes of consumption by 2026." This rapid growth underscores the urgency in expanding the LNG bunkering fleet to meet future needs. "There is a very real danger of a clear shortage of vessels in our opinion. And we expect to see that take effect in 12 months from now," he added. In a report on the role of LNG in maritime decarbonization, SEA-LNG highlighted the pivotal role LNG is playing in the industry's shift towards sustainability. The organisation noted: "LNG-fuelled vessels provide a clear pathway to decarbonisation, significantly reducing greenhouse gas emissions compared to conventional marine fuels." This further emphasises the importance of developing a robust LNG bunkering infrastructure to support this transition. To address the potential shortfall in bunkering vessels, several strategies can be employed. Retrofitting existing vessels and accelerating shipyard operations are crucial steps in increasing bunkering capacity more rapidly. Additionally, digital platforms like FuelBoss play a vital role in optimising bunkering operations, improving efficiency, and reducing operational bottlenecks through innovations such as electronic bunker delivery notes (eBDN). "Running these vessels as efficiently as possible can mitigate some of the shortfall," said Mr Wold. Regulatory initiatives also play a critical role in shaping the LNG bunkering landscape. For example, Singapore's Maritime and Port Authority (MPA) has mandated the use of eBDNs starting in 2025, aiming to standardise and streamline LNG bunkering operations. This regulatory push is expected to enhance overall market efficiency and support the growth of LNG as a marine fuel. "Singapore is leading the way with mandatory eBDNs, setting a benchmark for other regions to follow," notes SEA-LNG. Despite the challenges, the future of LNG bunkering looks promising. The industry's commitment to environmental sustainability and the growing adoption of LNG as a marine fuel underscore the need for a robust and scalable bunkering infrastructure. Associations like SEA-LNG and the Society for Gas as a Marine Fuel are at the forefront of promoting safe and responsible LNG bunkering practices. Their efforts in advocacy, standard-setting, and fostering industry collaborations are crucial in supporting the transition



to cleaner marine fuels. Summarising, Mr Wold said: "The maritime industry is entering a new era, and we must be prepared for the triple-digit growth in LNG demand." source:www.rivieramm.com

# WISON NEW ENERGIES INKS LNG CO-OPERATION DEAL WITH CIMC

Chinese offshore contractor Wison New Energies has signed a three-year strategic agreement with Zhoushan CIMC Changhong Shipyard Co Ltd (CIMC Changhong) to provide engineering, procurement, construction, installation, and commissioning (EPCIC) services for floating natural gas facilities. Wison New Energies has leased a facility in eastern China's Zhejiang province for three years following its decision to sell its Zhoushan yard. It will subcontract some of the modules fabrication work to CIMC Changhong, ensuring continuity for its EPCIC projects, specifically floating liquefied natural gas vessels. The deal has a strategic basis. Wison is looking to consolidate its presence in the LNG market and insulate itself from possible Western sanctions around Novatek's Arctic LNG 2 project, where it served as a key manufacturer of liquefaction modules. In June, the company announced it would discontinue working on Russian projects with immediate effect. That decision followed US sanctions on China's Penglai Jutal Offshore Engineering Heavy Industries for its continued deliveries of modules to Russia. CIMC Changhong, a unit of Zhoushan Changhong International Ship Repair, is a large-scale shipbuilding and offshore engineering company with six drydocks varying in dimensions from 240–510 m long and 40–120 m wide. Wison New Energies said these facilities will further expand its production and construction scale, ensuring the company can fulfil forthcoming contracts."This enhancement will specifically boost Wison's proficiency in fabricating large and mega-scale FLNG, FPSO, FSRUs, and other floating facilities," it said. source:www.riveramm.com

# FAIRFIELD CHEMICAL CARRIERS ADDS LNG DUAL-FUEL TANKER

Connecticut-based Fairfield Chemical Carriers, a unit of Japan's MOL Chemical Tankers, has added another LNG dual-fuel chemical tanker to their fleet, the Fairchem Pioneer, as announced by Fairfield Chemical Carriers on July 25 via a LinkedIn post. "We are proud to announce the addition of our second LNG-dual fuel 26,000 DWT vessel, the Fairchem Pioneer, to the fleet," the company stated. The vessel was delivered by Japan's Fukuoka Shipbuilding Co. on July 25. Fairfield Chemical Carriers emphasised that the addition of the Fairchem Pioneer demonstrates their ongoing commitment to sustainability and innovation in the maritime industry. Source: www.naturalgasworld.com

# TURKEY TO SIGN LONG-TERM LNG PURCHASE CONTRACTS, MINISTER SAYS

ANKARA, July 26 (Reuters) – Turkey is set to finalise long-term contracts for liquefied natural gas (LNG) to cover the 2027-2037 period, Energy Minister Alparslan Bayraktar said on Friday. The agreements, aimed at securing approximately 5–6 billion cubic metres of LNG annually, will meet 12–13% of Turkey's energy needs. "We will soon share with the public the details of these long-term LNG contracts for the 2027-2037 period. We are making every effort to finalise the last agreements," Bayraktar



told broadcaster AHaber. Turkey consumes over 50 billion cubic metres of gas per year. Long-term contracts for the supply of Russian gas to Turkey expire in 2025, and Bayraktar in late April announced the formation of a new portfolio of Turkish gas contracts with various global suppliers including Algeria, Qatar, Nigeria and the United States. By securing these LNG supplies, Turkey aims to stabilise its energy imports and reduce dependency on pipeline gas. The country currently relies on a mix of pipeline gas from Russia, Azerbaijan, and Iran, along with LNG imports from various suppliers. Source: www.naturalgasworld.com

# INDIA'S HINDUSTAN PETROLEUM WORKING TO SECURE LNG SUPPLIES FOR CHHARA TERMINAL

India's Hindustan Petroleum, a unit of state-owned ONGC, is working to secure long-term liquefied natural gas supplies for its delayed 5 mtpa Chhara LNG import terminal in Gujarat, according to its management. Asked about the LNG sourcing strategy during HPCL's quarterly earnings call on Tuesday, finance chief Rajneesh Narang said "we are already in the market for tying up long-term gas from international players." He said that HPCL would be undertaking commissioning activities the Chhara LNG import terminal in November or early December. This depends on the weather conditions at the site, Narang said. In April this year, the 2015-built 159,800-cbm, Maran Gas Mystras, arrived at the 5 mtpa LNG terminal in the Chhara port with a cargo from the Punta Europa LNG terminal in Equatorial Guinea. However, the LNG carrier did not unload this commissioning shipment at the facility due to the "rough sea and the swell beyond the permitted limits." Instead, the vessel delivered the shipment to Petronet LNG's Dahej terminal.

#### Breakwater not completed

HPCL's management said during the company's previous quarterly call in May that the company expects to commission the Chhara facility by October this year after this monsoon season ends. Also, HPCL has not yet completed the breakwater for the LNG facility to protect it during the monsoon season which typically lasts from June to September. Simar Port is building these facilities. Narang said during the call on Tuesday "maybe at the end of the next weather season the breakwater would be in place." He said that "around 1000 meters of the breakwater is already completed and around 800 meters more have to be done." Narang also noted that there is a "lot of interest" from parties who are willing to book regasification capacities at the LNG terminal. HPCL will first commission the facility and then it will be signing the regasification agreements, he said.

#### India's eighth LNG import facility

HPCL LNG (HPLNG), a unit of HPCL, built the 5 mtpa LNG terminal with all associated facilities for receipt, unloading, storage, regasification of LNG, and gas supply to the grid. The firm, formerly known as HPCL Shapoorji Energy Private Limited (HSEPL), was incorporated as a 50:50 joint venture between HPCL and SP Ports Private Limited (SPPPL) on October 15, 2013. However, HPCL purchased the 50 percent stake from SPPPL in March 2021, becoming the sole owner of the LNG import facility. The LNG terminal features a 1.2 km long jetty capable of receiving carriers with a capacity of 80,000 cbm to 266,000 cbm, and two LNG storage tanks each with a capacity of 200,000 cbm, according to HPLNG. HPCL previously said that the



pipeline which connects the terminal was mechanically completed. GSPL built the 42km long pipeline which stretches to Gundala and from there it is connected to the gas grid. The Chhara LNG terminal is India's eighth LNG import facility. At the moment, India imports LNG via seven facilities with a combined capacity of about 47.7 million tonnes per year. These include Petronet LNG's Dahej and Kochi terminals, Shell's Hazira terminal, and the Dabhol LNG, Ennore LNG, Mundra LNG, and Dhamra LNG terminal. source:www.lngprime.com

# CROWLEY TAKES DELIVERY OF LNG BUNKERING BARGE CHARTERED BY SHELL

US shipping and logistics company Crowley has taken delivery of a 12,000-cbm LNG bunkering barge which will serve a unit of LNG giant Shell. Fincantieri Bay Shipbuilding in Sturgeon Bay, Wisconsin, built the LNG bunkering barge named Progress. Crowley claims this is the largest US Jones Act-compliant vessel of its kind. The company and Shell NA LNG revealed this project in September 2021, and Fincantieri Bay Shipbuilding started work on the 126.8 meters long vessel in January 2021. Shell's unit will take the barge on a long-term charter. According to Crowley, Progress will expand access to "cleaner energy" for ship operators at the Port of Savannah, Georgia. Progress' technologies include capability developed by Shell and Crowley's engineering services group to flexibly deliver LNG to various types of LNG containment systems, it said. Shell has a worldwide LNG bunkering network, including in the US. In January 2021 Shell completed the first ship-to-ship bunkering operation using Q-LNG's barge, Q-LNG 4000, in Florida. Last year, Shell completed the first LNG bunkering operation in the Caribbean with the 18,000-cbm bunkering vessel, New Frontier 2. Earlier this year, Shell expanded its global LNG bunkering network with the completion of its first operation in the port of Zeebrugge, Belgium. source:www.lngprime.com

#### EDISON WRAPS UP FIRST TRIESTE LNG BUNKERING OP

Italian energy firm Edison, a unit of EDF, has completed the first ship-to-ship liquefied natural gas (LNG) bunkering operation in the Italian port of Trieste in the Adriatic Sea. Edison claims this is the first ship-to-ship LNG bunkering operation in the Adriatic Sea. It is also the first bunkering operation to be carried out by Edison with the 30,000-cbm small-scale LNG carrier, Ravenna Knutsen, it said. Edison has been using this small-scale LNG vessel since 2021 under a charter contract with Knutsen to deliver LNG to the small-scale LNG terminal in the port of Ravenna. During the LNG bunkering operation in the port of Trieste, Ravenna Knutsen delivered LNG to the LNG-powered Nova class cruise vessel, Silver Ray, according to a video by Edison. In May, Germany's Meyer Werft handed over this second LNG-powered Nova class cruise vessel to Silversea Cruises, the ultra-luxury brand of Royal Caribbean Group. Edison said this bunkering operation marks the start of "more" ship-to-ship bunkering operations in the port of Trieste for the 2024 summer season. The company also said it is developing a second coastal LNG terminal in Southern Italy and a second LNG carrier ready for bunkering operations. The number of LNG-powered vessels in operation and on order continues to grow and the global LNG-fueled fleet will rise to 1058 vessels by 2028,



according to DNV's Alternative Fuels Insight platform. There are now 559 LNG-powered ships in operation and 499 LNGfueled vessels on order, the data shows. Besides LNG-powered vessels, there are 56 LNG bunkering vessels in operation and 14 on order. source:www.lngprime.com

### MET INKS NEW FINANCING DEAL TO SUPPORT LNG BUSINESS

Switzerland-based energy trader MET Group has signed a new borrowing base facility to support its LNG and natural gas activities in Europe and beyond. The company said in a statement on Monday the 1.1 billion euros (\$1.19 billion) borrowing base facility (BBF) will be used for its sales and trading segment. According to MET, the facility includes an accordion option to increase it up to a maximum of 1.7 billion euros, allowing MET to accommodate further volume growth or changes in market structure and environment. The facility was structured and led by ING Bank as coordinator, security and facility agent, joined by Coöperatieve Rabobank, Natixis CIB, and Société Générale as active bookrunning mandated lead arrangers, and backed by a pool of 13 additional international banks, MET said. MET said the experience in recent years "clearly demonstrated the importance of adequate, scalable and efficient funding solutions in gas, LNG, and power trading." "This facility, as main financing vehicle of MET's sales and trading segment, continues to be a key pillar in MET's funding framework particularly supporting the import of LNG, the storage and sale of natural gas in Europe and beyond," the firm led by Benjamin Lakatos said.

#### **MET's LNG business**

In March last year, MET signed a new 1.23 billion euros syndicated borrowing base facility to support its growing LNG and natural gas activities. MET recently entered into a 10-year deal to buy US LNG volumes from LNG giant Shell. According to MET, the company's primary objective is to supply its European customers with US LNG. Prior to this contract, MET entered in September last year into a 20-year non-binding deal with US LNG terminal developer Commonwealth LNG to buy 1 mtpa of LNG from the proposed 9.3 mtpa plant in Cameron, Louisiana. Alongside bolstering security of supply for MET's European portfolio, this new "flexible" LNG supply enables its diversification ambitions, allowing the company to extend its geographical scope to new regions such as Asia, MET said. Last year, MET set up an office in Singapore as it works to expand its LNG business beyond Europe. The company has long-term regasification capacity bookings in Germany, Croatia and Spain, and has imported into eight different countries in recent years. This includes countries around the Mediterranean (Greece, Italy, Croatia, Spain), Northwest Europe (UK, Belgium, Germany), and the Nordic region (Finland), MET said. In 2023, MET delivered more than 30 cargoes of LNG 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. source:www.lngprime.com



# NORWEGIAN CAR CARRIERS ORDERS ANOTHER LNG-POWERED PCTC IN CHINA

JP Morgan's Norwegian Car Carriers has ordered one more LNG dual-fuel PCTC at China's CIMC Raffles in Yantai. NOCC CEO Olav Sollie announced the order last week in a social media post saying the company is "ramping up its green fleet for the future". Sollie did not reveal the price tag of the order or the delivery date of the vessel. The LNG dual-fuel pure care truck carrier (PCTC) will have a capacity of 7,000 ceu, such as its two sister vessels. In February, NOCC announced it has entered into an agreement with the shipbuilder for the construction of two car carrier newbuildings with a capacity of 7,000 ceu. NOCC said the vessels are LNG dual-fuel type and ammonia-ready basis from DNV. The company expects to take delivery of the first vessel in 2025 and the second vessel in 2026. According to VesselsValue data, NOCC will take delivery of the third vessel in 2027. The data shows that NOCC will pay \$88 million for each of the first two LNG-powered PCTCs. Last year, NOCC became fully owned by a company advised by JP Morgan Global Alternative's Global Transportation Group. NOCC's website shows it currently has three PCTCs in its fleet built between 2009 and 2017. Two of the vessels have a capacity of 6,500 ceu and one has a capacity of 6,754 ceu. source:www.lngprime.com

### FREEPORT LNG SAYS ALL THREE TRAINS BACK ONLINE

Freeport LNG, the operator of the 15 mtpa liquefaction plant in Texas, has resumed operations at all of its three liquefaction trains. "All three of Freeport LNG's liquefaction trains have been safely restarted," a Freeport LNG spokeswoman told LNG Prime on Monday. "We are now in the process of completing our return to normal production rates," the spokeswoman said. The LNG terminal operator ramped down production at its liquefaction end export facility on Sunday, July 7, ahead of Hurricane Beryl making landfall. Freeport LNG said on July 15 that it expects to restart the first train during that week after the terminal's fin fan air coolers were damaged during Hurricane Beryl. The spokeswoman said at the time that the company plans to restart the remaining two trains "shortly thereafter". Moreover, the spokeswoman said production levels after restart would be at "reduced rates for a period of time" as Freeport LNG continues repairs while operating the facility. Freeport LNG shipped its first cargo after Hurricane Beryl on July 22 onboard the 2024-built 174,000-cbm LNG carrier, Axios II, owned by Capital Product Partners. Of the 15 mtpa of Freeport LNG's export capacity, 13.4 mtpa has been sold to Osaka Gas, Jera, BP, TotalEnergies, and SK E&S. source:www.ingprime.com

# OMAN LNG TO BOOST CAPACITY WITH NEW TRAIN

State-owned Oman LNG plans to add a new liquefaction train at its three-train Qalhat complex by 2029. Oman's Ministry of Energy and Minerals said in a statement on Saturday the new train will have a capacity of 3.8 million metric tonnes per year. "The strategic expansion will boost Oman's production of LNG to 15.2 mtpa, optimize the utilization of the country's available discovered volumes of natural gas resources, while enhancing its LNG export capabilities," it said. According to the statement, Oman's government is now progressing with finalizing the front-end engineering design (FEED) study for this new LNG train



project. This "critical step" is expected to pave the way for the project's final investment decision (FID), it said. The project is expected to be completed and operational by 2029, helping to meet the growing global demand for LNG, the statement said.

#### 173 LNG cargoes in 2023

Oman LNG delivered 173 cargoes of LNG from its Qalhat complex in 2023, down by three cargoes compared to the year before, while its revenue decreased by 15.5 percent year-on-year to \$4.9 billion. Oman LNG delivered 176 cargoes in 2022, 163 in 2021, 155 in 2020, and 166 in 2019. According to Oman LNG's 2023 annual report, out of the 173 LNG cargoes delivered last year 94 percent were contracted cargoes and 6 percent were spot supplies. Oman produced 11.5 mtpa of LNG, exceeding the enhanced nameplate capacity. This compares to 11.5 mtpa in 2022, 10.6 mtpa in 2021, 10.2 mtpa in 2020, and 10.7 mtpa in 2019. Oman LNG operates three liquefaction trains at its site in Qalhat near Sur and the trains maintained an "exceptionally high level", standing at 95 percent, alongside a plant utilization rate of 92 percent last year, Oman LNG previously said.

#### Shareholders and supply deals

Last year, Oman LNG signed shareholding deals with international companies, including Shell and TotalEnergies. Besides Oman LNG and Qalhat LNG shareholding agreements, Oman LNG, in which the government of Oman holds 51 percent, also signed a gas supply agreement with state-owned Integrated Gas Company (IGC) to extend the gas supplies beyond 2024. Oman LNG in collaboration with its shareholders, approved the extension of the company's operations beyond 2024 that linked these key agreements for a period of 10 years from 2025 to 2034 for Oman LNG and 2026 to 2029 for Qalhat LNG. As a result of these deals, Oman LNG secured sales term commitments up to 10.4 mtpa through the execution of term sheet agreements with several buyers and shareholders, expanding the company's footprint into new regions across Asian and European markets. Earlier this year, Oman LNG signed a 10-year SPA with its shareholder TotalEnergies for 0.8 mtpa of LNG from 2025, and a 10-year SPA with Botas for 1 mtpa of LNG. Oman LNG also signed a 10-year SPA for 1.6 mtpa of LNG with its shareholder Shell and it also signed a 10-year SPA for 0.8 mtpa of LNG with Japan's Jera, The LNG producer and German gas importer Securing Energy for Europe (SEFE) also finalized their previously announced LNG deal for 0.4 mtpa of LNG between 2026 and 2029. source:www.lngprime.com

# GREECE'S MARAN GAS WELCOMES NEW LNG CARRIERS IN ITS FLEET

Greece's Maran Gas, the gas shipping unit of Angelicoussis, has added two more newbuild liquefied natural gas carriers to its large LNG fleet. These vessels will serve France's TotalEnergies under charter deals. Earlier this month, South Korea's shipbuilding giant Samsung Heavy Industries hosted the naming ceremony for the 174,000-cbm LNG carriers, Maran Gas Nice and Maran Gas Antibes, according to a social media post by Angelicoussis. CEO Maria Angelicoussis and deputy CEO Sveinung Støhle were present at the ceremony along with executives from TotalEnergies and Samsung Heavy. The BV-classed



vessels have an "environmentally friendly design with innovative solutions, including air lubrication, shaft generators, an LNG sub-cooler, and a new propulsion engine type that reduces the methane slip," Angelicoussis said. "The "Nice" and "Antibes" names represent the historical ties between Greece and France, mirroring the strong relationship between the Angelicoussis Group and charterer TotalEnergies," the group said. According to VesselsValue data, Maran Gas ordered these LNG carriers at Samsung Heavy in May 2021 for about \$186 million per ship.Maran Gas has 45 ships under management and 13 vessels on order, its website shows. In August last year, Maran Gas took delivery of the 174,000-cbm, Maran Gas Marseille, from Samsung Heavy. This vessel also serves TotalEnergies. Maria Angelicoussis and Sveinung Støhle spoke with LNG Prime in November last year about the group's plans on LNG fleet expansion. source:www.lngprime.com

# VENTURE GLOBAL LNG WRAPS UP \$1.5 BILLION SENIOR NOTES OFFERING

US LNG exporter Venture Global LNG has closed its \$1.5 billion offering of senior secured notes. The 7 percent senior secured notes will mature on January 15, 2030 and were issued at par, according to Venture Global. Also, the firm said the notes were secured on a pari passu basis by a first-priority security interest in substantially all of the existing and future assets of Venture Global and the future guarantors, if any, subject to customary exclusions. Venture Global said the notes were not registered under the Securities Act of 1933, or the securities laws of any state or other jurisdictions, and the notes may not be offered or sold in the US. In November last year, Venture Global closed its \$1 billion offering of senior secured notes. The firm said at the time that this offering takes Venture Global's total year-to-date high yield debt raised to \$9.5 billion, which marks the "largest US dollar high yield issuance by volume in a single year since 2015".

#### LNG export terminals

Venture Global currently exports LNG via its 10 mtpa Calcasieu Pass liquefaction plant in Louisiana, which is still in the commissioning phase. The firm is also working to launch production at its Plaquemines LNG export terminal in Louisiana. Venture Global took a final investment decision in May 2022 on the first phase of the Plaquemines project with a capacity of 13.3 mtpa and the related pipeline. It also secured \$13.2 billion in project financing. In March last year, the company sanctioned the second phase of the Plaquemines LNG export plant in Louisiana and also secured \$7.8 billion in project financing. The full project, including the second stage, will have a capacity of 20 mtpa coming from 36 modular units, configured in 18 blocks. Last month, the US Pipeline and Hazardous Materials Safety Administration (PHMSA) last month gave the green light to Venture Global for its proposed Plaquemines LNG uprate project. In addition to these projects, the US FERC has recently given the green light to Venture Global for its proposed CP2 LNG project in Louisiana. The CP2 LNG plant will be located next to Venture Global's existing Calcasieu Pass liquefaction plant. It will have 18 liquefaction blocks, each with a capacity of about 1.1 mtpa of LNG, and also four 200,000-cbm full containment LNG storage tanks. Besides the FERC approval, CP2 LNG also needs the non-FTA export authorization from the US Department of Energy. source.www.lngprime.com

# <sup>ce</sup>Cygnus Energy

### MOLGAS LAUNCHES FIRST LNG STATION IN GREECE

Greece's Blue Grid, a part of Madrid-based small-scale LNG player Molgas, has launched what it says is Greece's first LNG and CNG station for vehicles. Molgas announced the opening of the new LNG/CNG station in Thessaloniki in a social media post on Monday. The firm said the launch of this station will be followed by the opening of stations in Athens, Patras, and loannina. In June last year, Blue Grid revealed plans to build four LNG fueling stations for trucks in Greece. This will be the first network of LNG fueling stations for vehicles in Greece. In addition to fueling stations, Blue Grid recently started supplying LNG to compatriot dairy firm Kolios. Blue Grid says this is the first industrial LNG customer in Greece. The company loads LNG on its semi-trailers at DESFA's Revithoussa truck loading facility and transports it to a storage and regasification station located within Kolios's premises and built by Blue Grid. Molgas, backed by French infrastructure fund investor InfraVia, purchased Blue Grid in 2022. In December last year, Molgas appointed the founder of Athens-based Blue Grid, Sofoklis Papanikolaou, as CEO of the group and he also joined the board of directors of the company. Molgas has significantly expanded its operations in the last four years, including the industrial sector, truck filling stations, and bunkering. Besides Blue Grid, the group completed a deal with LNG giant Shell to buy Norway's Gasnor in 2021, and it also bought last year a 45 percent stake in Dutch LNG supplier Titan. source:www.lngprime.com

# DONSOTANK ORDERS NEW LNG-POWERED TANKER IN CHINA

Swedish shipping firm Donsotank has ordered one more LNG-powered oil and chemical tanker from China's Wuhu yard. According to a social media post by Donsotank, Wuhu will deliver the LNG dual-fuel 22,500-dwt vessel in the middle of 2027. The shipping firm did not provide the price tag of the deal. This will be the fifth sister ship, joining Prospero and Pacifico and the two vessels currently under construction, Donsotank said. Donsotank took delivery of the 22,000-dwt hybrid tanker, Pacifico, in May 2022 and Prospero in December 2021. Designed by FKAB, both of the ice-class 1A ships have Wartsila LNG propulsion and Wuhu also equipped them with a battery pack. Last year, Donsotank ordered two more LNG dual-fuel vessels at Wuhu. This fifth vessel will be constructed and equipped based on the proven design of the four sister ships, Donsotank said. It will feature dual-fuel propulsion (LNG-LBG/diesel), a 500-kWh battery pack, shore power connection, SCR-Catamiser, and a waste heat recovery system. The vessel will have a cargo capacity of 27,800 cbm and it will be 167 meters long and 26.5 meters wide with a draft of 9.4 meters. source:www.lngprime.com

#### SANDP@CYGNUS-ENERGY.COM (SALE AND PURCHASE) (GAS PROJECTS)



# UAE'S WELL-TIMED LNG EXPANSION [GLOBAL GAS PERSPECTIVES]

The UAE last month approved the construction of what will be the country's biggest LNG export terminal, having successfully curbed its domestic gas demand in recent years to free up supplies for sale abroad. National oil company ADNOC took a final investment decision (FID) on the construction of a 9.6mn tonne/year facility in the industrial hub of Ruwais. The greenlight was followed up with agreements in July between ADNOC and BP, Mitsui & Co., Shell and TotalEnergies, giving each foreign company a 10% stake in the project. Moreover, ADNOC has also signed several new long-term sales contracts, including for the delivery of 1mn t/yr of LNG to Shell and 0.6mn t/yr of LNG to Mitsui. These deals bring Ruwais LNG's committed production capacity to 70%. The state-owned company also awarded a \$5.5bn engineering and construction contract in June for the plant to a joint venture consisting of Technip Energies, JGC Holdings and NMDC Energy. The project is expected to come on stream in 2028, joining the UAE's existing LNG facility on Das Island, which has a capacity of almost 6mn t/yr. The terminal started operations back in the late 1970s, with a third train added in 1994.

#### A project that stands out

The decision to go ahead with the Ruwais project stands out for several reasons. Firstly, despite a global LNG supply crunch over the last few years, so far the only major projects to pass approval have been in the US and Qatar. Even though such tight market conditions provided an opportunity for smaller LNG exporters to expand and new players to enter the sector, it is clear that the largest established exports were best-placed to capitalise on the global shortage of supply. Secondly, the UAE chose to build its second LNG terminal in Ruwais despite the risk of shipping in the Strait of Hormuz, the narrow channel between Iran and the Musandam governorate of Oman. Iran has frequently threatened to close down the strait over the years, and tensions are high in light of the Israel-Gaza conflict. Previously the UAE had planned to build its second LNG terminal in Fujairah, providing access to the Gulf of Oman east of the Strait. ADNOC has stressed that gas will be vital as a bridge fuel in the energy transition, helping reduce global coal-related emissions. But it has gone even further in burnishing the project's green credentials. The terminal will have an electric-powered liquefaction system with access to renewable energy supply, which can reduce its operational emissions. Parallel to expanding the UAE's own LNG capacity, ADNOC is also building up its global LNG portfolio. In May, the national oil company acquired a 11.7% stake in the first phase of Next Decade's Rio Grande LNG project on the US Gulf Coast, while also striking a 20-year offtake deal for 1.9mn t/yr of LNG from the project's fourth train. Next Decade took an FID in July last year on Rio Grande LNG's first phase, which will consist of three trains with a combined capacity of 17.5mn t/yr. A greenlight on the fourth train is expected by the end of the year. Also in May, ADNOC bought a 10% equity position at the Area 4 concession in Mozambigue's Rovuma Basin from Galp. The concession contains the operational Coral South floating LNG (FLNG) unit, as well as the planned Coral North FLNG and onshore Rovuma LNG facilities.



#### Freeing up gas for export

The project is only possible thanks to the UAE's successful efforts in recent years to reduce domestic gas demand. The country's gas consumption has risen fast over most of the last few decades, driven by the expansion of its power sector. By 2000, its demand was growing faster than production was increasing, leading the country to start importing supplies three years later from Oman via the AI Ain-Fujairah pipeline. The UAE gained access to Qatari gas thanks to the commissioning of the Dolphin gas pipeline in 2006, which brings North Field gas from Ras Laffan to Taweelah on the UAE's west coast. Even this was not enough, and in 2010, the UAE imported its first LNG cargo, while still maintaining high levels of LNG exports. In a bid to achieve gas self-sufficiency, however, the UAE has been growing its nuclear and solar power generation in recent years. Between April 2021 and March this year, the country has launched four South Korean-built nuclear reactors, boasting a combined capacity of 5,330 MW. Meanwhile, its solar capacity reached 5,925 MW at the end of 2023, according to the International Renewable Energy Agency (IRENA), following the launch of the 2.1-GW AI Dhafra project last November. This is up from a mere 135 MW seven years earlier. Wind power is also gaining traction, following the launch of the country's first farms in 2023, with a combined capacity of 103 MW. All told, the UAE aims to have 14 GW of clean energy capacity, mostly solar, up and running by the end of the decade. As a result, gas-for-power generation, which more than doubled between 2000 and 2010, dropped for the first time in 2020, and fell much more substantially in 2021 and decline has continued. Gasfor-power demand reached a 13-year low in 2023, with nuclear and renewables contributing around 40% of the country's electricity that year, versus only a negligible share just a few years ago. At the same time, the UAE has been expanding investment in gas production. In November 2022, ADNOC announced a five-year investment plan worth \$150bn to enable an "accelerated growth strategy" for oil and gas. At the heart of this plan is sour gas development. In November, ADNOC took an FID on the Ghasha Mega project, the world's largest source gas development, consisting of the Ghasha, Hail, Hair Dalma, Satah, Bu Haseer, Nasr, SARB, Shuwaihat and Mubarraz gas fields. It is expected to yield 1.5bn ft3/d (15.5bn m3/yr) of gas before the end of the decade - which is the equivalent of just under 30% of the country's total output last year. Other key projects in the pipeline include the TotalEnergies-operated Ruwais Diyab onshore gas field, which lies in the Ruwais Diyab unconventional gas concession. Ruwais Diyab is on track for launch next year and should flow 1bn ft3/d of gas by 2030 and around 2bn ft3/d (20.7bn m3/yr) at its peak in 2035. There have also been a steady stream of new gas discoveries in the country over recent years, including the Jebel Ali discovery, containing 80 trillion ft3 of gas, and the smaller Mahani find, in 2020. There have also been important discoveries in Abu Dhabi's offshore Block 2, estimated to have 2.5-3.5 trillion ft3 of recoverable gas. Should the UAE's upstream and power generation projects continue on track, the country should become self-sufficient in gas supply sometime in the latter half of the decade. But it will still continue importing Qatari pipeline gas for longer, as its supply contract does not expire until 2032. These imports currently amount to 2bn ft3/d (20.7bn m3/yr). The



country should therefore have plenty of spare gas to carve out a larger stake in the international LNG market. And the FID is

well-timed, as the market is expected to grow increasingly competitive over the coming years as more supply arrives on the

stage. source: www.naturalgasworld.com

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