

LNG Unlimited

LNG JOURNAL PUBLICATION

25 July 2023

Morocco and Shell sign LNG deal to see regasified cargoes in pipe

LNG will be regasified at Spanish terminals then equivalent sent by Gaz Maghreb-Europe
LNG News Editor

Morocco has signed a liquefied natural gas supply agreement with Shell for a period of 12 years that will initially see volumes shipped as cargoes to Spain and onwards as pipeline gas across the Mediterranean to Moroccan gas-fired power plants.

The UK-based major's subsidiary, Shell International Trading Middle East Limited, signed the agreement with Morocco's state-owned power and water utility company, the Office National de l'Electricité et de l'Eau Potable (ONEE), for the supply of 500,000 tonnes per annum of LNG shipments.

GME Pipeline

"In the first years, LNG will be supplied through Spanish ports and the volumes would be transported to Morocco via the Gaz Maghreb-Europe (GME) Pipeline," explained a government statement.

"Then, the gas can be delivered through future Moroccan LNG terminals," it added.

The existing GME pipeline runs from Algeria through Morocco to the Spanish city of Cordoba and is one of two pipeline links from Algeria to Spain.

Morocco also has plans to prepare port infrastructure for one or more floating LNG import terminals as LNG imports are already restoring gas supplies from reverse flows after Algeria shut its pipeline to Spain via Morocco in 2021.

Algerian gas supplies for Spain are still carried from the Hassi



Chief Executive of ONEE Abderrahim El-Hafidi and Shell's Mehdi Chennoufi signing as Minister Leïla Benali looks on

R'Mel gas hub in Algeria on the Medgaz pipeline via Beni Saf on the Algerian coast to Almeria in southern Spain.

Cooperation

"The Kingdom of Morocco entered the international LNG market for the first time in 2022, thanks to exemplary cooperation and a climate of trust with our neighbours," said Leïla Benali, Morocco's Minister of Energy Transition and Sustainable Development at the LNG signing event.

"This medium-term supply contract will strengthen our energy security, improve our competitiveness and accelerate our decarbonization strategy," added Benali.

Under the Shell agreement Morocco can now have supplies for two key gas-fired power plants operated by the utility ONEE.

The power plants previously operated on pipeline gas sent from Algeria on the GME Pipeline, which had up until November 2021 transported billions of cubic metres of natural gas per annum from Algeria to Spain via Morocco.

The GME pipeline opened in 1996 with a 25-year contract and Morocco was entitled to transit fees paid in gas and which by 2021

had reached 1 Bcm per annum.

In addition, Morocco purchased just over 200 million cubic metres a year of supplemental natural gas from Algeria via the pipeline.

This natural gas was mainly used to power the Tahaddart and Ain Béni Mathar power plants, which represent one-sixth of all Moroccan electricity generating capacity.

Utility plans

The Chief Executive of ONEE, Abderrahim El-Hafidi, was one of the signatories of the Shell deal and was delighted with the accord.

"After having made several purchases of LNG on the spot market in 2022, we are delighted to sign this agreement which is a first for ONEE on the international LNG market," explained El-Hafidi.

"This agreement will enable us to meet part of our needs and guarantee the supply of natural gas to our power stations," he added.

"Natural gas is now a major component of our electricity mix because it offers the flexibility needed to compensate for the massive introduction of renewable energies into our electricity system," the CEO of ONEE stated.

UNLIMITED AGENDA

EXPORTS

US LNG cargo data shows regional mix with Europe, Japan and Americas on list

2

EARNINGS

Baker Hughes posts solid earnings and revenue surge in continued LNG cycle

3

SUPPLY

EU seeks more LNG amid concerns power resilience is being tested by renewables

5

MARKETS

IEA urges more talking between producer and consumer nations on LNG and pipeline gas

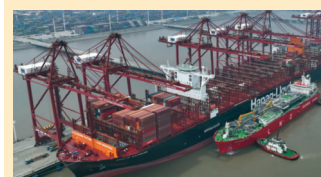
6

UPSTREAM

ExxonMobil in \$4.9Bln purchase to boost CCS in US LNG hub area

7

SHIPPING



US firm completes first LNG bunker at key Chinese port for Hapag-Lloyd

9

US LNG cargo data shows regional mix with Europe, Japan and Argentina leading cargo list

LNG News Editor

The US Department of Energy has published its latest LNG export data showing a regional spread of US shipments with leading monthly destinations including France, the Netherlands, Japan and Argentina as prices steadily declined from 2023 highs, though edged higher on average from the previous month.

The July 2023 DoE data report just issued gives the prices, numbers and trends for May 2023.

It showed that the total number of US cargoes delivered worldwide since March 2016 now amounted to 4,816 shipments, or 15,363.1 billion cubic feet of natural gas.

ISO LNG

A further 1,408 ISO containers of LNG have been shipped to nations in the Caribbean and Latin America from ports in Florida and from Puerto Rico.

The seven operating US LNG export plants dispatched 127 full LNG cargoes in May 2023 versus 110 in the previous month of April and 114 shipments in May 2022.

The Sabine Pass plant in Louisiana remained the volume



Deliveries rising of ISO LNG cargoes to Caribbean region

leader in May 2023 supplying 38 cargoes followed by the now combined Cameron export point's 32 shipments (including split cargoes) from Louisiana.

This included 17 cargoes from Cameron LNG and 15 from Calcasieu Pass.

Freeport LNG in Texas dispatched 28 cargoes, the Corpus Christi facility in Texas shipped 18 cargoes, Cove Point in Maryland sent out 11 shipments and Elba Island in Georgia saw three departures.

In the DoE data the two separately operated export plants are California-based utility Sempra's Cameron LNG and Arlington-based Venture Global's Calcasieu Pass.

Cargoes lifted from the Cameron facilities near Lake Charles cost an average of \$12.87 per million British thermal units in May 2023, which was higher than the combined Cameron price in the previous month of April of \$9.86 per MMBtu.

The Cameron and Calcasieu Pass plants supplied their usual varied array of customers.

Sempra's 17 shipments in May from the Cameron plant at Hackberry comprised three cargoes for France and three for Japan as well as split cargoes.

Among the 15 liftings from Venture Global's Calcasieu Pass plant in May a total of six were directed to Argentina.

The combined average May price for all the seven plants combined was \$7.05 per MMBtu versus \$6.60 per MMBtu for the previous month.

The year-to-date price in May 2023 for all of the plants was lower, however, at \$11.12 per MMBtu versus \$11.38 per MMBtu in the previous month.

The average prices for each of the five other plants (from the export point) from highest to lowest in April 2023 were: Cove Point (Maryland) \$6.32 per MMBtu (\$6.55, April); Corpus Christi in Texas \$5.62 per MMBtu (\$5.51 April); Sabine Pass (Louisiana) \$5.26 per MMBtu (\$5.45, April); Freeport LNG (Texas) \$5.25 per MMBtu (\$5.34, April); and Elba Island (Georgia) \$4.55 per MMBtu (\$4.75 April).

Leading buyers

The Top Five countries of destination, representing 54.4 percent of total US LNG exports in May 2023, were the Netherlands (64.5, 18 cargoes), France (51.7 Bcf, 14 cargoes), Japan (31.2 Bcf, nine cargoes); (Argentina (26.9 Bcf, eight cargoes); and the United Kingdom (25.2 Bcf, seven cargoes).

Israel considers tenders by nine companies for licences in East Med pipeline gas and LNG

The Israeli Energy Ministry said four groups of companies have made bids in Israel's latest tender for offshore hydrocarbon exploration and production as interest grows in the East Mediterranean natural gas and LNG hub.

The Ministry said the groups include a total of nine companies, five of which were new to the Israeli market.

Four zones

They reportedly include companies such as UK-based major BP and the State Oil Company of the Republic of Azerbaijan, known as SOCAR.

Azerbaijan is already a key sup-

plier of natural gas to southern Europe delivered by the Trans-Adriatic Pipeline to countries in the Balkans and to Greece and Italy.

Other bidders are said to include Israel's NewMed Energy and Chevron Corp., which are already producing natural gas and have LNG export plans for the prolific Leviathan gas field offshore Israel.

Israel's NewMed is also the subject of an offer by a joint venture, comprising BP and Abu Dhabi National Oil Company to acquire a 50 percent stake in NewMed valued at around \$2 billion.

Israel has offered licences for four exploration zones made up of

20 blocks in its fourth offshore bidding round.

The bids will be examined in the coming weeks through to the end of August before winners are chosen.

"The scope of the proposals and the diversity of bidders means new companies will explore for natural gas in Israel's economic waters," the Ministry stated.

BP and SOCAR are said to have jointly placed a bid along with Israel's NewMed for two offshore blocks in the licensing round that closed on July 16.

Other bidding companies are said to include Energean, a company listed in London and in Tel

Aviv and which operates the Karish field offshore Israel, as well as Ratio Energies, owner of a 15 percent stake in the Leviathan field.

FID on Leviathan

NewMed earlier in July 2023 took a positive final investment decision for a third natural gas pipeline for production wells in the Leviathan field from where LNG will be exported from a floating production facility.

The expansion of the maximum gas supply capacity from the Leviathan project will also allow the transportation of more gas into the state-owned Israeli pipeline system.

Utility Gasunie boosts income

Gasunie, the Dutch utility and owner of stakes in the Dutch Rotterdam and Eemshaven LNG import terminals and the on-shore German regasification project planned for Brunsbüttel, posted increases in profits and revenues as natural gas markets evolved after the ending of Russian pipeline flows.

Gasunie reported a 23 percent increase in first-half revenues to €1.10 billion (\$1.23Bln) from €897 million in the same six months of 2022.

The Groningen-based utility's net profits rose by 17 percent to €266 million compared with €227M in the same period last year.

"A large part of this increase can be attributed to the EemsEnergy Terminal, which was not yet in operation in the first half of 2022," said the company.

Gasunie's transported volumes declined by 10 percent to 516 terawatt hours from 573 TWh in the prior-year period. The regulated network in the Netherlands and in Germany saw revenues climb by 9 percent and 14 percent respectively.

"With the arrival of the EemsEnergy Terminal and the many energy transition projects Gasunie is working on, energy costs and operating expenses are both rising," said the company.

Gasunie's Dutch subsidiary, Gasunie Transport Services (GTS,) handled 377 TWh of natural gas in the first half of 2023, which was 3 percent less than in the first half of 2022.

Gas storage facilities remained relatively well filled, meaning less gas was needed to be directed to these facilities.

Baker Hughes posts solid earnings and revenue surge in LNG cycle

LNG News Editor

Baker Hughes, the US liquefied natural gas equipment-maker and energy services company, reported solid profits as revenues increased along with orders with an LNG cycle still forecast to extend for several years.

Baker Hughes reported a second-quarter profit to the end of June of \$410M compared with a loss of \$839M in the same quarter of 2022.

The profits were lower by 29 percent than the \$576M posted in the first quarter to the end of March 2023.

The company reported a 25 percent jump in revenues for the three months to \$6.13 billion, up from \$5.04Bln in the prior-year quarter and higher than the previous quarter's \$5.71Bln.

Confident

"Outside of the upstream markets, we remain confident on the LNG outlook, with solid demand growth this year led by Europe and Asia," said Lorenzo Simonelli, Baker Hughes Chairman and Chief Executive.



Chairman Lorenzo Simonelli is upbeat on LNG market

"Based on the continued development of the LNG project pipeline, we still expect the market to exceed 65 million tons per annum of FIDs this year and should see a similar level of activity in 2024," added Simonelli.

"We continue to see the potential for this LNG cycle to extend for several years with a pipeline of new international opportunities expanding project visibility out to 2026 and beyond," the CEO stated.

The company reported a year-over-year 27.5 percent surge in orders to \$7.47 billion for the second quarter from \$5.86Bln in the

three months to June 2023.

Baker Hughes with main offices in Houston and London said the IET business enjoyed another strong quarter in gas technology as momentum for LNG and new energy continues to build.

Order from Bechtel

IET received a "significant LNG order" from US engineering firm Bechtel to supply three Main Refrigerant Compressors (MRCs) for NextDecade's Rio Grande LNG project in the Port of Brownsville, Texas.

Kinder Morgan posts lower profits but steady cash flow amid volatility

Kinder Morgan Inc. (KMI), the leading US pipeline feed-gas company for liquefied natural gas plants and a key energy infrastructure developer, reported lower second-quarter net profits amid steady cash flow as it responded to volatile market conditions.

The company said profits declined to \$586 million during the three months to the end of June from \$635M in the second quarter of 2022.

KMI's distributable cash flow amounted to \$1.07 billion compared with \$1.17Bln in the prior-year quarter.

Asset values

"KMI once again saw the value of its existing natural gas transportation

and storage assets that are able to respond to volatile market conditions caused by extreme weather events and an increasingly intermittent resource-based electric grid," said Chief Executive Steve Kean.

"Our 700 billion cubic feet of operated natural gas storage capacity is particularly useful in back-stopping intermittent renewable electricity resources," Kean explained.

"Financial contributions from the Natural Gas Pipeline business segment were up relative to the second quarter of 2022 and ahead of budget," added the CEO.

"Our Terminals business segment also over-performed relative to both the second quarter of 2022 and budget," stated Kean.

KMI President Kim Dang said

that the performance of the Natural Gas Pipelines business improved in the second quarter of 2023 versus the prior-year quarter.

Dang cited higher contributions from Midcontinent Express Pipeline, the Texas Intrastate system, El Paso Natural Gas (EPNG), the Stagecoach asset and the Tennessee Gas Pipeline (TGP), partially offset by lower contributions from the company's Eagle Ford gathering system assets.

Texas Intrastate

Natural gas transport volumes were up 5 percent year-over-year, primarily from increases on EPNG due to returning a pipeline to service and the retirement of a coal-fired power plant.

Fast Solution for all your LNG Storage & Transport needs.



Factory-built 1,200+ m³ LNG Tanks



40' & 53' ISO Tank Containers



1,228 m³



Railroad Tank Wagons



Marine LNG Tanks

On-site / Factory-Built Storage Tanks, Intermodal ISO Tank-Containers, Tank Trailers, Ship / Barge Cargo Tanks, Railroad Tank Wagons, & more..

Corban Energy Group (CEG), based in New Jersey, USA, has been creating highly engineered products for the natural gas supply chain in the Americas, Europe, and Africa. With its global network of engineers and its manufacturing facilities optimized for building large tanks, CEG has provided unmatched quality and value in LNG equipment for producers, suppliers, and end-users.

Call or e-mail us to find out how your company can benefit from our comprehensive natural gas products and services today.

www.CorbanEnergyGroup.com

CORBAN ENERGY GROUP

Your Solution for LNG/LPG



T. 201.509.8555 info@corbanenergygroup.com
418 Falmouth Avenue, Elmwood Park, NJ 07407, USA

NEWS BRIEFS

UK transmission sale

National Grid plc, whose strategic and widespread assets include the UK Isle of Grain LNG import terminal, has agreed to sell a further 20 percent equity interest in the UK gas transmission and metering business to the existing majority owners, a consortium of long-term infrastructure investors led by Macquarie Asset Management of Australia. The extra 20 percent will give the consortium 80 ownership of the UK gas transmission assets subject to regulatory clearance. Martin Bradley, European Head of Infrastructure for Macquarie Asset Management, said the additional investment underlines the group's commitment to the UK's energy system. "We have been working closely with the National Gas team since January as they have continued to meet the energy needs of millions of households and businesses."

Japex-Norway venture

Japan Petroleum Exploration (Japex), the mainly Asian energy and LNG projects participant, has established a joint venture in Norway with Longboat Energy called Longboat Japex Norge AS. Longboat said that having completed the transaction, a \$100 million financing facility for acquisitions and associated development costs has been established for the venture to draw on.

Indian LNG deals

Indian Oil Corp., the country's main oil refiner and importer and the owner of the LNG import terminal at Ennore in Kamarajar Port in the East Coast state of Tamil Nadu, has signed separate long-term supply agreements with France's Total-Energies and a unit of Abu Dhabi National Oil Company (ADNOC) for a combined 2 million tonnes per annum of deliveries.

European Union seeks increased LNG imports amid concerns power-grid resilience is being tested by renewables

LNG News Editor

The European Union Agency for the Cooperation of Energy Regulators (ACER), whose responsibilities include assessing the prices of LNG cargoes, said that more LNG imports were needed to help energy security amid raised concerns about power-grid resilience in the 27-nation group and about subsidies making its citizens lax on saving electricity.

ACER welcomed the publication of the Supply Outlook 2023 by the European Network of Transmission System Operators for Gas (ENTSOG) and that its scope has been extended to provide an overview of the preparedness for the winter season into 2024.

On LNG imports, ACER said it agreed with the ENTSOG report's focus on continued high delivery levels until the end of the summer season and beyond to compensate for reduced supplies of Russian pipeline gas and to replenish storage facilities.

"However, ACER finds no quantification in the Outlook of the additional LNG imports that would be needed, and notes that apparently ENTSOG's supply assumptions for LNG for 2023 are the same as for 2022, despite the increase of LNG regasification capacities in the Union due the commissioning of new LNG regasification projects," ACER said.

Warning

It warned that Europe "would have to import incremental LNG volumes, which may be challenging and costly" in view of limited additional liquefaction projects becoming operational.

"There is also a possible rebound of LNG demand in Asia. China's LNG requirements are uncertain and will depend on its economic recovery, government policies and coal consumption," explained ACER.



Maasvlakte power hub near the Dutch Gate LNG terminal

"Some suggest that China's potential gas demand growth will be mostly filled by domestic and already contracted LNG supplies, suggesting benign levels of LNG spot prices during 2023," ACER said.

ACER noted that EU members spent €646 billion (\$725Bln) funding price caps, energy savings and finding alternative fuels to the pipeline gas lost by Russia cutting supplies.

On specific issues for winter 2023-2024, ACER welcomed the report's forecast that reaching a 90 percent natural gas storage filling level by September 2023 would enable efficient cooperation between countries.

More measures

"However, a Russian pipeline supply disruption would require additional measures to safeguard a 30 percent target storage level at the end of March 2024," said ACER.

"Under a 'cold winter' (once in 20 years) scenario with a full Russian pipeline supply disruption, which represents the most stressful simulated scenario, additional gas supplies and demand reduction would be required," stated ACER.

"European countries would be exposed to a risk of demand curtailment between 6 percent and 13 percent during the whole winter," it added.

ACER concurred with ENTSOG that gas storage would continue to play a crucial role in balancing the European gas system and to cover peak demand during winter.

"The continuation of the Russian aggression against Ukraine leads to the continuation of gas supply risks, although the EU dependence on Russian gas is currently much lower (approximately 8 percent) compared to the start of the invasion of Ukraine (approximately 40 percent of the EU's gas demand)," ACER said.

The report also explained that "enhanced capacities" provided by TSOs would contribute to the increase of pipeline import volumes from the Caspian region on the Trans-Adriatic Pipeline and from Norway.

There was also an expected benefit from the possibility of better cooperation between Germany and Austria, Belgium, France, Czech Republic, and the Netherlands, resulting in an increase of gas supply flow from West to East in the EU.

The report went on to say that industrial consumers in Lithuania, Latvia and Hungary suffered from more sky-high power prices in 2023 while Germany and France increased their subsidies to alleviate costs paid by companies and household consumers.

The regulator said ultimately that the EU had to "address the challenges imposed by decarbonisation needs and by the needs to ensure security of supply at affordable conditions" and that consumers should be told to ration their power use.

IEA urges closer dialogue between producer and consumer nations on LNG and pipe gas

LNG News Editor

The International Energy Agency said the structure of global natural gas markets has been altered by issues raised by the Ukraine conflict and will require still more closer dialogue between producer and consumer nations to ensure the availability of short-term and long-term pipeline gas and LNG cargo volumes.

The IEA's annual "Global Gas Security Review" also noted that tensions in the gas markets had eased "significantly" since the beginning of 2023.

The report coincided with the 12th LNG Producer and Consumer Conference in Tokyo involving the leading importers and exporters.

That Tokyo event was co-organised by the IEA and Japan's Ministry of Economy, Trade and Industry (METI) and has always provided a forum for discussions between natural gas and LNG producer and consumer countries.

The new IEA analysis noted that deeper coordination among market participants remained essential, given momentous shifts in how gas markets function.

The IEA's latest assessment of market dynamics showed gas markets had moved towards a gradual rebalancing since the start of the year.

High inventories

The report stated that high inventory levels at storage sites in key Asian and European markets provide grounds for "cautious opti-



The Paris-based IEA co-organised the 12th LNG Producer and Consumer Conference in Tokyo for leading importers and exporters to discuss their future strategy

mism" ahead of the 2023-24 winter heating season in the Northern Hemisphere.

"If injections continue at the average rate observed since mid-April, EU storage sites will reach 90 percent of their working capacity by early August and could be filled close to 100 percent by mid-September," said the report.

"However, full storage sites are no guarantee against market volatility during the (coming) winter," the report warned.

The Paris-based body said that there remained "major uncertainties" ahead of the upcoming heating season.

"A cold winter, together with a full halt in Russia piped gas supplies to Europe early in the heating season, could easily renew market tensions," said the report.

"Fierce competition for gas supplies could also emerge if Northeast Asia experiences colder-than-usual weather and economic

growth is stronger than expected in China," the IEA added.

The security of global gas supplies remains at the forefront of energy policy making, with growing complexity for both the short and long term.

LNG surge

"LNG has become a baseload source of supply for Europe, with its share in total EU demand rising from an average of 12 percent over the 2010s to close to 35 percent in 2022 - similar to the contribution from Russia's piped gas before the invasion of Ukraine," said the report.

"Meanwhile, China's balancing role in global gas markets is set to increase," stated the IEA.

The report also explained that the "flexibility of gas supply" needed to be reassessed in light of the phase-out of Russian piped gas exports to the European Union.

As producers and consumers

engage in closer dialogue to address these dynamics, the new IEA report recommended that they should explore the development of innovative commercial offerings, new procurement mechanisms and cooperative frameworks favouring a more flexible supply of LNG.

The new IEA report also includes a special focus on integrating low-emissions gases into energy systems.

"A new global gas market is taking shape after last year's crisis. Given this, responsible producers and consumers must reconsider their approaches to supply security and flexibility, cooperating even more closely," said Keisuke Sadamori, the IEA's Director of Energy Markets and Security.

"Meaningful efforts are also needed to reduce the carbon footprint of gas supply chains, including through greater use of low-emissions gases," added Sadamori.

Japanese demand

The report also focused on some individual nations and on the main regions.

In the case of Japan, the leading LNG importer's gas consumption decreased by 12 percent, or 4 billion cubic metres, in the first three months of 2023.

"Gas-fired power generation in the first three months declined by 16 percent (or 15 terawatt hours) according to data from the METI. This was primarily driven by lower electricity consumption, down by 6 percent year-over-year with improving nuclear availability," said the IEA.

"Japan's nuclear power output rose by 47 percent (or 12 TWh) in the first half of 2023. In addition, city-gas sales for commercial and industrial use decreased by 3 percent and 12 percent respectively," added the report.

"For 2023 Japan's gas demand is forecast to decrease by about 5 percent compared with the previous year," the IEA stated.

LNG Journal Subscription Package

Sign up now for an Online Subscription
at only US\$1190; €920 or £830
Discount options available for multi-users
Contact us for more information

New subscriptions or
general queries:
Stephan Venter
venter@lngjournal.com
+44 207 017 3407

Renew an existing
subscription or upgrade
your package:
Gabi Weck
gabi@lngjournal.com



Santos reports fall in revenues

Australian liquefied natural gas plant operator Santos reported a decline in LNG sales income as production and Asia-Pacific prices fell and the Darwin plant continued to suffer feed-gas issues as the supplying field depleted.

Santos, which operates the Gladstone LNG plant in Queensland and the Darwin facility in the Northern Territory, reported second-quarter sales revenues from LNG and other products of US\$1.33 billion, down almost 29 percent from the US\$1.88Bln posted in the second quarter of 2022 and from US\$1.63Bln in the first quarter of 2023.

Santos shipped just three cargoes from the Darwin LNG plant in the second quarter versus five deliveries in the same three months of 2022 and just one shipment in the first quarter of 2023.

Santos is aiming to replace depleting production from the Bayu-Undan gas field in the Timor Sea by bringing on stream the offshore Barossa gas project to provide replacement feed gas for Darwin LNG.

However, the authorities stopped Barossa drilling activities and suspended environmental clearance to set back the project timing.

"The Bayu-Undan field continued to produce through the second quarter. Gross gas and liquids production was more than last quarter, as a result of increased plant uptime. Production was anticipated to cease in 2023," stated Santos. "The Barossa gas and condensate project to backfill Darwin LNG is 60 percent complete," noted the Adelaide-based company.

Earnings from LNG also declined at the other assets owned by Santos in Queensland and Papua New Guinea.

ExxonMobil in \$4.9Bln purchase to boost CCS in US LNG hub area

LNG News Editor

ExxonMobil Corp., the largest US oil and natural gas major, plans to acquire Denbury Inc., the developer of carbon-capture and storage (CCS) solutions and with assets in the LNG production hub area of the US Gulf Coast, for \$4.9 billion in an all-share transaction.

The offer is for \$89.45 per share based on ExxonMobil's closing price on July 12 and under the terms of the agreement Denbury shareholders will receive 0.84 shares of ExxonMobil for each Denbury share.

"The transaction synergies are expected to drive strong growth and returns for ExxonMobil," said a statement.

The acquisition of Denbury provides ExxonMobil with the largest owned and operated carbon-dioxide (CO₂) pipeline network in the US at 1,300 miles, including nearly 925 miles of CO₂ pipelines in Louisiana, Texas and Mississippi.

Strategic locations

ExxonMobil's acquired assets are located within one of the largest US markets for CO₂ emissions as



CEO Woods said acquiring Denbury reflected carbon plans

well as 10 strategically located onshore sequestration sites.

The Irving, Texas-based company said that a cost-efficient transportation and storage system will help accelerate CCS deployment for ExxonMobil and third-party customers over the next decade and will underpin multiple low-carbon value chains including CCS, hydrogen, ammonia, biofuels and direct air capture (DAC).

"Acquiring Denbury reflects our determination to profitably grow our Low Carbon Solutions business by serving a range of hard-to-decarbonize industries with a comprehensive carbon capture and sequestration offering," said Dar-

ren Woods, Chairman and Chief Executive of ExxonMobil.

"The breadth of Denbury's network, when added to ExxonMobil's decades of experience and capabilities in CCS, gives us the opportunity to play an even greater role in a thoughtful energy transition, as we continue to deliver on our commitment to provide the world with the vital energy and products it needs," Woods stated.

ExxonMobil Senior Vice President and Chief Financial Officer Kathy Mikells, said the major was excited about the acquisition of Denbury and how it would enable strong growth and returns.

Woodside reports drop in income with lower prices and fall in output

The leading Western Australia liquefied natural gas plant operator Woodside Energy reported a 13 percent drop in second-quarter revenues from a year ago as realised LNG prices dropped along with oil and natural gas production volumes.

During the quarter to the end of June, Woodside earned US\$3.08Bln in sales income compared with US\$3.44Bln in the same three months of 2022, including from its one-sixth share of the operated North West Shelf plant, the operated Pluto LNG plant and from its stake in the Chevron-operated Wheatstone LNG facility and other various oil and gas projects.

The earnings were 29 percent

lower than the first-quarter of 2023 when they had amounted to \$4.33Bln.

Hub pricing

The Woodside traded LNG prices dropped to US\$11.0 per million British thermal units from US\$16.7 per MMBtu in the first quarter and US\$21.5 per MMBtu in the same three months of 2022.

The Perth-based company said it sold 31 percent of produced LNG at prices linked to gas hub indices.

Woodside reported overall quarterly production of 44.5 million barrels of oil equivalent (489,000 boe per day), down 5 percent from the first quarter

due to planned turnaround and maintenance activities.

However, production at Woodside had been much lower at 33.77 MMboe in the second quarter of 2022 before the full impact kicked in of the acquisition of BHP Petroleum.

Full-year production guidance remained unchanged at between 180 MMboe and 190 MMboe.

Among its major projects in LNG and oil, Woodside reported that the Scarborough gas field development was 38 percent complete with the trunkline on the way and the module fabrication ramping up for Train 2 at the Pluto LNG plant expansion.



Atlas Copco



In LNG, experience matters

The LNG industry is constantly evolving, and we can help you lead the way. We provide custom-engineered compression and expansion technology that boosts your productivity throughout the LNG value chain. For over 40 years we have engineered advanced process equipment that delivers maximum efficiency in modular, compact packaging. We offer end-to-end centrifugal compressors, screw compressors, turboexpanders, Compander™ and centrifugal fluid pumps customized for every LNG application, from small scale to large scale, onshore and off.

Learn more at www.atlascopco-gap.com

World Fuel Services of US completes first LNG bunkering key Chinese port for Hapag-Lloyd

LNG News Editor

World Fuel Services Corp. of the US has completed a notable liquefied natural gas bunkering operation at a Chinese port with the new Hapag-Lloyd ship “Berlin Express” receiving bonded LNG.

The LNG bunkering operation took place at Ningbo-Zhoushan Port in the Chinese province of Zhejiang.

The fuel was supplied by the Chinese major and LNG player China National Offshore Oil Corp.

Volumes

“During the operation the dual-fuelled and ultra-large container ship ‘Berlin Express’ took delivery of 6,000 cubic metres of bonded LNG fuel in an operation that lasted around 20 hours,” said the US company.



Bunkering at Ningbo-Zhoushan Port in Zhejiang province

The “Berlin Express” is a 24,000 twenty-foot equivalent unit (TEU) ultra-large container ship on its maiden voyage, having been launched in June.

World Fuel Services said it was dedicated to connecting customers with the right suppliers and ports.

“The successful LNG fueling of

Hapag Lloyd’s ‘Berlin Express’ exemplifies the power of collaboration with support from the Ningbo-Zhoushan Port Authority and local supplier CNOOC,” said Mark Tamsitt, Senior Vice President of Marine for World Fuel Services in the region.

“By working together, we can support the movement towards a

more sustainable future in the marine sector,” Tamsitt added.

World Fuel Services is headquartered in Miami, Florida, and is listed on the New York Stock Exchange as a division of World Kinect Corp.

The Miami company is a worldwide supplier of liquid fuels, natural gas, electricity and renewable energy.

Hapag-Lloyd AG is the leading German international shipping and container transportation company based in Hamburg.

“The refueling of our new ‘Berlin Express’ demonstrates great collaboration and innovation to achieve efficient LNG bunkering at a major international port,” stated Jan Christensen, Head of Global Fuel Purchasing at Hapag-Lloyd.

Danish-owned towage company Svitzer wins 15-year contract for Greece’s FLNG terminal

Svitzer, a subsidiary of the Danish shipping group A.P. Moller-Maersk and a leading provider of towage, has signed a 15-year agreement to service Gastrade’s Alexandroupolis Independent Natural Gas System LNG terminal offshore the north-east coast of Greece.

“Svitzer will apply its global terminal towage expertise and experience to rapidly set up towage services and support for advanced LNG operations at the new import terminal,” Svitzer said.

“This includes supporting a Floating Storage Regasification Unit (FSRU) with a pipeline system connecting the floating unit to the Greek National Natural Gas Transmission System and onwards to final consumers in Greece and the Balkans,” explained Svitzer.

Svitzer said it would provide four new Azimuth Stern Drive (ASD) tugboats, fully manned by Greek crew, to assist the FSRU and the carriers delivering LNG.

The Svitzer tugboats are designed for push-pull, harbour assisting and escort towing operations up to 150-tons towline forces.

Co-financed

The Alexandroupolis LNG terminal project is co-financed by the European Regional Development Fund of the European Union.

Its five shareholders have 20 percent stakes each and comprise Ms Elmina Copelouzou, the Chairwoman of Gastrade, the Greek shipping group GasLog, the Greek gas company DEPA Commercial, Bulgartransgaz of Bulgaria and DESFA SA, Greece’s natural gas Transmission System Operator.

“The tugboats will provide berthing, un-berthing, navigation assistance, and other terminal services including firefighting, pollution control, pilot and boarding party transfer,” Svitzer explained.

Svitzer will also provide support and station-keeping services to the

FSRU during initial installation.

“The project marks Svitzer’s first entry into the Greek market and will see the company apply its knowledge and skills in the local environment,” the company added.

The deal will result in the creation of both onshore and offshore job opportunities based at the terminal in Alexandroupolis.

Recruitment

Svitzer said that while the Alexandroupolis FLNG terminal was set to become operational in the beginning of 2024, the company had already initiated the recruitment process “to ensure staff undergo robust training in line with Svitzer’s operational and safety standards” ahead of operations commencing.

“Training will include the use of advanced tug simulators replicating the actual environment around the Alexandroupolis LNG terminal,” it said.

Svitzer noted that it had more

than 25 years of experience as a leading towage provider for customers in the global LNG market.

“We are delighted that Gastrade has chosen us as its trusted partner to deliver towage services for the Alexandroupolis LNG terminal,” said Lise Demant, Managing Director of Svitzer Europe.

“The long-term agreement will allow Svitzer to grow within its core business, expand geographically and deliver safe and efficient marine services to a new customer,” Demant stated.

A main gas user will be the Alexandroupolis Power Plant being built by a consortium of Greece’s major energy players including DEPA and the Copelouzou Group.

The power plant will be directly connected to the FSRU import project led by Greek company Gastrade and with the vessel being provided by one of the world’s leading LNG carrier companies GasLog.



NEXUS OF CLEAN™

"Chart's vision is to be the global leader in the design, engineering and manufacturing of cryogenic process technologies and equipment for the Nexus of Clean™ — **clean power, clean water, clean food and clean industrials**, regardless of molecule."

A handwritten signature in black ink, likely belonging to Jill Evanko.

JILL EVANKO / CEO / CHART INDUSTRIES

CLEAN CLEAN CLEAN CLEAN

 CHART DELIVERS CLEAN SOLUTIONS FOR



Power



Water



Food



Industrials



Learn more at chartindustries.com