LNG Unlimited

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LNG importer Italy shows scale European Union gas over-hang

SNAM subsidiary had 9.3 Bcm in storage at the start of January as EU prices dropped

LNG News Editor

SNAM, the Italian natural gas grid and LNG terminals operator, said its gas storage subsidiary had ended the year with nearly 40 percent more gas in storage than at the same time last year as usage was lower and power companies used alternatives to gas in the energy mix.

The SNAM subsidiary called STOGIT, said that at the start of January 2023 it had 9.3 billion cubic metres of natural gas in storage, which was 2.6 Bcm, or 39 percent, more than last year at this time.

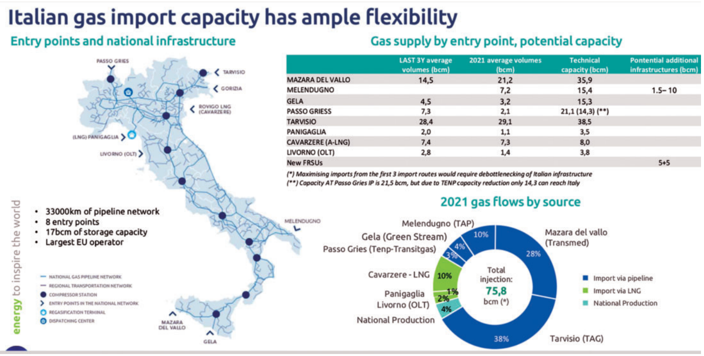
Storage sites

The storage sites were filled up to 84 percent compared with 68 percent at the start of January last year.

The high storage and mild weather led the Italian front-month natural gas futures price, the Punto di Scambio Virtuale (PSV), to hit a seasonal low last week of the equivalent of $22.10 per million British thermal units.

SNAM in addition to owning the STOGIT storage unit also controls two of the nation's three existing LNG import terminal, while SNAM is planning two others using floating storage and regasification units (FSRUs).

The company operates the onshore Panigaglia LNG facility at La Spezia, near Genoa, as well as having a controlling stake in the LNG facility, the "FSRU Toscana", the FSRU moored off the Italian port of Livorno.



Italy's gas infrastructure and pipeline and terminal volumes

SNAM said that the storage facilities of the subsidiary STOGIT in addition to the 9.3 Bcm stored could also count on the 4.5 Bcm of strategic storage in an emergency.

"In percentage terms, the fill rate is approximately 84 percent compared to 68 percent a year earlier," said SNAM

"About 70 percent of the volume of gas is found in the sites in the Po Valley while the remaining 30 percent is in the Abruzzo field of Fiume Treste in the province of Chieti (on the east coast of central Italy)," it added.

SNAM noted that with the winter gas season set to finish at the end of March 2023 it was a "very positive result, made possible not only by the favorable weather conditions and the National Consumption Containment Plan but determined and supported by optimized flow management" by the company.

"In particular, based on the preliminary data for the month of December, gas consumption in the fourth quarter of 2022 amounted to approximately 16.9 Bcm, with a saving of 5.6 Bcm compared to the 22.5 Bcm consumed in the corresponding quarter of 2021," explained SNAM

"This outcome can also be attributed to lower industrial demand and the switch of some utilities to alternative fuels away from natural gas," it added.

At the beginning of last November, a new counterflow storage service was launched, which provided an offer to users of an injection capacity of up to 600 million cubic metres in the November-December period, with supply to be made in the January quarter to March 2023.

"This service was particularly appreciated by operators and was taken up for all available volumes," said SNAM.

Furthermore, amid the uncertainties linked to climate variability and the potential risks of gas supply interruptions, SNAM said it was determined to preserve as far as possible the gas quantities present in the STOGIT storage system and with a view to facilitating the next injection campaign in the absence of EU supplies from Russia.

"Firstly, a storage service was offered to users for the 2023-2024 thermal year up to 500 million cubic metres, which has been fully allocated," said SNAM.

The counterflow initiative was then repeated and extended for the month of January 2023 for another 500 million cubic metres. ■

Mitsui OSK Lines initiates first truck-to-ship LNG bunkering with skid for Sunflower ferry

LNG News Editor

Japan's Mitsui OSK Lines and group company Ferry Sunflower Limited said that the "Sunflower Kurenai" received its first LNG fuel supply at the Port of Beppu in Oita Prefecture.

LNG fuel was supplied via truck-to-ship and this was the first time this method was used. MOL said the fuelling involved a skid being connected to four tank trucks.

'Sunflower Kurenai' is re-fuelled at Port of Beppu in Oita

Larger volumes

"Unlike a conventional method of receiving fuel supply by connecting a single tank truck to LNG-fuelled vessels, the use of the skid enables the ferry to receive LNG fuel from four tank trucks simultaneously, speeding up the process," explained MOL.

The LNG fuel was supplied to the tank trucks by Oita Liquefied Natural Gas Co., a Kyuden's group company.

Niyac Corp. transported the LNG fuel and supplied the volumes to the ferry company.

MOL added that the ferry would be deployed on the Osaka-Beppu route operated by Ferry Sunflower and start commercial service from Osaka to Beppu on January 13, 2023.

"Thereafter, LNG fuel will be supplied when the ferry calls at the Port of Beppu," said MOL.

"The LNG fuel supplied this time will be used for trial operations ahead of the launch of commercial services," it added.

MOL, Ferry Sunflower and Kyuden said they would continue to proactively use environment-friendly LNG as they work to de-carbonise shipping.

MOL ordered Japan's first two LNG-powered ferries from Mitsubishi Shipbuilding in November 2019, the "Sunflower Kurenai" and "Sunflower Murasaki".

The ferries are equipped with high-performance, dual-fuel engines and will provide passengers with comfortable accommodation and reliable schedules.

Capacities

Each of the ferries is able to carry 763 passengers and about 136 trucks and vehicles. Their gross tonnage is 17,300 tons and they are able to travel at 22.5 knots.

Ferry Sunflower is chartering the ferries and will use them on the route from Osaka to the spa resort of Beppu and as replacements for vessels currently in service.

The vessel names are derived from the 'Kurenai Maru' and 'Murasaki Maru', which MOL's corporate forerunner, Osaka Shosen Kaisha, launched on the Osaka-Beppu route in the 1910s.

The Sunflower company is based in Oita in Kyushu and has offices in other cities such as Kobe, Osaka, Kagoshima and Tokyo. ■

Kanfer Shipping of Norway and leading ship agency in Panama sign LNG and fuel accord

Kanfer Shipping AS, one of the leading companies for small-scale gas solutions based in Norway, has signed an accord on establishing an attractive hub for liquefied natural gas bunkering and small-scale LNG distribution in and out of the Central American nation of Panama.

Kanfer's accord in the form of a memorandum of understanding has been signed with CB Fenton, a leading ship agency in Panama and part of the Ultramar (Chile), an international maritime group with business activities in the Americas for port and shipping services and logistics.

"The parties have joined forces and are now seeking a partner in the LNG trading space," they said in a statement.

Initial plans

Panama is among the most important global water ways and a strategic location for bunkering with more than 13,000 ships passing through the locks of the Panama Canal and a significant number of those ships have waiting time before entering the locks.

Kanfer and CB Fenton noted that about 80 percent of the conventional bunkering is done on the Pacific side (Balboa) and for this reason, the companies have agreed to perform a feasibility study for a floating storage unit (FSU) of LNG on the Pacific side of the Canal.

Kanfer and its potential partner said that this FSU would then be a source for smaller ships to supply the growing fleet of dual-fuelled ships with LNG.

They would also distribute the fuel to power intensive industries and power stations in Central America and the West Coast South America.

"We are delighted to partner with Kanfer for such an innovative service," said CB Fenton's Chief Executive Marco A. Guerra.

"An LNG bunkering and distribution hub in Panama is in line with our sustainability strategy and will add value to the trade lanes using the Panama Canal," explained Guerra.

"Our purpose is to contribute to the quality of life in our region of influence, through facilitating foreign trade," he added.

Kanfer is now aiming to provide much-needed LNG bunkering services in Panama in addition to its previously announced bunkering services in the Egypt-Mediterranean market covering the Suez Canal and the Red Sea.

"We cannot do anything about the LNG prices, but together we can reduce the infrastructure cost considerably," said Stig Hagen, Managing Partner at Kanfer.

"We are confident that Panama will be an important LNG bunkering hub and even though LNG is said to be a transition fuel, we will see more of bio-LNG and synthetic LNG in years to come," added Hagen.

Other partners

CB Fenton and Kanfer confirmed they were now seeking partners to make the business proposition even more appealing to the industry.

"We believe the right partners shall have experience with bunker trading and/or commodity trading and have know-how about LNG or natural gas," they added. ■

Korean yards lead Chinese in LNG ships

South Korean shipyards outperformed their Chinese counterparts in terms of orders for liquefied natural gas carriers during 2022, though finished second to China in overall shipyard orders.

The latest report from London-based shipping specialists Clarkson Research Service showed that the leading South Korean yards led LNG newbuild orders.

The global LNG fleet consisted of 700 vessels at the start of 2022 and is now headed for over 800 ships in the next two or three years.

The Clarksons report had counted a record total of 170 LNG carriers ordered through December 2022, an increase of over 90 percent on the previous year.

However, the overall total was down by about 22 percent from the previous year because of the economic slowdown.

South Korea had retained the world's No. 1 spot in new shipbuilding orders for three years running before falling behind China in 2020.

The Korean yards retained their dominance in LNG carrier newbuild orders, obtaining 10.12 million CGTs worth of LNG carrier orders in 2022, taking up 70 percent of the 14.52 million global total, which was up 130 percent from a year earlier.

Chinese shipyards took the remaining 4.4 million CGTs for LNG vessels with their share reaching 30 percent.

LNG carrier orders obtained by South Korean shipyards accounted for 65 percent of their total orders.

Excelerate Energy FSRU arrives at southern Finnish port of Inkoo

LNG News Editor

Excelerate Energy, the leading US provider of floating LNG import terminals, said its floating storage and regasification unit (FSRU), the "Exemplar", arrived at the port of Inkoo, in Finland to become a Baltic regional supplier of natural gas.

The FSRU was previously loaded with a partial cargo of LNG which would serve as the initial commissioning cargo for the terminal.

Charterer

The FSRU "Exemplar" has been chartered to Gasgrid Finland Oy for a period of 10 years.

"It will provide flexible, reliable, and secure delivery of regasified LNG to Finland and other Baltic countries," said Excelerate.

Inkoo port is located on the Southern Coast of Finland and provides an optimal deepwater port at close proximity to the pipelines distributing the gas mainly to industrial end-users in the Baltic region.

The developer had made the move to enable independence from Russian pipeline natural gas.

The 'Exemplar' will supply gas to Finland and Estonia

The FSRU capacity alone is sufficient for the gas needs of both Finland and Estonia. Russian gas supplies through the Imatra entry point into Finland have been stopped since May 2022.

Finland already has two onshore LNG terminals at Pori and Tornio. They have been in operation since 2016 and 2018 respectively.

Infrastructure

"The arrival of the FSRU 'Exemplar' at the port of Inkoo represents an important milestone for Finland as it prepares to enhance its energy security and bring essential energy infrastructure to the region," said Steven Kobos, President and Chief Executive of Excelerate.

"This is a tremendous accomplishment for everyone involved, and we are proud to have partnered with Gasgrid on this opportunity," added Kobos.

In addition to providing regasification services under the time charter with Gasgrid, Excelerate said that through its recently formed Finnish gas marketing subsidiary, Excelerate Finland Gas Marketing, the US firm has executed an agreement for the sale of commissioning volumes and regasification capacity rights during the commissioning phase.

DNV says LNG-fuelled ships led alternative fuel orders in 2022

European maritime classification society DNV said that liquefied natural gas-fuelled vessels led the way among the 275 newbuild orders made during 2022.

There were orders for 222 LNG-powered ships, which was 81 percent of total orders placed with the world's leading shipyards, according to DNV data.

Vessel types

About 74 percent of these orders were for container vessels and Pure Car and Truck Carriers (PCTCs), while product tankers came in third, representing 9 percent of orders.

DNV said that against all the odds 2022 turned out to be almost on a par with the record year of 2021 for LNG-fueled ship orders, which saw 240 LNG-powered vessels ordered.

The Norwegian class society added that the total count of LNG-fuelled ships in operation and on order now stood at 876.

A total of 104 new LNG-fuelled ships entered operation during 2022, representing 41 percent growth within the sailing fleet.

"A diverse portfolio of LNG-fuelled ships was delivered in 2022, with large crude oil tankers in the lead and container ships in second place," said Martin Wold, Principal Consultant in DNV's Maritime Advisory business.

"Far from all are currently operating fully on LNG fuel but there are geographical pockets where LNG is still competitively priced and being bunkered regularly," explained Wold.

"The underlying growth for LNG fuel is nevertheless very strong and the market will likely return with a boom at some point, with bunkered volumes expected to triple within a very short time span," he added.

Looking ahead DNV expected 2023 to turn out similar to 2022 in terms of newbuild orders for alternative fuels.

Similar to last year, the vast majority of ships ordered with alternative fuels in 2023 is expected to be LNG dual-fuel vessels.

NEWS BRIEFS

Shell profit update

Shell Plc has updated its earnings forecast for Integrated Gas and the other divisions and sees lower liquefaction volumes in Australia. Shell said these lower volumes mainly reflected the longer than expected plant outage at the "Prelude FLNG" plant offshore northwest Australia and "operational issues" at the Queensland Curtis LNG export facility. Shell's adjusted earnings in Integrated Gas will see pre-tax depreciation of $1.2 billion to $1.6 billion. Shell added that its Trading and Optimisation earnings in the fourth quarter were "expected to be significantly higher" compared with the third quarter of 2022.

Occidental boost

Occidental Petroleum Corp., whose main shareholders include US investor Warren Buffett, said it had paid off debts after also completing a $3 billion share repurchase program. "During fiscal year 2022, Occidental repaid over $10.5 billion of debt, including over $1.1Bln in the fourth quarter, reducing the face value of its debt to below $18Bln," said the company. Occidental added that the December winter storm in the US affected production.

Bulgaria LNG talks

The Turkish Minister of Energy and Natural Resources Fatih Donmez has held talks with Bulgarian Energy Minister Rossen Hristov on the European Union nation receiving regasified LNG supplies from Turkey. The talks covered negotiating to reserve a capacity of 1 billion cubic metres per annum from one or more of Turkey's four LNG import facilities and for the volumes to be transferred by pipeline to the Bulgarian border by the Turkish Petroleum Pipeline Corp. (BOTAS) network. ■

Australia calls a tie with Qatar and US as World No. 1 exporter while shipping record high-priced cargoes

LNG News Editor

Darwin LNG plant now awaits start-up of Barossa gas field

Australian LNG exports reached a new record of 81.4 million tonnes in 2022 and the export revenue increased by 86 percent year-on-year to A$92.8 billion (US$63.4Bln) in the 12 months to the end of December because of much higher prices and Australia appeared to tie in volume terms as World No. 1 exporter along with Qatar and the US.

The latest data published by Adelaide-based consultants EnergyQuest showed that the shipments mainly to the Asia-Pacific region were much higher than the 81.1MT logged in the previous year.

Cyclical

"The highly cyclical nature of LNG revenue is demonstrated by the fact that during the peak of the Covid-19 pandemic in 2020 LNG export revenue was only $36 billion," explained the report by the consultancy headed by Chairman Graeme Bethune.

"The huge growth in export revenue in 2022 is set to drive strong growth in taxation and royalties paid by Australian LNG projects, as well as helping pay for Australia's imports," his report added.

Australia continued to be one of the world's largest LNG exporters in 2022, though EnergyQuest stated that the record for the world's biggest LNG exporter in 2022 appeared to have been a photo finish between Australia, Qatar and the United States.

Other data published suggested that Qatar and the US also exported around 81.2MT of cargoes in 2022, marginally less than Australia.

"The rapid growth in US exports since 2016 shows the flexibility of the US energy market, particularly its ability to respond quickly to global crises such as the cuts in Russian gas supplies to Europe," said Bethune in his analysis.

"Ironically, US LNG exports are based on fracture-stimulated shale gas, the development of which is widely banned in Europe and is politically controversial in Australia," he explained.

"The challenges of gas development in Australia are shown by the fact that in the seven years in which the US has gone from being a net LNG importer to a world-leading exporter, Santos has been unsuccessfully trying to develop the Narrabri gas field in NSW," Bethune observed.

"The debacle over approval for drilling wells in the Barossa gas field is another example of challenges in Australia," declared Bethune.

The bulk of Australia's LNG exports continues to come from Western Australia and the Northern Territory, comprising 71 percent of exports in 2022 and up by 2.1 percent on the previous year.

Exports from Queensland were 29 percent of the total, which was 3.3 percent less than in the previous year.

"Australian exports are likely to fall in 2023 while exports continue to grow from Qatar and the United States," said the report.

> **"The rapid growth in US exports since 2016 shows the flexibility of the US energy market, particularly its ability to respond quickly to global crises ..."**
>
> *Graeme Bethune, Chairman,EnergyQuest*

Darwin LNG shut

"Following the depletion of reserves from the Bayu-Undan gas field, the Santos-operated Darwin LNG project will be out of action until the Barossa field comes online, hopefully in 2025," the report added.

"Darwin shipped 1.3MT in 2022. First cargoes from the Woodside-operated Scarborough LNG project are not due until 2026. Any decision to trigger the Australian Domestic Gas Security Mechanism (ADGSM) would also cut exports," it said.

The Australian data showed that the country's biggest LNG customers were Japan with 39 percent of exports followed by China with 28 percent and South Korea with 15 percent.

"Japan and Korea have already publicly expressed concern about any cut to exports and Australia is currently trying to encourage China to allow increased imports of Australian coal," the report noted. ■

Equinor solves upgrade challenge as oil and gas field in Norwegian Sea resumes supply

LNG News Editor

Production from the Njord oil and natural gas field in the Norwegian Sea has just resumed to supply Europe following a landmark upgrading project in which both the platform and the floating storage and offloading vessel (FSO) were brought ashore and overhauled before being towed back to sea and re-fitted to the fields.

Njord is located in the Norwegian Sea, about 30 kilometres west of Draugen and 130 kilometres northwest of Kristiansund in water depths of 330 metres.

Tankers

Produced oil is transported by pipeline to the Njord Bravo FSO and onwards by tankers to the market.

Natural gas from the field is exported through a 40-kilometre pipeline connected to the Åsgard transportation system (ÅTS), and from there to the Kårstø terminal.

The platform and FSO were brought ashore in 2016 after 19 years of production.

In 2017 and 2018, upgrading contracts were awarded for the two installations.

Njord field in Norwegian Sea (Photo: Even Flogstad/Equinor)

The Njord A platform was upgraded at Stord, where it was constructed in the 1990s while the Njord Bravo FSO was inspected prior to upgrade and prepared for tow-out in Kristiansund, whereas the refurbishment was carried out in Haugesund.

Production from the Njord field was initially supposed to resume two years ago.

Norway's Equinor is operator of the field with a 27.5 percent stake while Germany's Wintershall Dea owns 50 percent and with the balance of 22.5 percent held by Neptune Energy of the UK.

However, Equinor admitted that the upgrading project has been more challenging than expected, and the venture was hard hit by the COVID-19 pandemic.

"This has also put an upward pressure on costs," added Equinor.

Final capital expenditures almost doubled during the period to 31 billion Norwegian crowns ($3.15Bln) from the original 17Bln crowns in the plan for development and operation.

Equinor pointed out that the project was still profitable as it was undertaken when oil prices were far lower than today.

Contractors

Norwegian engineering company Aker Solutions had the main responsibility for the platform engineering and upgrading.

Another local firm Brevik Engineering carried out the engineering work for the FSO, which has been upgraded by Aibel.

The Njord oil and gas field was discovered in 1986 and came on stream in 1997 and the Hyme subsea field was tied back to Njord in 2013.

"Our ambition is to produce about the same volume from Njord and Hyme as we have produced so far, more than 250 million barrels of oil equivalent," explained Kjetil Hove, Equinor's executive vice president for Exploration & Production in Norway.

Equinor said that a further 10 new wells would be drilled at Njord from an upgraded drilling facility, while new discoveries have been made at the outer edges of Njord and more exploration would be carried out in the surrounding area.

"In addition, the platform and FSO have been prepared to receive production from two new subsea fields, Bauge and Fenja, with a total of 110 million barrels of recoverable resources," stated Equinor.

German utility signs LNG deal with Sempra

US LNG project developer Sempra Infrastructure has entered into a long-term sale and purchase agreement with a unit of German utility RWE AG for volumes from the Port Arthur project in Texas.

Sempra said that RWE Supply & Trading would receive round 2.25 million tonnes per annum LNG from the Port Arthur LNG Phase 1 project under development in Jefferson County in Texas.

This is among Germany's largest long-term supply deals so far and will help reduce the nation's future LNG cargo expenditure.

The LNG would be delivered on a free-on-board (FOB) basis for 15 years whereby RWE supplies its own ships.

“We could not be more excited to finalize our agreement with RWE as we continue supporting the energy security and environmental goals of our European customers,” said Justin Bird, Chief Executive of Sempra Infrastructure.

“Because of its scale, location and permitting status, Port Arthur LNG is benefitting from a lot of commercial momentum with nearly all the projected off-take capacity for Phase 1 now under long-term agreements,” added Bird.

Andree Stracke, CEO of RWE Supply & Trading, said the Sempra deal was another important step to diversify Germany's natural gas supply and energy security.

“Thanks to the LNG supply contract with Sempra Infrastructure, we can also enlarge our international LNG portfolio,” explained Stracke.

Sempra already operates the Cameron LNG plant at Hackberry in Louisiana and is additionally involved in LNG export ventures in Mexico.

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GTT decides on full withdrawal from Russian storage contracts

LNG News Editor

Gaztransport and Technigaz (GTT), the French designer of LNG storage tanks for ships and for onshore including record licensing orders for LNG carrier membrane tanks, has decided on a full withdrawal from contracts for Russian ships and projects.

GTT has been involved in tank design for 15 ice-breaker LNG carriers currently being built at the Zvezda Shipbuilding Complex (Zvezda) in the Russian Far East and for the design of three gravity-based storage tanks for other projects.

French tanks designer ends ties with Zvezda Shipbuilding

Revenues

The Paris-based company said that as of October 1, 2022, revenues of €74 million ($80M) remained to be recognised for the ice-breaking LNG carriers by 2025 and €12M for the GBSs by 2027, which was a total exposure representing less than 6 percent of the order book.

“Following an in-depth analysis of European sanction packages No. 8 and No. 9 notably prohibiting engineering services with Russian companies, the group announces that it is ceasing its activities in Russia,” stated GTT.

The company explained that as of January 8, 2023, the contract with Russia’s Zvezda would be suspended and GTT's interventions would be limited, on the two most advanced LNG carriers, to ensuring the “safety of the projects” and the “integrity of the technology” in compliance with the international sanctions in force.

With regards to the GBS projects, the terms of GTT's departure are currently being finalised.

GTT added that these elements would have a financial impact mainly from 2023.

“GTT's order book will no longer include projects in Russia in the future. In addition, from 2023 onwards, the group's annual targets will exclude the revenues and EBITDA that would be generated by the last services in progress in Russia,” it added.

The company added that other shipping orders under construction in Asian shipyards, relating to six ice-breaking LNG carriers and two Floating storage units (FSUs), are intended specifically for Russian Arctic LNG projects.

“To date, these projects are proceeding normally. As of October 1, 2022, these orders represented a total revenue of €31M for GTT, to be recognised by 2024,” it said.

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Swiss-based Nord Stream firm wins stay of bankruptcy process

The bankruptcy procedure for Nord Stream II AG, the Swiss-based operator of the Nord Stream II gas pipeline from Russia to Germany under the Baltic Sea, was extended by six more months until July 2023, according to the Swiss Official Gazette of Commerce.

“The applicant was granted a definitive composition moratorium,” said a statement from a court in the Swiss canton of Zug.

“The court grants a definitive moratorium for repayment of loans instead of the provisional moratorium in effect earlier until July 10, 2023,” added the statement.

“Complaints against this decision can be made in writing within 10 days of delivery, stating reasons and submitting specific applications and enclosing the contested decision with the Higher Court of the Canton of Zug,” it said.

The Swiss company Transliq AG was nominated to continue to act as the administrative receiver for Nord Stream II.

Nord Steam II cost €9.50 billion ($10.10Bln) to complete. Its shareholders were Russia’s Gazprom and previously included Shell plc of the UK as well as the German utility Uniper, Austrian energy company OMV and Nord Stream I shareholders, Germany’s Wintershall Dea and France’s Engie.

Explosions were recorded on September 26, 2022, on three lines of Nord Stream I and Nord Stream II pipelines, essentially putting Nord Stream I out of service and ending start-up possibilities for Nord Stream II. The explosions were blamed on acts of sabotage.

Nord Stream II had also suffered what it regarded as delaying tactics led by the European Commission and the new German Social Democrat-Green Party coalition government who said the pipeline did not meet competition laws in the European Union.

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Indonesia approves $3Bln plan for Tuna gas field near coast of the future LNG importer Vietnam

LNG News Editor

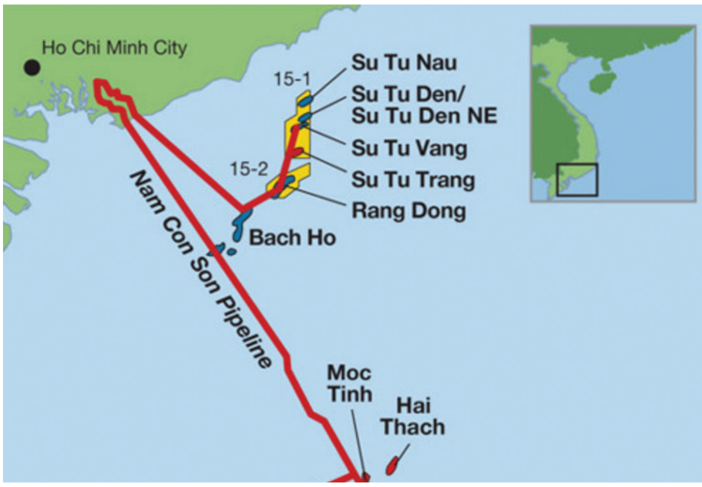
Indonesia, a leading Asian LNG producer, has approved a plan of development for the Tuna offshore natural gas field with total estimated investment at over US$3.0 billion and in the face of continued Chinese claims to sovereignty over most of the South China Sea where the field is located.

The Indonesian upstream oil and gas regulator, SKK Migas, issued a statement saying that the Tuna field, located between Indonesia and Vietnam, is expected to reach peak production of 115 million standard cubic feet per day by 2027.

Harbour Energy

The Tuna field is operated by London-listed Harbour Energy and the natural gas is expected to be exported by pipeline to the future LNG importing nation of Vietnam starting in 2026.

SKK Migas Chairman Dwi Soetjipto said that aside from the economic benefits, development of the project would underline Indonesia's "maritime entitlements" in the region.



New pipeline may connect the field to Vietnam's system

The Tuna field's reserves now stand at more than 100 million barrels of oil equivalent on a gross basis of which 55 percent is gas and 45 percent is liquids.

However, this could be firmed up as the UK-based operator plans to begin reprocessing 3D seismic acquired over the discovery and the surrounding area.

Harbour Energy also operates the Natuna Sea Block A lying near the maritime borders between Malaysia, Indonesia and Vietnam, and is already a major supplier of natural gas to Singapore. That block consists of seven producing fields - Anoa, Gajah Baru, Pelikan, Naga, Bison, Iguana and Gajah-Puteri. These have been developed through a combination of platforms and subsea tiebacks.

In the Tuna offshore block, Harbour has a 50 percent interest in the resources close to the Indonesian-Vietnam maritime border under a licence awarded by the Indonesian Government in March 2007.

The UK company has said it envisaged using a new cross-border pipeline to connect the Tuna area to the existing Nam Con Son pipeline system in Vietnam.

The field lies a long way from domestic market infrastructure in Indonesia, though is only around 15 kilometres (9.3 miles) from the border with Vietnam.

During the appraisal campaign China officially told the Indonesian government to stop drilling at Harbour Energy's Tuna Block in maritime territory that both nations view as their own.

However, Indonesia rejected China's request as it has sovereignty over the maritime area as stated in the UN Convention on the Law of the Sea.

"There will be activity in the border area which is one of the world's geopolitical hotspots," admitted Dwi in his statement.

Indonesian Navy

"The Indonesian Navy will also participate in securing the upstream oil and gas project so that economically and politically, it becomes an affirmation of Indonesia's sovereignty," he declared.

Largest US natural gas producer EQT Corp. cuts emissions to increase global appetite for US LNG

EQT Corp. the largest producer of natural gas in the United States through hydraulic fracturing, has announced the completion of a programme to eliminate methane emissions from natural gas-powered pneumatic devices in production operations.

As a result of the initiative, EQT said it had reduced its methane emissions by 70 percent in the process.

Forecast

EQT believes that US LNG has available feed-gas capacity of as much as 55 billion cubic feet per day available from 2030 to replace international coal production at an unprecedented pace and fully funded by the natural gas industry.

EQT's operations are centred on the Marcellus Shale located beneath large areas of Ohio, Pennsylvania, New York and West Virginia.

The company is the leading developer in the Marcellus Shale with over one million gross acres and about 18.0 trillion cubic feet of proved reserves.

EQT also operates Utica Shale well in Pennsylvania and wells and throughout its Ohio acreage with 0.9 trillion cubic feet of proved Ohio Utica reserves.

"Nearly 9,000 pneumatic controllers were replaced or retrofitted on all EQT production locations and compressor stations through a 'fit-for-purpose' technology strategy using primarily electric actuators and air-compressor installations," EQT.

"As part of the initiative, EQT installed 341 air compressors and retrofitted 451 dump assemblies and 381 motor valves to electric actuators," it added.

"The entire conversion process took just 515 days and was completed a full year ahead of schedule," stated EQT.

The company explained that replacing natural gas-driven pneumatic devices, which are used for managing produced fluids in separators, scrubbers and filters, represents a "meaningful opportunity" for reducing methane emissions within the industry.

EQT said that it found natural gas-powered pneumatic devices were the source of 39 percent of the company's 2021production segment greenhouse-gas emissions.

"We are aggressively addressing methane emission. As the nation's largest natural gas producer, EQT not only delivered on its commitment to eliminate a major source of methane emissions in our operations, we also did it in a cost-effective and expedient way," said Toby Z. Rice, President and Chief Executive of EQT.