LNG Unlimited

LNG JOURNAL PUBLICATION 6 July 2021

Largest Japanese LNG importer JERA set for tight power market

Outlooks point to the 2021 summer season requiring careful strategies

LNG News Editor

Chita LNG terminal is one where JERA has capacity

JERA Co. Inc., the Japanese LNG buyer of 35 million tonnes per annum of volumes and with control of a fleet of 20 LNG carriers, has drawn up measures to address supply and demand issues in Japan through the Northern Hemisphere summer season.

JERA stated that this summer season was expected to be the tightest in several years, according to the outlook presented to the Japanese government's Ministry of Economy, Trade, and Industry's Electricity and Gas Basic Policy Subcommittee.

Balancing act

For this reason, the company has established its own JERA Electricity Supply-Demand Measures Subcommittee.

JERA is Japan's biggest fossil-fuel generator being owned jointly by Tokyo Electric Power Co. and Chubu Electric, the two largest power companies.

The joint venture company currently operates and provides fuel for a total of 26 power plants in Japan and imports LNG into 11 of Japan's network of 37 terminals.

JERA's power plants have 70 gigawatts of capacity and the company is in the process of upgrading existing LNG and steam plants and also proposes to close its 2.2GW of coal-fired plants by 2030.

"The environment for thermal power generation is extremely difficult given uncertainty in the electricity supply and demand outlook caused by increased renewable energy, a tightening supply and demand balance in the fuel market and an increased risk of failure at ageing power generation facilities," explained JERA.

"In cooperation with related parties, however, the JERA group will make every effort to ensure a stable supply of energy," it stated.

To prepare for the tight power supply-and-demand market in Japan JERA said it had implemented some counter-measures.

The first of these was the checking of priority equipment at thermal power plants during targeted patrols and regular inspections and this has now been implemented.

JERA has also run trials of its own demand estimates, and the identification of related issues, with the aim of accurately grasping power supply and demand in the areas of Tokyo and Chubu.

The company has subsequently adjusted fuel procurement and delivery schedules to ensure appropriate inventory levels.

JERA said it had made preparations to ensure supply capability at times when supply and demand balance is tight in the Tokyo and Chubu area, including, cooperation with transmission system operators.

The METI, Japan's most powerful government department, stated in February 2021 that more measures were expected from power companies and LNG importers after the winter season price spikes in Japan when LNG storage levels dropped.

Power supply and demand has now become a key government issue along with LNG supply stability for gas-fired plants.

Japanese spot LNG prices soared for contracted and delivered cargoes in January 2021 to as high as $18.50 per million British thermal units, back to the levels they were in 2014.

LNG competes mainly with thermal coal for power generation in Japan, while the nation's nuclear power generation is still at a very low level.

Stocks held by Japanese utilities hit a seasonal high of about 1.9 million tonnes around mid-December 2020 before dropping rapidly. The METI has made a priority out of avoiding a repeat of the LNG supply crisis.

Japan's imports rebounded in May 2021 with steady volumes from the Middle East and Australia and higher cargo numbers from Russia and the US, though LNG deliveries were outpaced by thermal coal shipments.

The May 2021 LNG shipments amounted to 4.95 million tonnes, or around 73 cargoes, which was 8.2 percent higher than the 4.58MT received in May 2020, according to the trade figures. ■

UNLIMITED AGENDA

Kiryu Gas of Japan signs supply deal with Inpex for 'carbon-neutral' LNG as a public service

LNG News Editor

Inpex Corp., the Japanese operator of the Ichthys LNG export plant in northern Australia and a shareholder in a liquefaction project in Indonesia, has signed a sales and purchase agreement with distribution company Kiryu Gas Ltd for "carbon-neutral" cargoes.

Inpex said Kiryu Gas planned to purchase the carbon-neutral shipments and establish a "carbon offset gas agreement" and begin supplying customers, including private households, by July 1, 2021.

Experienced

Kiryu Gas was founded in 1926 and will soon celebrate its centennial.

Inpex noted that Kiryu Gas has long operated under the motto, "generously supplying quality gas fuel at accessible prices in the spirit of public service."

The agreement with Inpex for "carbon-neutral" LNG follows the issuing by Kiryu Gas of a Sustainable Development Goals private placement of bonds guaranteed by Gunma Bank, and limited to accredited institutional investors as it pursues environmental targets.

Australia gas platform owned by Ichthys operator Inpex

Analysts note that LNG projects are also taking actual measures on carbon-capture and cleaner electricity supply, using plant power from hydro for example instead of coal, so the carbon footprint of LNG is diminishing all the time.

"By providing its customers with 'carbon-neutral' gas, Kiryu Gas will contribute to the conservation of resources and sustainable consumption through realizing a safe and stable supply of quality energy," added Inpex.

Inpex explained that the "carbon-neutrality" of the natural gas to be supplied through this agreement is based on carbon credits certified by a credible certifier as deriving from carbon-dioxide reduction efforts at forest conservation projects and other green ventures.

It stated that the LNG cargoes will also be certified to confirm that greenhouse-gas emissions have been offset throughout the entire value chain process from development to combustion.

Royal Dutch Shell is one of the leaders in supplying "carbon-neutral" LNG cargoes to Asia and also shipped the first one to Western Europe to the Dragon LNG terminal in Wales.

Shell partnered with Russia's Gazprom in supplying and delivering the first "carbon-neutral LNG cargo" in Europe, while it is on the way to being the leading "carbon-neutral" shipper in Asia.

According to Shell, an average LNG cargo of about 70,000 tonnes emits around 240,000 tonnes of carbon dioxide equivalent (CO_2e) across the value chain.

In their "carbon-neutral" activities energy companies can use nature-based carbon credits which can be retired to offset full lifecycle emissions, including methane, generated from exploring for and producing the natural gas.

Nature-based projects protect biodiversity, transform or restore land and enable nature to add oxygen and absorb more CO_2 emissions from the atmosphere.

Shell partnered with Russia's Gazprom in supplying the first "carbon-neutral LNG cargo" in Europe, while it is on the way to being the leading "carbon-neutral" shipper in Asia.

Inpex has various sources for its LNG. The Japanese oil and gas company is a shareholder with France's Total in the Ichthys plant near Darwin, supplying Japanese utilities with LNG cargoes as well as Taiwan. ■

V Group ship management firm hires one of first Chartered Master Mariners to head LNG unit

Leading ship management company V Group has appointed former Shell executive David Taylor as Managing Director of the liquefied natural gas division as it prepares for the expansion of the global LNG fleet.

Taylor, who was one of the first in the world to become a Chartered Master Mariner in 2017, held various roles at Shell, including General Manager of Ship Management.

V Group said that with more than 38 years of experience in the industry, he has sailed all ranks to Master on LNG, Crude and Product Tankers and also managed the commissioning and start-up of an LNG terminal.

It added that more recently, Taylor had managed the safe and efficient global operation of all types of LNG vessels including an LNG bunker vessel and in addition, oversaw the operations readiness activities for the management of the world's first bulk liquid hydrogen vessel.

"David's appointment is testament to our commitment to the rapidly evolving LNG sector," said Bjoern Sprotte, Chief Executive of Ship Management at V Group.

"He has a proven strategic and operational track record and his technical expertise in LNG is second to none," added Sprotte.

"With LNG trading volumes set to double in the next 20 years, David's appointment comes at an exciting period of change as we work closely with our customers to meet this growth and support the future emission strategies," stated the CEO.

Taylor said he was delighted to be joining a global leader with unrivalled experience in vessel management.

"LNG shipping demand is poised to increase, being one of the transition fuels as the global shipping industry looks to find solutions to meet decarbonisation goals," added Taylor.

"With our global reach, industry-leading standards for safety and experience in providing skilled LNG crew, we are well poised to support the growth of the global LNG fleet," stated Taylor.

V Group provides ship management and crewing services to LNG vessel owners. It has experience at sea and on shore with propulsion type vessels including MOSS-type vessels, Steam, M-type Electronically Controlled, Gas Injection (MEGI), Dual-Fuel Diesel-Electric and Tri-Fuel-diesel-electric LNG carriers. ■

Qatar stakes have appeal for leading energy majors

Qatar Petroleum has received offers for double the equity available to potential partners in the bidding process for the North Field East liquefied natural gas export plant expansion project in the Gulf.

The Qatari company said it was in the process of evaluating commercial offers received for participation in the largest LNG development in the world with a capacity of 32 million tonnes per annum of LNG production.

Saad Sherida Al-Kaabi, Minister of State for Energy Affairs for Qatar and President and Chief Executive, noted that Qatar Petroleum had also received offers for offtake commitments or sales and purchase agreements for double the 32 MTPA available

The NFE project details emerged during and economic forum attended by Al-Kaabi and Ben Van Beurden, the CEO of Royal Dutch Shell, Patrick Pouyanne, the Chairman and CEO of TotalEnergies and Darren Woods, the Chairman and CEO of ExxonMobil.

These major oil and gas companies are likely to have been among those who made equity participation offers and those for offtake.

Qatar Petroleum in February 2021 took the final investment decision on expanding its LNG output in the Arab Gulf and signed project engineering contracts with Japanese company Chiyoda Corp. and European-based TechnipEnergies.

The expansion of output at Ras Laffan will comprise the construction of four Trains for liquefaction to take the Arab Gulf state's output from 77 million tonnes per annum up to 110 MTPA.

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Qatar Petroleum set for on-time completion of LNG expansion

LNG News Editor

US credit ratings agency Moody's Investors Service has affirmed the high credit rating of Qatar Petroleum as it embarks on liquefied natural gas expansions and the projects are expected to be completed on time.

The Moody's rating signifies that Qatar Petroleum bonds have financial backing underpinned by cash reserves and with a low risk of default.

Ras Laffan liquefaction and export plant awaits volumes

Bond sales

Qatar Petroleum achieved a "Aa3" long-term issuer rating as well as a "aa3" baseline credit assessment (BCA).

Moody's has also assigned "Aa3" ratings to Qatar Petroleum's contemplated senior unsecured bond issuances. The outlook on all ratings is stable.

"The affirmation of QP's rating reflects the expectation that QP will maintain a very strong financial profile despite the sizeable and partially debt-funded capital spending program over the course of the next six years," said Julien Haddad, a Moody's Vice President and Senior Analyst.

"The affirmation of the rating also reflects the expectation that QP will execute the North Field East Expansion (NFE) LNG project on time and in line with budget given the company's track record in delivering mega projects," stated Haddad.

Qatar Petroleum is contemplating bonds issues in four tranches to partially fund its capital spending program for the NFE, the Golden Pass LNG export plant in Texas, as well as two petrochemical projects in Qatar and the US.

According to Qatar Petroleum, the company's capital spending share in these projects and a portion of the North Field South Expansion will be around $35 billion, spread over the next five years.

This assumes that Qatar Petroleum will bring in partners for up to 30 percent of the NFE equity.

The expansion of output at the Ras Laffan LNG plant will include the construction of four Trains for liquefaction to take the Arab Gulf state's output from 77 million tonnes per annum up to 110 MTPA.

Qatar is additionally considering boosting capacity beyond the 126 MTPA of output in a future second expansion already announced. ■

Ras Laffan supply to China set to grow after Shell supply deal

Qatar Petroleum has signed a 10-year Sale and Purchase Agreement with Royal Dutch Shell for the supply of 1 million tonnes per annum of liquefied natural gas to China.

The shipments will commence in January 2022 to various Chinese regasification terminals.

"We are pleased to enter into this new LNG SPA with our trusted partner Shell," said Saad Sherida Al-Kaabi, Qatar's Minister of State for Energy Affairs and the President and Chief Executive of Qatar Petroleum.

"I am especially delighted that this agreement will meet part of the demand of Shell's end customers in China, thereby further supplementing Qatar's contribution to meeting China's growing energy needs," added Al-Kaabi.

The Qataris believe that the SPA with Shell to supply China further highlighted their ability to meet the requirements of customers and partners across the world.

"I would like to take this opportunity to thank the management and staff of Shell for the successful conclusion of this SPA, which is another testament to our long and fruitful partnership," stated Al-Kaabi.

The Qatari Minister also thanked Sheikh Khalid Khalifa Al Thani, the CEO of Qatargas, and his team for their valuable contributions to reinforce Qatar's position in the LNG market.

Qatar plans to supply the LNG volumes contracted under this agreement from its Qatargas I venture, which will become 100 percent owned by Qatar Petroleum as of January 2022.

"China is considered a major customer for the State of Qatar and a strategic partner in the energy sector," said the statement.

"With the conclusion of this agreement, China will be supplied with approximately 12 MPTA of LNG under long-term SPAs from Qatar," it added.

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NEWS NUDGES

Stolt-Nielsen delivers

Stolt-Nielsen, the UK-headquartered Norwegian company with interests including terminals, shipping and the Avenir small-scale LNG business, said net profits from operations rose to $10.3 million for the first half of 2021 compared with a loss of $7.0M in the same period of 2020. In addition to a growing vessel fleet, the company's Avenir LNG joint venture has an 80 percent stake in the small-scale Italian terminal located at the port of Oristano on the island of Sardinia.

Burckhardt passes test

Swiss company Burckhardt Compression said its Laby-GI Compressors for the MAN Energy Solutions M-Type Electronically Controlled-Gas Injection (ME-GI) engines has passed the one million operating hours mark. "The Burckhardt Compression Laby®-GI fuel gas compressor systems play an important role on LNG carriers," explained the Winterthur-based company.

Tellurian lease signed

Tellurian Inc., developer of the US Driftwood LNG plant in Louisiana, has exercised its long-term lease option with the Lake Charles Harbor and Terminal District on a 477-acre site. The ground lease agreement has an initial term of 20 years with extension options of up to 50 years. "Tellurian is taking necessary steps to prepare for Driftwood LNG construction by entering into this long-term lease and executing certain projects such as road improvements and utility relocation," said Tellurian's Executive Vice President and Chief Operating Officer Keith Teague.

Gazprom is building first LNG liquefaction plant in Russia to convert coal-seam gas

LNG News Editor

Gazprom tested CSG output at Kuzbass Taldinskoye field

Gazprom said it had begun building a small-scale liquefied natural gas facility using coal-seam gas in the Kuznetsk Coal Basin in the country's Kemerovo region of southwest Siberia, known as the Kuzbass.

Gazprom said the small-scale liquefaction plant's output would help convert mining equipment to LNG and to replace coal fuel in the region, particularly in the Sheregesh ski resort.

Small-scale

The small-scale plant is located in the Prokopyevsk district and would receive feed gas from the coal formations.

The Gazprom subsidiary Gazprom Dobycha Kuznetsk holds the subsurface mining licence for the area.

Gazprom is concentrating its CSG feed-gas activities in the Narykско-Ostashkinskoye coal field.

The produced CSG would go to the small-scale LNG plant to be located near the production site.

The facility would have an initial capacity of 26,000 tons per annum with potential for expansion.

Australia is so far the only country to produce commercial quantities for CSG for LNG production on Curtis Island in the state of Queensland.

The three Australian facilities, Queensland Curtis LNG, Gladstone LNG and the Australia-Pacific plant ship more than 20 tonnes per annum of LNG cargoes to Asia derived from CSG.

Gazprom has signed several deals regarding the small-scale LNG project with officials in the Kemerovo Region.

The agreements include the development of equipment and technologies for the construction of wells, production of gas from CSG tenements and the subsequent processing and liquefaction of this gas in the Kuzbass.

Titan LNG provides 'bridge' for regional bunkering during Rotterdam maintenance

Titan LNG, a Dutch supplier to the marine and industrial markets with quayside and ship-to-ship delivery of LNG to river barges and seagoing ships in the ports such as Amsterdam, Rotterdam and Antwerp has commissioned a short-term LNG truck-loading facility in the Belgian Port of Zeebrugge.

Titan said its "Project Bridge" has been designed to accommodate LNG truck-loadings as an interim solution during a four-week period in which the Dutch Gate LNG import terminal in Rotterdam is undergoing essential maintenance.

"The Titan LNG chartered 'Green Zeebrugge' is filling up trucks at the quay of the PSA terminal in Zeebrugge to serve bunkering customers in the ARA region, Zeebrugge, and surrounding areas," explained Titan.

Equipped with two loading bays, the interim fuelling station was commissioned and developed by Titan LNG's in-house team, in collaboration with small-scale LNG market participants to trial the project's operations.

The Port Authorities of Zeebrugge and the terminal were involved in initial plans for the project to ensure compliance for this temporary set-up, including the step-by-step protocols and designs.

The facility was assembled and is being operated by Rijlaarsdam Tech, Titan LNG's project partners.

"Operator Rijlaarsdam and Titan LNG passed the vetting and approval process due to the preparation and robustness of the documentation and training of the crew on the quay, providing confidence to the Authorities that safe operations could be carried out for the duration of the four-week period," said Titan.

"During normal operations, the GATE terminal loads some 600 trailers per month and the Fluxys terminal in Zeebrugge cannot fill this demand for extra slots, meaning it would not have sufficient capacity to ensure the demand for the downstream market," added the Dutch company.

The project aims to handle additional LNG demand coming to Zeebrugge starting from mid-July of this year and is expected to fulfil up to 300 orders during its deployment.

"This is an immensely proud moment for the team at Titan LNG and for the LNG market sector," said Michael Schaap, Titan LNG's Commercial Director of Marine.

"It takes LNG terminals years to install this functionality, and we did it in a matter of months. I would like to thank all our project partners for the hard work and perseverance that went into this success," stated Schaap.

Norway and UK open new era in energy cooperation that will affect power and LNG

LNG News Editor

Norwegian Minister Tina Bru with UK's Kwasi Kwarteng

Norway and the UK, among the two main oil and natural gas producers in Europe and who are outside of the European Union since the UK's Brexit vote, have opened a new chapter in energy cooperation as they continue to influence European gas and LNG markets.

Norwegian Minister for Oil and Energy Tina Bru and the UK Secretary of State for Business, Energy and Industrial Strategy, Kwasi Kwarteng, met in Oslo for talks on energy issues covering existing and new projects.

'Key word'

"Energy is a key word in the cooperation between UK and Norway," said Bru after the meeting with Kwarteng.

"Now we are entering a new and exciting phase," she added.

"We have discussed a number of topics of common interest, such as the Norwegian gas export to the UK and carbon capture and storage," stated the Norwegian Minister.

A joint statement said that during their meeting in Oslo, Bru and Kwarteng also discussed the interconnector North Sea Link, which will be put into operation in the fourth quarte. Their discussions additionally covered other agreements between Norway and the UK on power trade and interconnectors.

"We are close to finalising the agreement on power exchange. The agreement will contribute to predicable framework conditions for the exchange of power between our two countries," explained Bru.

"In addition, we agree to cooperate on development of offshore wind power and related infrastructure in the North Sea," she added.

UK Minister Kwarteng noted that UK had a strong bond with Norway going back many decades.

"My visit has been a great opportunity to reaffirm and grow our lasting relationship as we work together to connect our two electricity grids for the first time and finalise this historic North Sea agreement," he added.

The joint declaration stated that energy was at the ore of the close relationship between the UK and Norway.

"We are now embarking on a fresh, exciting chapter, establishing a new phase of cross-border energy cooperation," said the declaration.

"We are celebrating the completion this month of the construction of the North Sea Link interconnector, which joins together our nations' world-class electricity grids for the first time. Trading over the interconnector is scheduled to start later this year," it added.

"We are also announcing that the UK and Norway are close to concluding a historic bilateral treaty on electricity interconnection, which will set out our shared principles for maximising the mutual benefits of efficient electricity trading," they explained.

"The treaty will also set out commitments to co-operate on electricity infrastructure between our countries, including further interconnection, and infrastructure which combines cross-border transmission with offshore wind in the North Sea, where we have significant mutual interests," the statement concluded.

Trafigura leads Vaca Muerta Shale revival with stake

Global commodities firm Trafigura is helping lead the investment revival in the Vaca Muerta Shale Basin in Argentina where energy investment has lagged other nations as well as dropping during the Covid-19 pandemic.

South American company Vista Oil and Gas and the local unit of Trafigura in Argentina have signed a joint investment agreement for the development of 20 wells in the Bajada del Palo Oeste block in the Vaca Muerta.

This joint investment of around $250 million represents important spending in the shale basin located in the Argentina's Neuquén province in the northern part of Patagonia.

The level of investment in Vaca Muerta Shale has yet to reach a point whereby Argentina could become a net exporter of LNG and energy products instead of being an importer.

Vista has its headquarters in Mexico, though is the third-largest crude oil producer in Argentina and the second-largest shale oil operator in the country with its operations in the Bajada del Palo Oeste block.

"This is the first strategic agreement that Vista has made with another company to accelerate the development of its main shale oil block which has 28 wells currently in production," said a statement.

Trafigura trades around six million barrels of oil per day in its commodities business.

The firm has also been a big supplier over recent years of LNG cargoes to Argentina, helped by its long-term supply agreements with Cheniere Energy of the US and Freeport LNG in Texas.

JGC retained by Japan space body for fuel plant development on moon

LNG News Editor

JGC Holdings Corp. of Japan, the leading global builder of liquefied natural gas liquefaction facilities, has been commissioned by the Japan Aerospace Exploration Agency (JAXA) to design a fuel plant for the moon.

JAXA and JGC signed a cooperation agreement to study the concept of a Lunar ISRU (In Situ Resource Utilization) plant.

Junichi Sakai (left), Director of JAXA Human Spaceflight Technology Center and JGC executive Fumio Sakamoto

Water-ice

The ISRU facility would extracts water-ice from lunar soil (regolith) to produce liquid hydrogen and liquid oxygen, which can be used as propellant for lunar landers and spacecrafts.

JGC's current LNG work includes the LNG Canada project being constructed by Royal Dutch Shell and partners and the Coral South floating LNG venture offshore Mozambique for Italian energy company Eni.

JGC was also chosen by Iraq to upgrade the oil refinery at Basrah, located 525 kilometres southeast of the capital Baghdad.

Under the lunar fuel plant cooperation agreement with JAXA, JGC will conduct a conceptual study of a lunar ISRU plant using lunar water-ice resources over a period of about one year, and will identify the technological elements and research issues necessary for its realization.

JGC's past projects cover engineering, procurement, and construction of various energy-related plants, including oil, natural gas and renewables.

The JGC-JAXA ceremony was attended by Junichi Sakai, Director of the Human Spaceflight Technology Center from JAXA, and Fumio Sakamoto, Executive Officer and Vice President of JGC's Engineering Solutions Center.

"For more than 90 years since its founding, the JGC Group has been involved in the engineering and construction of plants and facilities in a wide range of fields, from energy-related fields to social and industrial infrastructure," said JGC's Sakamoto.

"We have completed more than 20,000 projects in a variety of environments, including deserts, jungles, the far north and offshore," added Sakamoto.

LNG importer CNOOC starts first China-led deepwater gas field

China National Offshore Oil Corp, the Chinese major and largest LNG importer, has started production at the first deepwater natural gas field fully operated by a Chinese company.

CNOOC said the Lingshui 17-2 field started production in the South China Sea.

The field is expected to reach peak production of 328 million cubic feet of natural gas and 6,751 barrels of condensate per day by 2022.

CNOOC said the Lingshui 17-2 field would have 11 production wells when fully completed.

The new field would bring CNOOC's total gas production capacity in the South China to more than 13 billion cubic metres per annum, the equivalent of around 9.6 million tonnes per annum of LNG.

CNOOC said in its statement that Lingshui 17-2 was part of the company's plan to significantly increase its gas output to cut carbon emissions over time.

In its LNG activities CNOOC has recently expanded the planned storage capacity from six tanks to 10 tanks for the Yancheng-Binhai Port import terminal now under construction in the eastern province of Jiangsu.

Phase one will have an annual receiving capacity of 3 MTPA and will be completed by 2022, including the first four 220,000 cubic metres full containment LNG tanks.

The company added that the Binhai LNG terminal project would also be an important asset in the industrial upgrade of the Yangtze River Economic Zone.

CNOOC has the largest regasification capacity of the Chinese majors with a presence in eight of the existing 22 import terminals, even after state-backed PipeChina bought and opened up several CNOOC-owned terminals to third-party access.

Australian Aboriginal company wins contract for onshore Waitsia gas to provide LNG exports

LNG News Editor

Australian engineering company Clough has awarded the bulk earthworks contract for the Waitsia Gas Project Stage Two development in the onshore northern Perth Basin to an Indigenous company.

The contract was awarded to Garla Barna Civil and Mining (GBCM), a local Mid-West business.

Stages

Clough is running the second stage of development of the Waitsia natural gas field in the Perth Basin as a future source of LNG exports.

Clough's main work sites are near the town of Dongara, located about 350 kilometres (217 miles) north of the city of Perth and 65km south of the town of Geraldton.

Beach Energy of Australia and a subsidiary of Japan's Mitsui and Co. each own 50 percent of the venture and Mitsui is the operator of the Waitsia field.

Waitsia gas field in the onshore northern Perth Basin

Beach and Mitsui have also finalized and signed key commercial agreements with shareholders of the North West Shelf LNG plant to enable LNG exports.

"Clough and the Waitsia Joint Venture (Mitsui E&P Australia and Beach Energy) are committed to delivering a high performing project while providing opportunities to the local community at every stage of the project and this award demonstrates that," said Peter Bennett, Clough Chief Executive.

"Our Innovate Reconciliation Action Plan drives our commitment to improve outcomes for Aboriginal and Torres Strait Islander Peoples by providing employment, education and business opportunities," he added.

John Galvin, Clough Executive Vice President Australia and Asia Pacific, said he was looking forward to starting work with GBCM, a local construction business that has demonstrated the capabilities needed to perform this scope of work.

GBCM was established in 2019 as an emerging regional-based Aboriginal services contractor offering project solutions in Western Australia.

GBCM's intent is to maximise opportunities for Aboriginal people in the construction industry, creating hope and career paths for future generations.

"GBCM are pleased that Clough have provided our company with this opportunity on a project that is being built on our traditional lands," said Fred Taylor, GBCM Director and shareholder.

"We are excited to be working with Clough in the delivery of this scope and look forward to the engagement this project brings to the Mid-West and the Southern Yamatji people," Taylor added. ■

LNG plant operator Santos starts engineering of Dorado development in Bedout Sub-Basin

Australian LNG plant operator Santos has started front-end engineering and design for the Dorado project in the Bedout Sub-Basin offshore Western Australia and expects to boost natural gas supplies for the domestic market.

Dorado is an integrated oil and natural gas project which is planned to be developed in two phases.

The first phase is for the production of oil and condensate through a well head platform (WHP) and floating production, storage and offloading (FPSO) facility.

This part has an estimated gross capital cost of around US$2 billion, assuming a purchased FPSO.

Santos explained that the selected FPSO and WHP concept allows for the optimal integrated development of both the gas and liquids resource and retains sufficient flexibility to support future exploration success.

Gas will be reinjected in the initial phase to enhance oil and condensate recovery.

The second phase will then develop the significant natural gas resources in the Bedout Sub-basin and provide future backfill supply to the Santos domestic gas infrastructure assets in Western Australia.

Santos is a growing energy company in Australia as operator now of two LNG export plants, Gladstone LNG in Queensland and the Darwin plant in the Northern Territory after purchasing the Darwin stake of ConocoPhillips.

"FEED contracts for the FPSO and WHP design are being finalised and are expected to be awarded over the next few months," said Santos.

"This follows the competitive pre-FEED phase of the project where top-tier contractors have been engaged for these major work packages," it added.

Santos has an 80 percent interest in the Dorado project and is operator. The remaining interest is held by Carnarvon Petroleum.

Market interest

Santos is currently undertaking a process to seek interest from the market in non-operated equity in Dorado and potentially other WA oil assets.

Santos Chief Executive Kevin Gallagher said Dorado was expected to have an initial gross oil production rate of between 75,000 to 100,000 barrels per day of high-quality crude that is expected to earn a premium to regional pricing benchmarks.

"Entering FEED for the Dorado project is a significant milestone and has the project on schedule for a final investment decision around mid-2022, building on the investment decision on the Barossa gas project earlier this year," stated Gallagher.

"Dorado is on track to be the first development in the Bedout Sub-basin, with its high-quality reservoirs and shallow-water setting, making it a very cost-competitive project globally," he added.

Santos noted that Dorado is also a very low carbon-dioxide reservoir with approximately 1.5 per cent CO_2, and with all gas reinjected in the initial phase, making it one of the lowest emission-intensity oil projects in the region. ■