

# LNG Unlimited

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## German LNG terminal company for Brunsbüttel project stays optimistic

Joint managing directors named to push Germans to accept LNG to compete with Russian pipelines

LNG News Editor

Germany's main onshore liquefied natural gas import terminal project being developed at Brunsbüttel on the Elbe River south of Hamburg has changed leadership as the joint venture progresses and executives express confidence on completing the nation's first LNG facility.

The Brunsbüttel development company, German LNG Terminal GmbH, said Managing Director Rolf Brouwer, who was seconded by the Dutch shareholder company, storage giant Royal Vopak, to advance the German terminal is returning to the Vopak group.

### Still confident

The joint venture for building and operating the terminal is owned by Vopak, Dutch gas network company Gasunie as well as Oiltanking GmbH, a subsidiary of fuel company Marquard & Bahls AG, based in Hamburg.

"Under Rolf Brouwer's leadership, a stable project company has been developed which is determined to tackle the future plans," said German LNG Terminal.

"Our thanks go to Rolf Brouwer and his team for making this project so successful despite the challenging environment caused by the pandemic," said a statement from the main shareholders signed by Ulco Vermeulen, a board member at Gasunie, René Anghel, Chief Financial Officer of German stakeholder Oiltanking, and Kees van Seventer, President of LNG at Vopak.

Gasunie and Vopak are experienced in the LNG terminal busi-



Project site on Elbe River at Brunsbüttel near the Kiel Canal

ness having developed the Dutch Gate terminal in Rotterdam.

"The foundations have now been laid for the Brunsbüttel project to move with further momentum into the approval procedure phase, followed by its gradual implementation," added the statement.

As of September 2021, the new managing directors will be the current Head of Finance and Administration Philipp Kroepels, aged 48, and Michael Kleemiss, aged 54, who is already well familiar with the project as a representative of shareholder Gasunie.

### Experience

German LNG Terminal said Kleemiss has almost 25 years of experience in the natural gas business both in Germany and in the Netherlands.

He was also Division Manager in the Marketing and Operations Division of the Transmission System Operator, Gasunie Deutschland, and initiated and helped to shape the Germany-wide market area conversion from L-gas to H-gas.

At the moment, he is responsible for Gasunie's corporate strategy and business development in Groningen.

The statement added that joint managing director Philipp Kroepels

has held various commercial and operational management positions in the international energy business for over 15 years in Germany, Southern Europe and the US.

During this time, he was responsible for business development for Brunsbüttel shareholder Oiltanking's parent company, Marquard and Bahls.

Before joining German LNG Terminal in July 2020, Kroepels worked in the US as managing director of the jet fuel division of Marquard and Bahls.

"It's important for us that we maintain continuity in our knowledge of the project and that we successfully implement the project," the shareholding company representatives added.

"With Philipp Kroepels and Dr Michael Kleemiss we have found the ideal candidates," they declared.

### Services

The Brunsbüttel terminal will provide a wide range of services including the loading and unloading of LNG carriers, the temporary storage of LNG, regasification, feeding natural gas into the German natural gas network and distribution of LNG via tank trucks and LNG railcars.

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# US says Henry Hub natural gas and LNG prices to stay high through start of 2022 amid shortages

## LNG News Editor

The US Government forecasts that natural gas prices will remain high in the coming months because of a combination of more demand, lower short-term domestic natural gas production and the effects of Hurricane Ida on Gulf of Mexico output.

Fourth-quarter Henry Hub benchmark natural gas spot prices will average \$4.00 per million British thermal units, a 16 percent increase from its August forecast, according to the short-term outlook of the Energy Information Administration.

### Forecast

The EIA also revised its 2022 forecast of the average US natural gas price to \$3.47 per MMBtu, an increase of 13 percent on the previous forecast.

"Hurricane Ida affected natural gas production at a time when the United States was already experiencing higher natural gas prices due to growth in exports, strong



## LNG export shipments to Asia have risen at higher prices

domestic natural gas consumption, and relatively flat natural gas production," said EIA Acting Administrator Steve Nalley.

"Lost production from the storm combined with these current market conditions has limited our ability to build up natural gas inventories, and we expect that will keep prices higher in the short term than we had previously thought," added Nalley.

Hurricane Ida led producers to close more than 90 percent of natural gas and crude oil production capacity in the Gulf of Mexico re-

gion as the storm approached.

"Significant production and refining capacity remains offline in the region and the EIA expects that production and refining activity will gradually be brought back online through September," added the statement.

US natural gas prices ended August at \$4.33 per MMBtu, bringing the monthly average to \$4.07 per MMBtu, a 77 percent increase over August 2020.

Henry Hub spot prices in August 2021 were \$1.77 per MMBtu higher than in August 2020.

"Steadily rising natural gas prices over the past year primarily reflects the growth in LNG exports and rising domestic natural gas consumption for sectors other than electric power," said the report.

"We forecast Henry Hub prices this winter will reach a monthly average peak of \$4.25 per MMBtu in January and generally decline through 2022, averaging \$3.47 per MMBtu for the year amid rising US natural gas production and slowing growth in LNG exports," stated the US report.

The EIA said it estimated that US natural gas inventories ended August 2021 at about 2.9 trillion cubic feet, which is 7 percent lower than the five-year (2016-2020) average for this time of year.

### Injection season

"Injections into storage this summer have been below the previous five-year average, largely as a result of hot weather and high exports occurring amid relatively flat natural gas production," explained the EIA.

# US LNG exporter Cheniere Energy agrees on long-term financing plan for value and growth

Cheniere Energy, the largest US LNG exporter from its Sabine Pass plant in Louisiana and Corpus Christi facility in Texas, has approved a comprehensive, long-term capital allocation plan to achieve an investment-grade balance sheet, return significant capital to shareholders over time and continue to invest in growth.

"With financial results for 2021 expected at the high end of the guidance ranges, and the substantial completion of Sabine Pass Train 6 now expected in the first quarter of 2022, the company has reached a cash flow inflection point," said the Houston, Texas-based company.

Cheniere said it expected to generate \$10 billion of cumulative

distributable cash flow (DCF) through 2024 with annual run-rate DCF of \$2.6Bln to \$3.0Bln, enabling execution on the balance sheet, capital returns and accretive growth priorities.

The company said the plan was designed to achieve a run-rate DCF of \$15 per share to \$17 per share on a long-term basis, inclusive of the Corpus Christi Stage 3 expansion project.

The Corpus Christi plant currently has nameplate output of 13.5 million tonnes per annum from three Trains, each producing 4.5 MTPA.

The Stage 3 plan is an expansion comprising seven mid-scale liquefaction Trains adjacent to the Corpus Christi project, each with

an expected nominal production capacity of around 1.4 MTPA of LNG.

The total expected minimum production capacity of the seven mid-scale Trains is 9.5 MTPA.

Cheniere said it expected to make a final investment decision on the Corpus Christi brownfield expansion in 2022 once remaining investment and commercial parameters are met.

The company said it would develop further liquefaction growth opportunities at both Sabine Pass and Corpus Christi with a continued commitment to Cheniere's disciplined investment parameters, though gave no specific details.

The company additionally pledged to develop environmental

solutions along the LNG value chain to further enhance the resiliency and sustainability of Cheniere's assets.

"Over the past five years, we have successfully executed on our operating, commercial and financial goals, which now serve as the foundation for this comprehensive capital allocation plan for Cheniere's stakeholders," said Cheniere Chief Executive Jack Fusco.

"The plan is built from our guiding principles of maintaining a strong, sustainable balance sheet, funding financially disciplined accretive growth and returning capital to shareholders through share repurchases and dividends," added the CEO.

## GTT offers smart ship tool for fuel and boil-off

French liquefied natural gas storage technology firm Gaztransport and Technigaz (GTT) has launched a tool for ship-owners, to prepare the voyages of their vessels to reduce overall fuel consumption and to manage boil-off gas in the tanks.

GTT said the new digital “smart shipping” product is called “LNG Optim”.

“For several years, GTT Group has been extending its range of services to support the maritime industry in its digital and energy transformation, with the launch of smart-shipping solutions to optimize the energy performance of ships,” said GTT.

It explained that the “LNG Optim” solution is based on GTT’s expertise in studying boil-off gas management.

GTT said “LNG Optim” was developed in collaboration with the group’s subsidiaries, Ascenz, Marorka and OSE Engineering and has already been adopted by major players in the LNG shipping sector.

The firm added that the studies performed to design the product took into account the modelling of complex phenomena such as LNG ageing, the influence of sea states on boil-off gas generation, as well as the impact of active systems like reliquefaction plants and sub-coolers.

“This new technological innovation from GTT, which is the result of joint work between the different teams of the group, marks our ambition in the very promising ‘Smart Shipping’ field,” said Philippe Berterrotière, Chairman and Chief Executive.

## Dynagas LNG Partners posts profit rise as fleet financing costs decline

LNG News Editor

Dynagas LNG Partners, the small Greek LNG fleet owner with mostly ice-class vessels, reported a 42 percent increase in second-quarter net income, mainly attributable to a decrease in financing costs as all ships remained chartered for the next seven years on average and fleet growth was a possibility.

The Dynagas partnership, listed on the New York Stock Exchange, reported second-quarter net income of \$9.1 million, up from \$6.4M in the same three months of 2020.

### Half-year

Six-month net income to the end of June 2021 jumped to \$24.9M from \$13.3M in the same period of 2020.

The six vessels in the Dynagas fleet are the “Clean Energy”, the “Amur River”, the “Ob River”, the “Arctic Aurora”, the “Yenisei River” and the “Lena River”.

Five of the six carriers have winterized Ice-class 1A classification for delivering through Russian



Dynagas renews Equinor charter contract for ‘Arctic Aurora’

Arctic waters. Only the “Clean Energy” is not an ice-class vessel.

The first three ships on the list have capacity of 149,700 cubic metres capacity vessel and the second three vessels of the half-dozen have 155,000 cubic metres capacity.

Dynagas voyage revenues in the second quarter came to \$33.9M, little changed from the 2020 quarter.

Voyage revenues in the first half fell to \$67.3M from \$68.3M in the first six months of 2020.

Dynagas stated in its earnings

that a new time charter party agreement with entered into with Norwegian energy company Equinor for the employment of the “Arctic Aurora” vessel.

“Under the new time charter, the ‘Arctic Aurora’ is expected to be delivered to Equinor in September 2021 in direct continuation of the current charter party with Equinor, meaning there will be no lapse of time between the current and the new time charter,” explained Dynagas.

## Excelerate of US leads push for more LNG imports for Brazil

Excelerate Energy of the US, the leading global floating storage and regasification unit developer, has reached an agreement to enable more liquefied natural gas imports to Brazil as the nation continues to cope with much reduced hydro-electric power because of drought.

Under an initial agreement with the South American country’s state-owned oil and gas company Petróleo Brasileiro, known as Petrobras, Houston-based Excelerate plans to deploy one of its existing FSRUs to the port of Salvador in the northeast state of Bahia.

The FSRU will handle imported cargoes and regasify them for sale to Brazilian customers once a final deal is verified.

“The Petrobras decision to ad-

vance in the tender for leasing the Bahia regasification terminal to Excelerate is an important milestone in the process of promoting competition in the Brazilian natural gas sector,” said Excelerate Chief Executive Steven Kobos.

“We understand that increasing access to flexible LNG supply is critical to stabilizing Brazil’s energy system, especially during adverse weather events such as the current severe drought,” added the CEO.

Brazil has the largest installed hydro-power capacity in South America, with two thirds of the continent’s total capacity. It also relies on LNG in the Southern Hemisphere winter months when power demand surges.

Brazil overtook the US in 2018 as the world’s second-largest hydro-power producer by installed capacity after China.

The hydropower sector makes up two-thirds of total Brazilian energy capacity and meets more than three-quarters of electricity demand, though can be unreliable when water levels fall in dams and the rivers feeding them.

Excelerate is already an experienced player in the Brazilian market having provided FSRU facilities since 2012.

Petrobras has three terminal locations including Salvador in Bahia, Guanabara Bay in the state of Rio de Janeiro and the port of Pecem in the northeast state of Ceara.

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## NEWS BRIEFS

### Baltic LNG contract

Gazprom has awarded an engineering, procurement and construction contract for the construction of a Baltic Coast liquefied natural gas plant with 13 million tonnes per annum of output within the Gas Processing Complex (GPC) at Ust-Luga, west of St. Petersburg. A consortium comprising Germany's Linde and Turkish company Renaissance Heavy Industries will build the plant and handle the installation of two LNG production Trains. "A technology patented in Russia will be used to produce this LNG," said Gazprom. "The patent holders for the technology are Gazprom and Linde," it added.

### Bangladesh terminal

The government of Bangladesh has short-listed eight global companies, including US and European majors as well as various Japanese companies, to develop the nation's first onshore liquefied natural gas import terminal. The Bangladesh Energy and Mineral Resources Division of the government said it would make the final decision soon on the group chosen to build the facility near the coastal town of Cox's Bazar on the Bay of Bengal.

### BP carbon-offset delivery

BP Singapore said it delivered the UK major's first carbon-offset liquefied natural gas cargo to CPC Corp. of Taiwan at its Yung An import terminal. "This is BP's first delivery of carbon-offset LNG in the Asia-Pacific region, following its first delivery globally to Semptra LNG at the Energia Costa Azul terminal in Mexico in July 2021," said BP. "This new carbon-offset LNG offer strengthens BP's natural gas offering in the region," it added.

## ENN of China boosts profits from existing city-gas and LNG and plans to expand industrial sales

### LNG News Editor

ENN Group, the leading non-state energy company in China with LNG and growing city-gas assets, reported a more than 18 percent jump in first-half profits as revenues soared, boosted by increased business in LNG and in expanding retail, wholesale and industrial gas supply markets.

ENN said first-half core profits increased by 18.4 percent to 3.38 billion Chinese yuan (US\$570 million) from 3.11Bln yuan (US\$481Bln) in the prior-year period.

### Dividend

Profits came mainly from natural gas operations, though ENN has a growing integrated power business.

The company, whose shares are listed on the Hong Kong stock exchange, said earnings per share rose 39.2 percent to 3.34 yuan per share from 2.40 yuan per share in the first half of 2020.

The interim dividend per share came to \$0.59 Hong Kong dollars (US\$0.075).

Profits attributable to owners of the company increased by 39.8 percent to 3.76Bln yuan (US\$583M) from 2.69Bln yuan (US\$417M) in the first half of 2020.

ENN said that first-half revenues jumped 30.7 percent to 41.23Bln yuan (US\$6.38Bln) versus 31.54Bln yuan (US\$4.88Bln) in the first six months of last year.

The company owns the Zhoushan LNG import terminal in the Zhejiang Free Trade Zone in eastern China.

ENN has been doubling LNG storage by adding two more tanks, each with capacity of 160,000 cubic metres.

The company said its retail natural gas sales volumes increased by 22.3 percent to 12.43 billion cubic metres from 10.16 Bcm in the same period of 2020.

"During the period, LNG spot prices surged significantly, driven



Zhoushan LNG terminal located in Zhejiang Free Trade Zone

by strong demand," said ENN.

"The Group seized opportunities in the trading market, utilising its diversified LNG resources to conduct wholesale business and recorded 3.58 Bcm of wholesale volumes during the period," said ENN.

"Surging LNG price drove the revenue growth of the wholesale business to 9.76Bln yuan (US\$1.51Bln), up by 23.3 percent compared with the same period last year," said ENN.

"The Group flexibly deployed its diversified resources portfolio, maximised the profit of the overall natural gas sales business while maintaining the steady growth of its retail gas sales business," the company explained.

ENN said that during the first half it acquired exclusive operating rights of four more city-gas projects which are the Ruyang Industrial Cluster Zone in Henan province, Lvsigang Town of Qidong City in Jiangsu province, the Lantang Industrial New Town in Zijin County of Guangdong province and the Qianjiang Industrial Park of Chizhou in Anhui province.

"These projects consist of high energy demand industries such as glass processing, metal smelting and ceramic production, which will bring more industrial gas sales volume to the Group," said ENN.

ENN said that it currently had a

total of 239 city-gas franchises in 20 different regions and provinces in areas such as in Beijing, Fujian, Guangdong, Guangxi, Hebei, Henan, Inner Mongolia, Sichuan, Shandong, Yunnan, Zhejiang, Shanghai and Tianjin, with a connectable population of 117 million.

ENN said its pipeline natural gas penetration rate rose by 1.4 percentage points to 62.6 percent from 61.2 percent in the prior-year period.

"Most of the group's projects are located in key areas of environmental management such as Beijing-Tianjin-Hebei, Guangdong, Henan, Shandong, Jiangsu, and Zhejiang, where local governments strictly implement environmental protection policies," the company noted.

"At present, the Group has four regular medium to long-term international LNG sale and purchase agreements," said the company.

"The pricing of the international sale and purchase agreements is mainly indexed to the price of crude oil or natural gas," it added.

The Group has established a series of risk management policies and commodity hedging mechanism by hedging a reasonable proportion of planned annual sale and purchase of LNG. This is a means of stabilising the company's commodity price risks.

# Adriatic LNG open season will have November non-binding phase and December binding phase

## LNG News Editor

Adriatic LNG, the company that owns and operates the largest LNG regasification terminal in Italy located 17 kilometres off the Veneto coastline, is launching its open season in September to allocate regasification capacity for up to 25 years.

Adriatic LNG said the open season would consist of an initial, non-binding qualification phase until the end of November 2021 and a second binding phase for the allocation of capacity that is expected to take place in December 2021.

### Med market

"The regasification company is working to realize one of the most important events in the Mediterranean market for the future of the supply of energy to Italy and Europe," said a statement.

"The open season will be an extraordinary opportunity for LNG market players to subscribe to long-term regasification capacity with the leading operator in Italy," it added.

The terminal has been on line since autumn 2009 and is a private operator which enables cargo imports amounting to about 10 percent of the national gas consumption of Italy.

It has so far handled about 800 cargoes at its gravity-based struc-



Terminal has been on line since 2009 and is 17km offshore

ture facilities. The terminal includes two LNG storage tanks, each with a capacity of 125,000 cubic metres.

The terminal includes a regasification plant with four open-rack LNG vaporizers, one heat recovery LNG vaporizer, two cryogenic compressors, four in-tank pumps to pump LNG from the tanks, and five pumps to pump LNG into the vaporizers.

"Developed as a strategic infrastructure for the country for its contribution to the diversification of energy supply, Adriatic LNG at present has contributed to satisfying national Italian needs by delivering more than 73 billion cubic metres of gas to the national gas grid," said the company.

### Suppliers

The cargoes have come from a great variety of carriers from 65,000 cubic metres capacity ves-

sels up to the 217,000 cubic metres capacity carriers from Qatar.

The eight supplying countries so far have been Qatar, Angola, Egypt, Trinidad and Tobago, Equatorial Guinea, Norway, Nigeria and the US.

Adriatic LNG is co-controlled by ExxonMobil Italiana Gas and Qatar Terminal Ltd, a subsidiary of Qatar Petroleum, while Italian gas network operator SNAM has a 7.3 percent shareholding.

The terminal is connected to Italy's natural gas national grid by a 40km offshore pipeline extending from the terminal to a metering station near Cavarzere and an 85km pipeline from Cavarzere to an interconnection with the national grid near Minerbio in the north-central Italian region of Emilia-Romagna, about 15km from Bologna.

The terminal currently has available 1.6 Bcm per annum of

existing capacity. The terminal can be optimized to offer additional capacity of 1.0 Bcm per annum in excess of the existing capacity without requiring any modifications.

On top of that, another 6.4 Bcm per annum of existing capacity will become available in December 2034.

### Regulatory approvals

Adriatic LNG is also working to complete regulatory approvals for the additional capacity and received, on August 18th 2021, an exemption from the requirement of obtaining a full environmental impact assessment.

Adriatic LNG expects to secure all required approvals prior to the beginning of the binding portion of the open season, referred to as binding "Phase 2".

More information for interested parties is available from the Adriatic LNG Web site.

The leaflet provides information about regasification capacity and products that will be offered through the open season, key provisions regulating access to service and capacity allocation, as well as details about bidding phases, valuation and allocation methodology.

The Adriatic LNG open season details are available at [www.adriaticlng.it](http://www.adriaticlng.it)

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## TechnipFMC sells part of LNG firm to Dutch

TechnipFMC has sold 17.6 million shares in Technip Energies, one of the world's leading liquefied natural gas engineering companies, to Dutch firm HAL Investments.

The sale price of the shares was set at €11.15 (\$13.20) per share, yielding total gross proceeds of €196.2 million.

HAL, which has a varied portfolio of international investments and is listed on the Euronext Exchange in Amsterdam, has agreed to a lock-up of 180 days for its shares in Technip Energies.

Upon completion of the sale, representing about 9.9 percent of the issued and outstanding share capital of Technip Energies, TechnipFMC is still left with a direct stake of around 12.3 percent of the shares in Technip Energies.

TechnipFMC completed a spin-off of Technip Energies in February 2021.

Technip Energies is now pursuing its own path as one of the leading LNG engineering companies with current LNG export projects in nations such as Russia, Mexico and Mozambique.

The spin-off reversed the 2017 merger of Technip of France and FMC Technologies of the US, a transaction valued at the time at \$20Bn as it created TechnipFMC as a fully-integrated subsea and onshore provider and Technip Energies as a stand-alone company with the old Technip heritage.

Its portfolio also includes the construction of the world's largest liquefaction Trains in Qatar with 7.8 MTPA of capacity.

In its most recent projects the Technip Energies division of the former TechnipFMC entity constructed Yamal LNG in Russia's northern Siberia region with Japanese partners Chiyoda Corp. and JGC Corp.

## Siemens Energy supports Taiwan transition with LNG regas power

LNG News Editor

Siemens Energy said its HL-class gas-fired power technology is poised to enable particularly low-emission, economical and flexible power generation from mid-2024 for Taiwan's increasing LNG imports.

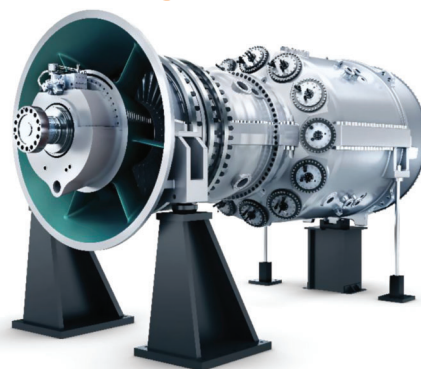
Taiwan in July 2021 signed a new LNG supply with Qatar Petroleum for 1.25 million tonnes per annum of cargoes as the Taiwanese use more of the fuel and expand their infrastructure.

### Importer

Taiwan is still Asia's fifth-largest importer after North Asia's top three of Japan, China and South Korea and with India in fourth place.

The Taiwanese are constructing a third LNG import terminal to meet increasing demand after imports rose 6 percent last year to 17.75 million tonnes.

Under the Taiwan expansion plans, the national energy com-



### Taiwan to benefit from HL-class gas turbine technology

pany CPC Corp. is developing its third LNG import terminal in the Taoyuan district of Datan Borough.

The first phase is under construction and could be completed by 2023. A second expansion phase is also proposed with the target of full commissioning by 2025.

The first expansion of Taiwan's existing Tai-Chung LNG terminal was completed at the end of 2019.

Further work is planned, including the addition of another berth and associated tanks, to be carried out in two phases.

The 1.8 MTPA expansion project at Taiwan's second terminal, the Yung-An facility, including three new storage tanks and related regasification facilities, is expected to be completed by the end of 2026.

Siemens Energy, together with its consortium partner CTCI Corp, the leading Taiwanese engineering, procurement, and construction (EPC) company, will build the Sun Ba Power Phase II combined-cycle power plant.

## Petronas selects BASF process for FLNG acid-gas removal

BASF Group, the German oil and gas and chemicals company, said the latest Malaysian floating LNG production hull owned by Petronas had selected BASF's "OASE purple" process for its Acid Gas Removal Unit.

BASF, headquartered in the Rhine River city of Ludwigshafen, said the Petronas-owned vessel, the "PFLNG Dua", is the first global user of the process.

The German company noted that Petronas successfully started up "FLNG Dua" in February 2021 and completed its performance test run in May 2021.

Petronas, the world leader in FLNG output, said in January 2021 that the "PFLNG Dua" had entered production in a joint venture with Thailand's energy company PTTEP over the Rotan gas field offshore

Sabah. The vessel is deployed over the gas located 140 kilometres off Kota Kinabalu in Sabah state on the northern part of the island of Borneo.

The "PFLNG Dua" was constructed at the South Korean shipyard, Samsung Heavy Industries.

The first Petronas LNG hull, "PFLNG Satu", became the world's first FLNG vessel to start commercial operations in 2017 over the Kanowit gas field offshore Sarawak, another Malaysian state on Borneo.

### Output

The "PFLNG Dua" has production capacity of 1.5 million tonnes of LNG per annum.

BASF said its "OASE purple" process is an amine-based solution that is utilized for the removal of

acid gases such as carbon-dioxide (CO<sub>2</sub>) and hydrogen-sulfide (H<sub>2</sub>S) from natural gas.

The removal of acid gases is necessary to prepare the gas for the liquefaction and subsequent pipeline transportation.

"The highly efficient and environmentally friendly BASF technology provides flexibility and low capital expenditure for its customers," said BASF.

"Additionally, the low energy demand of the process combined with the non-corrosive nature of the solvent keeps operating and maintenance costs (OPEX) low," the German company added.

BASF explained that the process also provided a high level of gas purity and gas recovery while keeping solvent losses to a minimum.



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# Australia's Mineral Resources Ltd makes big gas discovery in future LNG-producing Perth Basin

## LNG News Editor

Mineral Resources Ltd (MRL) of Australia said it had made a "significant" natural gas discovery in the onshore Perth Basin from where other gas producers are planning LNG production and exports.

The company said the discovery was made at the Lockyer Deep 1 project in the Perth Basin, near the town of Mingenew in Western Australia.

### Operations

MRL is mining services company with its own mining operations for several commodities, including iron ore and lithium.

The company, listed on the Australian Securities Exchange, also has an energy unit engaged in exploration and production.

In July 2021, MRL said its wholly owned subsidiary, Energy Resources Limited (ERL), had secured a drilling rig to support conventional gas exploration in WA's Mid-West region.

ERL is operator of the EP368 joint venture and holds 80 percent



Lockyer Deep 1 is near the town of Mingenew in WA

while partner Norwest Energy owns 20 percent. ERL also holds the largest petroleum acreage in the onshore Northern Carnarvon Basin, with the combination of the Perth and Northern Carnarvon Basins providing a total acreage position of 13,629 square kilometres in Western Australia.

Another Australian company Beach Energy, partnered with a subsidiary of Japan's Mitsui & Co., are developing the Waitsia natural gas field in the Perth Basin and have a tolling agreement to liquefy and export the gas at the Woodside Petroleum-operated

North West Shelf liquefaction and gas plant at Karratha.

The Beach Energy project will produce around 7.5 million tonnes per annum of LNG.

### Drilling

Describing the Lockyer Deep discovery, MRL said drilling commenced in late July at the well location.

"Successful exploration to a depth of over 4,000 metres identified a significant gas discovery in the Kingia Sandstone, the primary objective of the well, representing a positive step forward in MRL's

efforts to locate and utilise natural gas to replace diesel fuel in powering its own and other Western Australian mining operations," explained MRL in a statement.

MRL Managing Director Chris Ellison said the update from Lockyer Deep 1 was "an exciting start" to the gas exploration programme.

"As our business continues to grow, we remain committed to pursuing opportunities for natural gas to power our operations, alongside renewable energy sources such as solar and wind," Ellison said.

"This is an exciting step forward in our gas exploration efforts. Now the final depth of over 4,000 metres has been achieved, a wireline logging program will be completed," he explained.

"Positive supporting data from the logging program will result in the well being cased for production testing. A seismic survey planned for later this year will assist in selecting future drilling locations on the Lockyer Deep prospect," Ellison added.

# Western Australian government criticised for neglecting state's LNG and gas in strategy paper

The Australian Petroleum Production and Exploration Association (APPEA) has criticized a report from the Government of the state of Western Australia, the nation's main natural gas producer and LNG exporter, for issuing a Resources Sector Strategy document without mentioning the critical role of natural gas.

The APPEA, the industry association representing oil and gas exploration and production companies, said the WA strategy "lacked any forward-looking initiatives or tangible objectives" and does not acknowledge the critical role that a reliable and affordable supply of energy, particularly that of natural gas, will play in the future.

"While we commend the Gov-

ernment's endeavour to have a strategy, it must be the right strategy," said APPEA WA Director Claire Wilkinson.

The state hosts four world-scale LNG export plants, Gorgon, Wheatstone, North West Shelf and Pluto as well as multiple gas fields providing domestic gas for homes and industry.

"This document falls short. Rather than providing industry with a clear understanding of the Government's priorities for the future, it is instead a collection of already-announced initiatives, most of which relate only to the minerals sector," added Wilkinson.

"We need a strategy that recognizes gas means jobs. We need a

strategy that pulls the right levers so gas can continue to mean economic prosperity for our state and a cleaner energy future," she stated.

### Reliable power

The APPEA pointed out that natural gas already generates more than 60 percent of the electricity produced in WA for homes as well as some of the biggest businesses and industries such as mines and minerals processing.

"We expect support for such critical areas of WA's economy to continue in the decades to come," said Wilkinson.

"In future decades, gas is well placed to support the growth of renewables, development of low-

emission technologies, and enable new energy sources such as hydrogen, but in some areas the policy settings are continuing to drag on WA's investment competitiveness where capital is needed to bring new gas supplies to market," she explained.

"It is a missed opportunity that the strategy does not focus on the future," stated Wilkinson.

"Western Australia cannot rest on its successes of the past and must strive to have in place the right policy frameworks to attract investment and develop new supplies of affordable and reliable natural gas to underpin the rest of the WA economy," she declared.