LNG Unlimited

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Sustained oil and gas investment is more important than ever - ExxonMobil

In the absence of new investment in natural gas, global supply would decline by around 11% per year, resulting in a shortfall of about 250 bill cu ft per day by 2030, or about half of projected global demand, a new US energy report claimed.

Limiting investment to only existing fields would slow the decline to about 3% per year.

In its latest 'Energy Outlook to 2050', ExxonMobil warned that oil and natural gas supply from producing wells naturally declines over time, which requires investment in new and existing fields to meet demand across various scenarios.

As the world's demand for oil and gas remains strong, sustained investments are more important than ever, the US energy giant said.

Sustained investment in finding and developing new resources is required to fill the gap between supply and projected global demand for both oil and gas through 2050.

North America is forecast to continue to be the largest natural gas producer, supporting both domestic demand and a growing export market.

The Middle East will see the highest production growth, supporting both increasing domestic demand and export markets.

Significant demand growth in Asia/Pacific will primarily be met by imported gas, while Europe is also predicted to continue to rely on natural gas imports to provide affordable energy necessary to support its industrial and commercial sectors.

LNG is still needed to meet the world's growing energy demand, ExxonMobil said. In 2024, LNG met nearly 15% of global natural gas demand, which is forecast to increase to about 20% by 2050, as global demand for LNG doubles.

The diversity and reliability of LNG supplies, combined with the flexibility to ship it where it is needed, make this a favourable choice for countries needing dependable, lower-emission energy sources to foster economic growth, the report said.

New LNG supplies will predominantly come from North America, the Middle East, and Africa. North America's abundant unconventional natural gas will both feed new LNG projects and meet growing local demand.

Africa's natural gas production could drive economic growth and prosperity, as demand and exports are poised to accelerate, led by Mozambique and Nigeria, while the Middle East is expected to continue investing in LNG export projects, more than doubling the region's export capacity by 2050, ExxonMobil said.

Gas lease schedule

Meanwhile, the US Government has released a long-term schedule for offshore oil and gas lease sales in the Gulf of America and Alaska's Cook Inlet through 2039 and 2032, respectively.

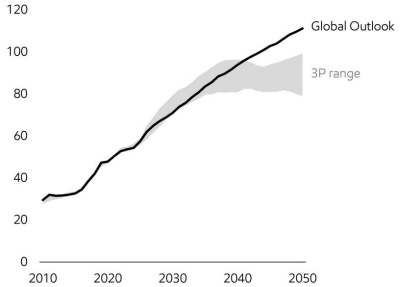
This provides certainty for the energy industry and supports increased natural gas production for LNG exports, it was claimed.

While the government is not directly involved in offshore LNG projects, these leasing schedules are expected to increase the supply of natural gas available for liquefaction, export, and domestic use, analysts said.

Two annual sales in the Gulf and six in Alaska's Cook Inlet are planned through 2032 and 2039, respectively.

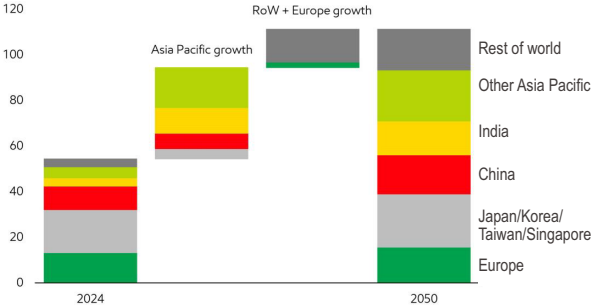
This increased production is crucial for supplying existing and future LNG export facilities, which are crucial for the US energy market, the Government said. ■

LNG demand (bill cu ft per day)



3P range includes: Wood Mackenzie Global Gas SPO (2025), S&P Inflections (2025), BP New Momentum (2024), Shell Surge (2025), Shell Archipelagos (2025), Rystad Gas Market Cube (2025), and EIA Supply/Demand Outlook to 2050 (2024); EM Analysis. Source: ExxonMobil

Asia/Pacific and Europe benefit from LNG imports (bill cu ft per day)



Demand in Asia/Pacific will drive about 70% of LNG growth from 2024 to 2050, helping the region to reduce its carbon intensity, while sustaining economic growth. Source: ExxonMobil

UNLIMITED AGENDA

Asian spot LNG prices continue downward trend

Asian spot LNG prices continued to soften last week on muted demand and ample supply.

The delivery of an LNG cargo from a sanctioned Russian project added to the supply concerns.

October delivery's average LNG price into northeast Asia was $11.15 per MMBtu, down from $11.40 per MMBtu the week before, industry sources estimated.

"LNG market sentiment remained calm with arbitrage for US cargoes still Europe-bound. Major northeast Asian buyers have limited interest in prompt cargoes, due to high stocks and a relatively loosened Pacific balance," said Kesher Sumeet, Senior LNG Analyst at Energy Aspects.

"The risk of Russia's Arctic LNG 2 ramping up LNG exports has significantly increased with the first unloading of a cargo from the facility in China. A full, sustained ramp-up of the first two trains at Arctic LNG 2 is a significant downside risk to JKM prices," Sumeet added.

The Arctic LNG 2 cargo delivery has weighed on Chinese demand expectations for spot LNG, freeing up spot supply elsewhere, said Martin Senior, Argus' Head of LNG pricing.

Additional supplies from new projects are also pressuring prices, said Siamak Adibi, Director for Gas and LNG Supply Analytics at consultancy, FGE.

Supply sources

Besides ramp-ups from the US Plaquemines project, new supply sources, such as LNG Canada, Greater Tortue Ahmeyim offshore West Africa and Congo LNG, could add around 0.5 mill tonnes per month, while the return of Norway's Hammerfest LNG, since being offline since May, represents a recovery of around 400,000 tonnes per month, he said.

In Europe, SP Global Commodity Insights assessed its daily North West Europe LNG Marker price benchmark for cargoes delivered in October on an ex-ship (DES) basis at $10.334 per MMBtu on 28th August, a $0.56 per MMBtu discount to the October TTF hub futures price.

"In Europe, LNG demand is still strong year-on-year, but overall gas consumption is weak. Pipeline flows from Azerbaijan and Norway have averaged high for August, allowing inventories to build," said FGE's Adibi, adding that Europe's gas storage is now close to 77% full.

"However, ongoing Norwegian pipeline maintenance may lend some support to TTF prices in September. Looking ahead, if no major or unexpected outages happen, October prices are likely to remain under pressure once again as European storage levels continue to rise," he said.

Last week, the US arbitrage to northeast Asia via the Cape of Good Hope widened for the third consecutive week to continue incentivising deliveries to Europe, said Spark Commodities analyst, Max Glen-Doepel, while the arbitrage via Panama also expanded pointing to Europe.

As for LNG freight rates, Atlantic levels fell to $34,250 per day on Friday, while Pacific rates softened to $33,500 per day, he added. ■

Argent LNG submits Port Fourchon filings

US developer, Argent LNG has submitted a letter of intent (LOI) and a Preliminary Waterway Suitability Assessment (PWSA) to the US Coast Guard.

This marks a key milestone in the advancement of its flagship LNG export terminal at Port Fourchon, Louisiana, the company said.

As part of the process, Argent LNG representatives met with the Captain of the Port's senior Coast Guard officials to present details of the project, outline next steps, and address questions regarding the safe and efficient integration of LNG exports into Port Fourchon's energy infrastructure.

"Our submission of the LOI and PWSA is another critical milestone for Argent LNG, as we advance one of the most competitive modular LNG facilities on the US Gulf Coast," said Jonathan Bass, Executive Business Line Leader, Argent LNG.

"We appreciate the Coast Guard's early engagement and look forward to working closely with the Captain of the Port, local authorities, and stakeholders, as we prepare to enter the FERC pre-filing process and deliver a project that enhances both US energy security and Port Fourchon's role as a global energy hub," he said.

"Port Fourchon has long been the centre of America's offshore energy industry, and Argent LNG represents the next chapter in that story," added Chett Chiasson, Executive Director of Port Fourchon. "During our meeting with the Coast Guard, I was able to present the port's strong support for this project and participate in an open and constructive dialogue with officials.

"This collaboration reaffirms our shared commitment to advancing the project safely, responsibly, and successfully. Argent LNG's investment will expand the Port's capabilities, create meaningful opportunities for our community, and strengthen our position in the global LNG market place," he said.

The new export terminal has been designed to handle 25 mill tonnes per annum of LNG at full capacity.

It is based on a 900-acre site under a 90-year lease at Port Fourchon, providing direct access to abundant low-nitrogen feed gas pipelines and uncongested deepwater shipping lanes.

Argent is planning to enter the FERC pre-filing process and the project is being developed in partnership with industry majors, including Baker Hughes, Honeywell UOP, ABB, and GTT. ■

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Nigeria to co-operate with UAE and Qatar on LNG projects

Nigeria, the United Arab Emirates (UAE) and Qatar are currently seeking to form a joint shipping network.

This was part of separate bilateral meetings held at the weekend between the Nigerian Minister of State, Petroleum Resources (Gas), Ekperikpe Ekpo; United Arab Emirates (UAE) Minister of Energy, Hydrocarbons, Infrastructure and Power, Suhail Al Mazrouei; and the Minister of State for Energy Affairs and President/Chief Executive Officer of Qatar Energy, Saad Sherida Al-Kaabi.

Other areas discussed were plans to strengthen energy ties for gas development and growth, according to a report in the Sun Nigeria.

At the Dubai meeting, both Ministers explored opportunities for joint co-operation in LNG trading and cargo swaps, as well as midstream development, including pipelines, LPG/CNG infrastructure, and processing hubs, the media outlet reported.

Also included were de-carbonisation partnerships, with a focus on carbon capture, utilisation, and storage (CCUS), blue hydrogen production, and methane management.

Minister Ekpo invited his UAE counterpart to visit Nigeria to further strengthen bilateral energy co-operation and explore new opportunities for partnerships.

In Qatar, the focus was on gas co-operation between both countries. During the meeting, which was held at Qatar Energy's headquarters in Doha, discussions included opportunities for deeper co-operation in LNG cargo swaps to reduce shipment times and optimise costs, shared shipping routes to expand Africa/Asia LNG connectivity, joint investments in FLNGs, small-scale LNG, and gas monetisation projects.

Also highlighted was Nigeria's 'Decade of Gas initiative', which is a commitment to harness the country's abundant natural gas resources as a catalyst for industrialisation, economic diversification, and clean energy access between 2021 and 2030.

Nigeria's President, Bola Tinubu, together with Minister Ekpo, visited Qatar in March, 2024, resulting in agreements, which had strengthened Qatar/Nigeria relations, it was claimed. ■

Two US LNG export projects get green light

Two major US LNG projects received regulatory approvals last week.

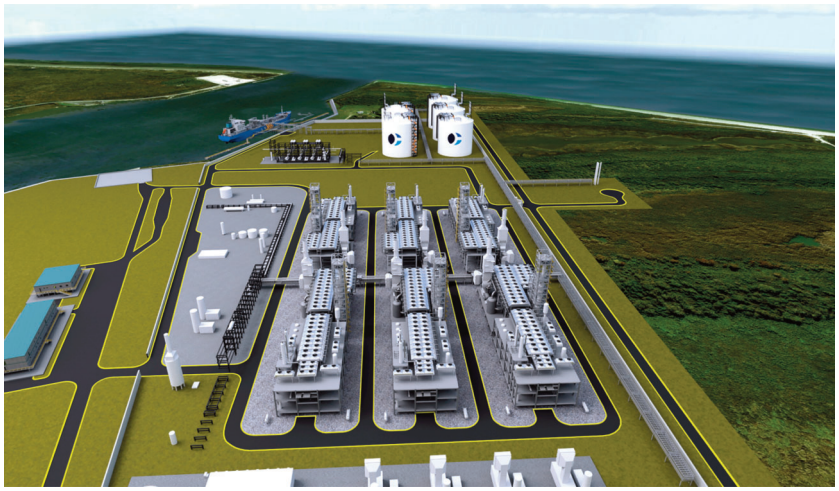
On 29th August, the US Department of Energy's (DoE) issued the final authorisation for Kimmeridge's Commonwealth LNG to export up to 1.21 bill cu ft per day to non-free trade agreement (FTA) countries from its planned project in Cameron Parish, Louisiana.

This announcement follows the DoE's conditional authorisation to Commonwealth LNG last February and reflects the US Federal Energy Regulatory Commission's (FERC) June, 2025 approval for the siting, construction, and operation of the facility.

"Finalising this authorisation moves us closer to delivering more American LNG to the world, advancing President Trump's energy dominance agenda," US Secretary for Energy, Chris Wright, said.

"As DoE found earlier this year and affirms again in this order, expanding America's LNG export capacity bolsters our economy, strengthens the energy security of our allies and trading partners and ensures the US can continue to lead the world in the production of affordable, reliable and secure energy," he said.

"We are glad to do our part in Commonwealth's recent progress toward its final investment decision (FID) and look forward to its contribution to our nation's success." added Tala Goudarzi, Principal Deputy Assistant Secretary of the Office of Fossil Energy and Carbon Management.



A rendering of Kimmeridge's Commonwealth plant

Commonwealth LNG has secured long-term offtake LNG agreements with Malaysia's PETRONAS, global energy commodities trading entity Glencore, and Japan's JERA, and recently announced an engineering, procurement, and construction (EPC) contract with Technip Energies to build the project.

Under President Trump's administration, the DoE has authorised LNG projects totaling more than 13.8 bill cu ft per day—greater than the volume exported today by the world's second-largest LNG supplier, the DoE said.

Rio Grande LNG

On the same day, Rio Grande LNG developer NextDecade secured an order on remand from FERC that upheld its authorisation for the project, a year after an adverse ruling from a US appeals court returned a previous approval to the regulator for further review.

This order, which has been made about three months ahead of a previously scheduled release date, marked a major win for the developer, as it targets FID on the planned two-train expansion by 15th September that would bring Rio Grande's production capacity up to about 27 mill tonnes per year.

The pricing validity for each train under the developer's EPC contracts extends through that date, meaning a delayed FID could expose it to higher costs.

NextDecade claimed it already had sufficient commercial support to build Train 4, after securing binding long-term deals covering a total 4.6 mill tonnes per annum. Offtakers include the Saudi energy giant, Aramco; UAE's ADNOC and France's TotalEnergies.

In June, NextDecade also signed an offtake deal with Japan's JERA for 2 mill tonnes per year from Train 5 for which, TotalEnergies has another option for 1.5 mill tonnes per year.

Three US projects have reached FID thus far this year - Woodside's 16.5 mill tonnes per year Louisiana LNG, around 5 mill tonnes expansion of Cheniere's Corpus Christi LNG, and the first 14.4 mill tonnes per year phase of Venture Global's CP2 LNG export project. ■

South Korea ramps up US LNG interests

South Korea's Hanwha Shipping's US subsidiary has exercised an option for a second LNGC at Hanwha Philly Shipyard.

This option declaration follows last month's firm contract for the first US LNGC to be ordered in a US shipyard for almost five decades.

The announcement formed part of parent Hanwha Group's $5 bill infrastructure plan put forward for the Philadelphia Shipyard, as part of South Korea's broader $150 bill commitment to revitalise the US shipbuilding industry.

Hanwha Shipping' also announced orders for 10 Jones Act MR oil and chemical tankers from the yard, with the first vessel due for delivery by early 2029.

The news came at a ceremony to deliver a US training ship, which was attended by South Korean President, Lee Jae Myung, alongside senior US government officials, including Pennsylvania Governor, Josh Shapiro and followed summit talks between President Lee and US President Donald Trump on Monday.

The infrastructure programme aims to dramatically increase the shipyard's production capacity through the installation of additional building docks and quays, which includes the possible construction of a new block assembly facility.

These improvements could potentially increase the shipyard's annual production rate from at most two vessels up to 20.

Hanwha said it intends to focus on building LNGCs, among other ship types.

On 9th April, 2025, President Trump signed an executive order entitled 'Restoring America's Maritime Dominance,' to rebuild its domestic shipbuilding capabilities in both commercial and military sectors.

MASGA launch

In July, South Korea launched the 'Make America Shipbuilding Great Again' (MASGA) initiative, a partnership worth around $150 bill led by its shipbuilders.

Hanwha acquired Philly Shipyard last year with a $100 mill investment, establishing what it described at the time as a landmark hub for US shipbuilding. It became the first South Korean shipbuilder to establish operations in the US.

South Korea's KOGAS' has announced it had agreed to purchase an additional 3.3 mill tonnes of LNG from the US per annum for 10 years, starting in 2028.

KOGAS signed the purchase deal with global energy suppliers, including Trafigura, during a roundtable of business leaders from South Korea and the US held in Washington last week, following President Lee's meeting with President Trump.

The LNG will be supplied from projects operated by Cheniere, according to company representatives.

This deal comes on the heels of Seoul's pledge last month to purchase $100 bill worth of US energy products over the next four years in return for lower 'reciprocal' tariffs on South Korean products to 15% from the initially proposed 25%.

KOGAS explained that the contract is expected to help it diversify its import sources, which have been concentrated in the Middle East.

Last year, the state owned company's contract for annual imports of 4.92 mill tonnes of gas from Qatar expired. Next year, the company will sign another contract to import 2.1 mill tonnes of gas annually. ■

Hanwha's Philly Shipyard will soon see LNGCs taking shape

NEWS BRIEFS

Burckhardt to unveil new compressors at Gastech

Burckhardt Compression and Everllence (formerly MAN Energy Solutions) are to launch new LNGC high-pressure compressors at Gastech next week.

The high-pressure compressors will handle the LNGCs' boil-off gas (BOG).

Launched in 2013 and developed in close cooperation with Everllence and South Korean shipbuilders, the Laby®-GI compressor is currently installed in 65 out of 76 existing LNGCs in service that run on high-pressure engines.

The fourth generation of high-pressure compressors for LNGCs is currently under development and will be officially presented at the Burckhardt Compression stand at Gastech 2025, from 9th to 12th September in Milan, Italy.

The new LNGC high-pressure compressors are being developed to coincide with the next generation of Everllance's B&W ME-GI engine that will continue to lower methane slip emissions and increase fuel efficiency. ■

ADNOC to sell stake in subsidiary

Abu Dhabi National Oil Co (ADNOC) is to sell a 3% stake in its logistics and services unit, ADNOC L&S.

The company is offering up to 222 mill shares to institutional investors to increase the shares' availability and trading on the market.

The sale is seen as a move by ADNOC to increase the company's free float, which is expected to help its inclusion in the MSCI Emerging Market Index.

Joining this index would likely bring in new international investors, further diversifying the shareholder base and raising the company's profile.

The offering follows strong financial results from ADNOC L&S. The company reported record-breaking performance in the second quarter, with revenue up 40% and EBITDA growing 31% year-on-year.

Following these results, the company upgraded its full-year guidance, showing confidence in its future.

The bookbuilding period for the sale was expected to have closed last Friday, with the final terms and price to be announced shortly. The settlement was due around 3rd September, 2025.

Adnoc's remaining shares in ADNOC L&S will be subject to a six-month lock-up period following the sale. ■

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Second Wilhelmshaven terminal comes onstream

Deutsche Energy Terminal's (DET) second Wilhelmshaven LNG terminal strarted commercial operations on 29th August, following a successful commissioning phase.

This followed several weeks of functional and performance testing.

On 1st August, the terminal received the approval under hazardous incident regulations from the German Oldenburg Trade Supervisory Authority (GAA) without any objections.

Dr Peter Röttgen, DET Managing Director, explained, "Wilhelmshaven 02 combines several technologies that are unique in Germany and Europe, from the FSRU to onshore feed-in: On the one hand, there is ECOnnect's flexible pipeline system for the direct transfer of natural gas to land without a pipe bridge. This has significantly reduced the impact on the seabed ecosystem.

"On the other hand, the ultrasonic process for cleaning the FSRU's seawater pipeline system, which is unique in Europe, has now been put into operation.

"We would like to thank everyone involved for this successful transition to commercial operation and for their outstanding work," he said.

The Wilhelmshaven02 terminal, utilising the FSRU 'Excelsior', is now fully operational and can contribute to security of supply and to filling the gas storage facilities before the next heating season.

DET offered regasification capacities in a marketing round at the beginning of July. They were fully purchased by traders, as was all of 2026's capacities offered.

Excelerate management

'Excelsior' owner, Excelerate Energy, manages the entire operations, including on board regasification services.

David Liner, Excelerate's Executive Vice President and COO, said, "We are honoured to support the successful commercial launch of the Wilhelmshaven02 terminal alongside our partners at DET.

"The terminal's innovative design - including an advanced gas export system and Europe's first ultrasonic anti-fouling technology - demonstrates the strength of our technical capabilities and commitment to operational excellence.

"As a global leader in delivering reliable energy infrastructure for sovereigns around the world, Excelerate is proud to contribute to Germany's energy security and the broader European energy transition," he said.

The on-site terminal operations will be conducted by Gasfin Services.

Danny van Schie, Managing Director, commented, "Following Gasfin's intensive role as consultant during the planning and implementation phases, the official takeover of operations management, and a successful trial run, we are all the more pleased to now begin commercial operations.

"Wilhelmshaven02 is the second terminal - after Brunsbüttel - for which Gasfin is responsible for operational management on behalf of DET. This milestone clearly demonstrates how technical expertise and collaborative partnership can create high-performance infrastructure for energy supply - contributing to a secure and stable energy system in Germany and Europe," he said.

DET has also awarded the commercial operations contract to the Lithuanian LNG company, KN Energies, as well as the terminal's technical operations and maintenance.

Darius Šilenskis, KN CEO, added, "We sincerely appreciate the hard work of DET and Gasfin throughout the terminal's construction and successful commissioning process.

"Our dedicated team in Germany - comprised of experts in HSE, engineering, and O&M management areas - is fully prepared to seamlessly transition Wilhelmshaven02 from commissioning phase to long-term, reliable operations.

"Drawing upon KN Energies group proven track record from operations and maintenance of LNG terminals in Lithuania and Brazil, we remain committed to delivering safe and reliable services, operational integrity, and continuous technical support, thus actively contributing to Germany's energy independence and reinforcing regional energy security," he said.

This year, 'Excelsior' will feed up to 1.9 bill cu m of natural gas into the German gas grid. The FSRU's regasification and grid feed-in capacity will then reach up to 4.6 bill cu m each. ■

NEWS BRIEFS

Hokkaido Gas in the market for more LNG cargoes

It has been reported that Japan's Hokkaido Gas is negotiating with JERA to buy LNG cargoes from April, 2027.

Hokkaido Gas issued a tender to buy two to four cargoes per year for seven years starting from April, of that year. The first round of the tender closed on 4th March.

Market sources said the buyer has only chosen JERA after a few shortlisting rounds.

Sources told Platts that Hokkaido Gas plans to buy two or three cargoes for the first two years and three or four cargoes for the remaining contract years. The price is linked to Brent crude.

They also said that the price level Hokkaido Gas and JERA were negotiating at was 12.7%-12.8% slope to Brent, which was considered competitive, given that Hokkaido Gas is purchasing more winter cargoes.

Japan's current term contracts are about 13.5%-14% slope to crude oil, according to industry sources.

Apart from Hokkaido Gas, other Japanese utilities were looking for new term contracts, as they expect existing contracts to expire in a few years, market sources said.

Adriatic LNG announces Open Season 2025

Italy's Adriatic LNG, which operates an LNG regasification terminal in the Northern Adriatic Sea, has launched the accreditation phase for Open Season 2025.

This is aimed at natural gas market participants interested in acquiring medium to long-term regasification capacity.

Regasification capacity will be available between January, 2029 and December, 2050.

Operators have until 12th September to gain their accreditation to participate in the binding phase, which will run from 17th September to 3rd October, 2025.

Adriatic LNG's offer is structured in products, proposed either as individually offered unloading slots or as annual volumes with a minimum subscription threshold. This year, the products definition followed a market test aimed at making the commercial offer even more competitive.

Specifically, a total of 38 unloading slots of 165,000 liqcm each are being made available to the market for the period 2029 to 2034.

For the subsequent years, from 2035 to 2050, the available regasification capacity is offered as volumes for fixed-duration periods (16, 10, or 5 consecutive years starting from 2035), with a minimum requirement for interested parties to request at least 1 bill cu m per year over various sessions' periods.

In previous auction sessions, Adriatic LNG allocated all regasification capacity available until December, 2028; 2.5 bill cu m per year from January, 2029 to December, 2034, 1.4 bill cu m per year from January, 2035 to December, 2042, as well as 0.5 bill cu m per year from January, 2043 until December, 2045. ■

Eni's Congo LNG project progresses

Italian energy major, Eni recently held a sail away ceremony for the 'Nguya' FLNG in Shanghai.

This FLNG is set to significantly boost LNG production in the Congo LNG project in the Marine XII concession, offshore the Republic of Congo.

The 376 m long and 60 m wide unit, will be moored at a depth of 35 m and used for LNG production.

Conceived, designed, and built in 33 months - from contract award to sail away - the FLNG set a record for time-to-market in the sector, Eni claimed. Moreover, the technology fitted enables the FLNG to be utilised for future field developments.

In addition, the floating production and compression unit (FPU) - formerly the drilling rig, 'Scarabeo 5' - was refurbished by Saipem and will depart for the field in the coming days.

This will be used to send processed gas to the 'Nguya' FLNG. Eni said it was able to meet execution timelines, reduce costs, and minimise environmental impact.

Work on the subsea infrastructure was required to launch Congo LNG project's Phase 2, which is progressing on schedule, to enable mooring and startup by the end of this year.

Eni's Congo LNG awaits new FLNG

'Tango' FLNG (0.6 mill tonnes per annum) began production in December, 2023 and has exported 12 cargoes. This unit will be joined by the 'Nguya' (2.4 mill tonnes) by the end of this year, bringing the total capacity of the Congo LNG project to 3 mill tonnes per annum.

The 'Scarabeo 5' conversion completion was described as a key milestone in the contract awarded to Saipem by Eni Congo in August, 2023, as part of Eni's Congo LNG project, the country's first natural gas liquefaction project.

Saipem's involvement was the engineering, procurement, construction, transportation and commissioning of the FPU to be installed offshore the coast of the Republic of Congo, northwest of the Djeno Terminal, at a depth of around 35 m.

Once installed, the FPU will serve as a control hub for the Congo LNG's entire offshore development field.

The conversion of 'Scarabeo 5' was completed in less than 24 months, further demonstrating Saipem's fast-track execution capability, the company claimed. ■

NEWS BRIEFS

WinGD and Hanwha deliver world's first LNG carrier engine with Variable Compression Ratio technology

Swiss marine power company WinGD and marine engine manufacturer Hanwha Engine have successfully produced the world's first X72DF-2.2 VCR engine equipped with Variable Compression Ratio technology. This next-generation low-emission engine technology, developed by WinGD for ships using both LNG and diesel fuel, maximizes fuel efficiency and reduces methane slip which means vessels can operate more cleanly and cost-effectively, ensuring compliance with stricter emissions regulations.

The two companies held a ceremony at Hanwha's headquarters in Changwon to commemorate the first factory acceptance test of the 5X72DF-2.2 engine with the VCR technology, which will be installed on an LNG carrier being built by Samsung Heavy Industries for a major global initiative in LNG transportation.

Peter Krähenbühl, Vice President Product Centre at WinGD, hailed this milestone in shipping's energy transition. "Our VCR technology optimises fuel efficiency, reduces emissions and leads to a significant cut in methane slip, making a material impact on a ship's carbon intensity and operating costs," said Peter. "With new emissions deadlines looming, our customers clearly see real value in this innovation, with over 160 orders already placed for VCR technology engines."

This was confirmed by Hanwha Engine's CEO Moonghee Yu, who attended the ceremony along with key figures from shipbuilding and shipping industries, noting that his company has already secured orders for 70 VCR-applied engines worth USD500 million.

"The world's first production of an X72DF-2.2 VCR engine for an LNG carrier is not merely a technical achievement, but a milestone accelerating the shipbuilding industry's transition towards environmental sustainability. Moving forward, Hanwha Engine will continue to lead the industry by leveraging clean energy technologies to shape the future and make tangible contributions to marine environmental protection." said Moonghee Yu. ■

AI to increase LNGC cargo management efficiency

HD Hyundai is to co-operate with SK Shipping to develop artificial intelligence (AI) solutions to increase LNGC cargo management efficiency.

When the solution is developed, AI will replace LNG cargo operations, which relied on experienced seafarers, so that less experienced crew can perform this management task.

HD Korea Shipbuilding & Marine Engineering, HD Hyundai Heavy Industries, and HD Hyundai Marine Solution recently held a joint signing ceremony for the AI cargo operation solution (AI-CHS) with SK Shipping, at HD Hyundai Heavy Industries' Ulsan Shipyard.

AI-CHS is an AI-based solution developed by HD Korea to support decision making to predict the amount of boil-off gas (BOG) generated naturally during the vessel's operations and distribute it optimally to major facilities, such as on board re-liquefaction plants, generators, and main engines.

About 0.1% of evaporation gas is generated every day, due to external shocks (sloshing) and heat inflows during shipment. In order to maintain proper pressure in the cargo tank, this BOG should be used as main engine propulsion fuel or auxiliary equipment fuel.

HD Hyundai will install AI-CHS solution on a SK Shipping 174,000 cu m LNGC newbuilding, which was delivered in June of this year.

The two companies said that they expected this project to significantly improve ship and fleet operational efficiency, including stable LNG cargo shipments, utilising a data-based fuel economy evaluation system, maximising ship fuel efficiency, and reducing crew operations. ■

ConocoPhillips train technology for CCL Stage 4

ConocoPhillips is to develop the trains for Cheniere's latest expansion project - CCL Stage 4 - at its Corpus Christi site, following its success with the company's other projects.

Cheniere will construct four large scale trains using ConocoPhillips' proprietary optimised cascade design.

In addition to the four trains, two full containment 220,000 cu m storage tanks, an LNGC berth, plus other infrastructure, including tie-ins to existing CCL facilities, are planned for Stage 4.

Feedgas for the project is expected to be shipped to the new CCL facility by expanding the Corpus Christi Pipeline system. This will include a 3 bill cu ft per day loop and compressor boost on the pipeline, giving the site flexibility to push total nameplate towards 10 bill cu ft early next decade.

Stage 4 is an expansion of the approved liquefaction projects, Stage 3 and CCL Midscale Trains 8 & 9, and once completed, will add another 24 mill tonnes per year LNG export capacity at Corpus Christi.

On 17th July, Cheniere initiated the pre-filing process for Stage 4 with the US Federal Energy Regulatory Commission (FERC), Cheniere head, Jack Fusco revealed at the second quarter results call.

Cheniere has targeted a full NGA application in early 2026, FERC approval by mid-2027, and phased in-service beginning, as soon as the four new trains are completed.

Fusco said that similar to the SPL (Sabine Pass) expansion project, CCL Stage 4 will be designed to take full advantage of the existing site and in place infrastructure the company has built in order to enable the most efficient and cost-effective incremental capacity possible.

Source: Cheniere Energy Inc.

The positioning of CCL Stage 4

This contract follows, Coastal Bend contracting ConocoPhillips for its optimised cascade process technology to be utilised on the developer's planned natural gas liquefaction and export facility on the Texas Gulf Coast.

This LNG project includes multiple liquefaction trains, co-generation, LNG storage tanks and export facilities.

Coastal Bend expects to pre-file its US FERC permits this year. ■

First LNG engine with new technology shown

Swiss marine power company WinGD and marine engine manufacturer, Hanwha Engine, have produced the world's first X72DF-2.2 VCR engine equipped with variable compression ratio technology.

This low-emission engine technology, developed by WinGD for ships using both LNG and diesel fuel, maximises fuel efficiency and reduces methane slip, which means vessels can operate more cleanly and cost-effectively, ensuring compliance with stricter emissions regulations, the company claimed.

The two companies held a ceremony at Hanwha's headquarters in Changwon to commemorate the first factory acceptance test (FAT) of the 5X72DF-2.2 engine with the VCR technology, which will be installed on an LNGC being built by Samsung Heavy Industries for a major owner.

Hanwha Engine's WinGD design on factory acceptance test

Peter Krähenbühl, Vice President Product Centre at WinGD, said: "Our VCR technology optimises fuel efficiency, reduces emissions and leads to a significant cut in methane slip, making a material impact on a ship's carbon intensity and operating costs.

"With new emissions deadlines looming, our customers clearly see real value in this innovation, with over 160 orders already placed for VCR technology engines," he said.

This was confirmed by Hanwha Engine's CEO Moonghee Yu, who attended the ceremony along with key figures from shipbuilding and shipping industries, noting that his company has already secured orders for 70 VCR-applied engines worth $500 mill.

"The world's first production of an X72DF-2.2 VCR engine for an LNG carrier is not merely a technical achievement, but a milestone accelerating the shipbuilding industry's transition towards environmental sustainability.

"Moving forward, Hanwha Engine will continue to lead the industry by leveraging clean energy technologies to shape the future and make tangible contributions to marine environmental protection," he said.

In addition, WinGD announced that it had become the first engine developer to join the Methane Abatement in Maritime Innovation Initiative (MAMII).

MAMII's members include LNGC, cruise ship and containership owners and operators, plus energy majors, among others, who are seeking to reduce methane emissions from ships.

WinGD said that it will bring its technical insight to support the methane abatement efforts from ships' engines. ■