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Isle of Skye in Scotland makes LNG debut with mini-plant from India

The Scottish terminal includes two insulated storage tanks and a ship bunkering station

LNG News Editor

The Inox Group of India, a leading manufacturer of cryogenic technology equipment, has commissioned the UK's first ever mini-LNG terminal at Kyleakin in Western Scotland.

The group said that the system was delivered by its subsidiary, InoxCVA, under the supervision of energy consultancy and advisory firm Fuelgarden, to a salmon farming feed plant at Kyleakin, on the eastern part of the Isle of Skye in the Inner Hebrides.

LNG terminal facilities at Kyleakin in Western Scotland

Industrial use

The mini-terminal and equipment buyer was the Mowi company of Scotland, which specializes in Atlantic salmon farming.

"The terminal sets a benchmark in terms of safety and process design and will be considered as a future template for type of mini-LNG terminals in the UK and across the globe," said InoxCVA.

"The first-of-its-kind terminal is designed according to EN1473, British standards for installation and equipment for liquefied natural gas, and was approved by the UK Health and Safety Executive and the Highland Council," the company explained.

"The innovative design and modularized concept of this terminal enabled InoxCVA to implement the project with minimum site activity and time," it added.

For the Kyleakin mini-LNG project, InoxCVA manufactured and supplied all the equipment on a turn-key supply basis. The first Scottish LNG terminal includes two 1,000 cubic metres vacuum insulated storage tanks, a ship bunkering station, 300 metres of vacuum-jacketed piping, a trailer loading station and vaporization system, suitable for natural gas consumption by the fish-feed factory.

The terminal is also capable of accepting LNG from small ships as well as by semi-trailers and IMO containers.

"All major critical equipment installed in the mini-LNG terminal were designed and manufactured in InoxCVA's manufacturing facility in India," said the company.

The Inox group said its key strength was design engineering, manufacturing, supply and commissioning of cryogenic turn-key packaged systems.

"Setting up the first ever multifunctional mini-LNG terminal in the UK is a momentous occasion in the history of InoxCVA," said Vijay Kalaria, Global Head of LNG at InoxCVA.

"With this implementation, we are glad to have developed an innovative and world-class solution which will pave the way for adoption of LNG across the globe by various industries," stated Kalaria.

"The success of this commissioning is a hallmark of our innovativeness and will inspire us to work towards enhancing the availability of LNG as a fuel," he added.

Partners

Kalaria also thanked Fuelgarden for partnering with InoxCVA in the project and the Mowi salmon company for choosing the Indian-made system.

The Inox Group also has a 50-50 joint venture with US LNG equipment and industrial gas company Air Products called Inox Air Products Ltd.

It is one of the largest manufacturers of medical and industrial gases in India with 45 plants spread throughout the country.

Inox additionally owns Gujarat Fluorochemicals, India's largest producer of chloromethane and refrigerants with two manufacturing facilities in Gujarat, a refrigerant plant at Ranjitnagar and another facility at Dahej.

UNLIMITED AGENDA

Tellurian's Driftwood LNG takes deals total to $24Bln over 10 years as Vitol signs for cargoes

LNG News Editor

Tellurian Inc., the developer of the Driftwood LNG export project in Louisiana, has finalized a second LNG supply deal with international commodities company Vitol after previously signing another agreement in late May with Vitol's market trading rival Gunvor.

Tellurian's LNG sales and purchase agreement (SPA) with Vitol is for 3 million tonnes per annum on a free-on-board (FOB) basis for a 10-year period.

Vitol LNG head Pablo Galante Escobar delighted with deal

Volumes

The volumes will be indexed to a combination of two indices, the Japan Korea Marker (JKM) for North Asian spot cargoes and the European benchmark Dutch Title Transfer Facility (TTF), each netted back for transportation charges, the same terms as the Gunvor deal.

Tellurian said that at today's prices, each of these SPAs is valued at around $12 billion in revenue over 10 years for the Gulf Coast venture with proposed total output of over 27 MTPA.

Tellurian had earlier signed a supply deal with Gunvor to give the Driftwood project some momentum after several years of firms declining to commit to long-term contracts.

"Vitol expressed interest in the development of Driftwood early on, and it is finalizing this agreement," explained Tellurian President and Chief Executive Octávio Simões.

"As the world electrifies and our population grows, the demand for reliable, low-cost energy will continue to increase. LNG provides a stable source of fuel at an attractive price, and Tellurian's integrated model is positioned perfectly to offer volumes on JKM, TTF or blended price basis," added Simões.

Tellurian's Executive Vice President LNG Marketing and Trading Tarek Souki added that the company had made exceptional progress in the first phase capacity sales by securing this second SPA.

"The two recent agreements represent an aggregate of $24Bln in estimated revenue. We will continue to be deliberate and selective in choosing our additional customers," added Souki.

Pablo Galante Escobar, Global Head of LNG and European Gas and Power at Vitol, said the firm was excited to conclude this agreement with Tellurian.

"Our long-term commitment and investment-grade rating will help Tellurian as they continue their path to financial close," he added.

Recovery

Tellurian had hinted in its first-quarter earnings report at the start of May 2021 that the improving market favoured the signing soon of supply agreements.

The Houston, Texas-based company said it continued to build its Gulf Coast natural gas business and had concentrated on paying down debt.

Novatek signs Arctic LNG accords with China's Zhejiang Energy and commodities firm Glencore

Novatek, the Russian natural gas developer of the Arctic LNG II project, has concluded two initial liquefied natural gas supply accords with global commodities firm Glencore and with China's Zhejiang Energy Gas Group.

Novatek, owner of the existing Yamal LNG export plant is constructing Arctic LNG II joint venture on the Gydan Peninsula at a cost $21 billion.

The plant will produce 19.8 million tonnes per annum of LNG as well as gas concentrate from the principal feed-gas resources, adding to Yamal's output of 17.5 MTPA.

The latest Arctic LNG supply deals were announced by Novatek on June 2 at the Saint-Petersburg International Economic Forum.

The Zhejiang Energy accord is a Heads of Agreement for the long-term supply of cargoes from the project.

The new deal builds on a memorandum of understanding signed by the parties back in October 2019 and establishes the key commercial terms for the annual supply of up to 1 million tonnes of LNG from the Gydan Peninsula project for a term of 15 years.

The LNG will be delivered on an ex-ship (DES) basis on Novatek ships to Zhejiang Energy's planned new gas-fired power generation facilities in China.

"The agreement is consistent with our commercial LNG strategy to diversify our client base and target end-consumers in the rapidly developing Asian Pacific market," said Novatek Chief Executive Leonid Mikhelson.

A second Heads of Agreement was signed with an affiliate of London-listed Glencore Plc for 500,000 tonnes per annum of Arctic LNG.

Novatek said the Glencore volumes would be delivered to a number of locations in East Asia.

"The market for LNG in the Asia-Pacific region has fully recovered from the impact of the coronavirus pandemic and has now resumed a stable growth phase," stated Novatek's Mikhelson.

Novatek holds 60 percent of the Arctic LNG II project and four other 10 percent stakes are shared between various shareholders.

Novatek has already concluded firm 20-year LNG Sales and Purchase Agreements (SPAs) for LNG volumes with all the project's participants from France, China and Japan.

The 10 percent holdings belong to French major TotalEnergies, China National Petroleum Corp., China National Offshore Oil Corp. and a Japanese investor group comprising Mitsui & Co. and the government institution, the Japan Oil, Gas and Metals National Corp.

The LNG sales from Arctic LNG II's first liquefaction Train are scheduled to commence in 2023.

Kinder signs $1.22Bln deal for storage and pipelines

Kinder Morgan, the US pipeline giant and key shareholder in the LNG export plant in Georgia and the Gulf LNG project in Mississippi, has agreed on the $1.22 billion acquisition of Stagecoach Gas Services, a natural gas pipeline and storage joint venture with assets serving the Marcellus Shale basin and northeast utilities.

The current owners of Stagecoach Gas Services are Consolidated Edison Inc. and Crestwood Equity Partners.

The Stagecoach Gas Service assets currently comprise four natural gas storage facilities with a total working gas capacity of 41 billion cubic feet and 185 miles of natural gas pipelines certificated by the Federal Energy Regulatory Commission.

These include multiple interconnects to major interstate natural gas pipelines such as the Tennessee Gas Pipeline, a KMI subsidiary and transporter of LNG feed gas in the southeast, and with wide supply portfolios in the northeast where the assets are located.

The assets also include the North-South MARC I pipelines to support customers in Bradford, Sullivan and Lycoming counties in Pennsylvania and Tioga county in New York with 2.9 billion cubic feet per day of delivery capacity. The customers include Marcellus Shale producers, northeast gas and electric utilities, marketers and power generators.

The new system acquired by Kinder Morgan in addition to connecting to the TGP is also linked to the Millennium and Transco pipelines.

Sakhalin plant in Russian Far East starts maintenance until July

LNG News Editor

Sakhalin Energy, the operator of the Sakhalin II LNG plant in the Russian Far East supplying four North Asian nations, has started scheduled maintenance at infrastructure facilities and is hopeful of having minimum disruption to exports despite changing loading arms.

"Around 2,500 technical staff from various regions of Russia will be engaged in operations at the facilities," explained Roman Dashkov, Chief Executive of Sakhalin Energy.

Loading arms

"As part of the shutdown, for the first time in Russia, there will be a replacement of loading arms performed at the LNG jetty of the liquefaction plant," said the CEO.

The Sakhalin plant has been on stream since 2009 and last year produced 10.8 million tonnes of LNG.

However, the joint venture run by Russian natural gas company Gazprom has yet to progress on construction of a long-promised third liquefaction Train at Prigorodnoye on Sakhalin Island.

The two-Train facility at Prigorodnoye on Sakhalin Island

The main shareholders in the plant are Gazprom with 50 percent, Royal Dutch Shell with 27.5 percent and Japanese company Mitsui & Co. and Mitsubishi with 12.5 percent and 10 percent respectively.

In the past year the Japanese have taken delivery of 51.6 percent of Sakhalin volumes, a further 17.4 percent was shipped to Taiwan, 16.3 percent to South Korea and 14.1 percent to China.

Since the start-up of the plant, Sakhalin Energy has produced and shipped about 130 million tonnes of LNG as of early May 2021 and more than 2,000 cargoes.

The company said that the Russian plant had already begun the maintenance campaign on the PA-B plant, the largest oil and gas production platform.

The PA-B platform is located about 12 kilometres offshore the northeast of the island in waters depths of 32 metres.

The workers would then proceed with the scheduled shutdown of the facilities in the integrated gas chain, including the LUN-A platform. The Sakhalin maintenance programme is expected to be completed by the start of July.

Stabilis completes acquisition of Port Allen plant in Louisiana

Stabilis Solutions, the liquefaction plant operator and supplier to the small-scale LNG market in the United States, has completed the acquisition of another facility in Louisiana.

Stabilis said the acquisition of the Port Allen plant, located on the west bank of the Mississippi River near Baton Rouge, was made from Nu Blu Energy LLC.

Stabilis said the Port Allen plant would increase its fuel output by 30 percent. The value of the transaction was not disclosed.

"The Port Allen facility is strategically located in the eastern Gulf Coast region and will support some of Stabilis' largest customers," said Houston, Texas-based Stabilis.

Built in 2018, the facility has nameplate production capacity of 30,000 LNG gallons per day.

Stabilis said it expected to be able to sell all of the facility's capacity immediately with contracts from existing customers.

"We are excited with the opportunities presented by the Port Allen acquisition," said Jim Reddinger, President and Chief Executive of Stabilis.

"We are witnessing rapid expansion in LNG marine bunkering activity across North America, and this acquisition allows us to expand our LNG marine bunkering services to customers throughout the Gulf Coast, including the ports of Baton Rouge, New Orleans and beyond," explained Reddinger.

The Stabilis CEO noted that the Port Allen plant currently supports North America's largest LNG-powered offshore service vessel fleet located in Port Fourchon in Louisiana.

Stabilis, which is listed on the Nasdaq global exchange, forecasts that the acquisition will be immediately accretive to earnings.

Incremental annual gross earnings are projected to be between $2.5 million and $3.0M.

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NEWS NUDGES

Colombia LNG plan

Black and Veatch of the US, the Kansas-based supplier of LNG and energy equipment and solutions, has been selected to conduct a technical, engineering and commercial study for the Andes Energy Terminal project in the South American nation of Colombia. The gas-to-power venture would be centred on Buenaventura in Colombia's Aguadulce Peninsula.

GTT China tanks order

French LNG storage tanks technology firm GTT has received another order for the design of two very large membrane full containment storage tanks from China's Chengda Engineering. GTT will design the two latest generation tanks, each with a net capacity of 220,000 cubic metres. GTT said the order was part of the cooperation agreement between Beijing Gas and GTT related to the Tianjin Nangang LNG terminal project in northeast China. The two tanks are scheduled to be delivered to the Tianjin South Industrial Zone for Phase III construction in the second quarter of 2024.

Charter rates steady

Shipping charter rates for LNG carriers in the spot market were little changed in the past week in the West of Suez market at between $59,000 per day and $55,000 per day for vessels of 155,000-165,000 cubic metres capacity. For vessels East of Suez fixture levels were down by at least $2,000 per day and were quoted at between $54,000 per day and $50,000 per day, according to London brokers. One-year charter rates for the most modern vessels were unchanged at around $77,000 per day.

Intercontinental Exchange hits records for Dutch TTF and JKM spot cargo futures and options for LNG complex

LNG News Editor

Dutch TTF had open interest total of 1.94M contracts

Intercontinental Exchange, the leading global provider of trading platforms and clearing, has posted record activity in two key LNG trading derivatives, the European benchmark Dutch Title Transfer Facility (TTF) and the Japan-Korea Marker for North Asian spot cargoes.

ICE said that TTF natural gas futures reached record open interest of approximately 1.94 million contracts on May 26, 2021 and is up 21 percent year-on-year, with open interest out to December 2028.

Growth path

The Atlanta, Georgia-based trading platforms operator said that since 2016, the Average Daily Volume (ADV) in Dutch TTF futures and options had grown more than 40 percent on average every year.

The ADV has reached 155,000 contracts in the year to date, an increase of 5 percent versus the same period in 2020.

"The total number of participants trading TTF has grown by 83 percent from 2016 to 2020," said ICE.

"Participants based outside of Europe have grown by 164 percent since 2016, with the highest growth coming from those based in the US," it added.

"The strong growth in trading activity and participation in the ICE TTF contract reflects how TTF is being used as a global gas benchmark," explained the firm.

The JKM LNG futures for Asia spot volumes reached record open interest of 108,210 contracts on May 13 and is up 10 percent year-on-year.

The ADV in JKM LNG futures and options is 3,800 contracts, an increase of 14 percent versus the same period in 2020.

"The number of participants trading JKM LNG futures has increased 25 percent since May 2020, with a significant contribution to growth coming from participants based in East Asia, a region considered to be the largest LNG-importing region in the world," stated ICE.

The TTF first line financial futures contract is a cash settled version of the benchmark TTF futures contract and trades in US dollars per million British thermal units.

"This contract is becoming increasingly popular because it allows market participants to trade TTF in the same currency (USD) and unit of measurement for energy (MMBtu) as the other globally relevant gas hubs, US Henry Hub and JKM LNG," the firm explained.

By the close of business on May 11, 2021, volume traded in TTF first line financial futures had already exceeded volume traded during the whole of 2020.

"Natural gas has become a global market and the record levels of open interest and strong trading activity in TTF and JKM LNG futures reflect how these contracts are at the forefront of global natural gas price formation," said Gordon Bennett, Managing Director of Utility Markets at ICE.

Maturity

"The increased utilization of JKM by participants in East Asia is a key milestone in the maturity of the LNG market and reinforces the position of the ICE JKM contract as a key benchmark for natural gas in the region," stated Bennett.

TTF and JKM futures and options form part of ICE's global natural gas complex alongside the UK National Balancing Point, Henry Hub, the West India Marker (WIM) LNG (Platts) and the Spark LNG Freight Futures contracts.

These contracts are cleared at ICE Clear Europe as part of ICE's global energy futures platform covering oil and the environmental complex.

> "Natural gas has become a global market and the record levels of open interest and strong trading activity in TTF and JKM LNG futures reflect how these contracts are at the forefront of global natural gas price formation"
>
> *- Gordon Bennett, Managing Director of Utility Markets at ICE.*

World Energy Investment report praises Qatar expansion and sees Russian and US spending

LNG News Editor

Global investment in energy is set to rebound by nearly 10 percent during 2021 to $1.9 trillion, reversing most of last year's drop caused the Covid-19 pandemic, with Qatar and its LNG expansion praised by the International Energy Agency in its annual investment report.

The Paris-based IEA said in the "World Energy Investment" report said that Qatar makes a "strong statement of intent" with its move to expand LNG capacity.

Offshore platforms in the Qatari North Field in the Gulf

'Strong signal'

"Qatar's decision to move ahead with the world's largest LNG expansion, and to include carbon-capture technologies in this investment, is a strong signal of its intent to maintain a leadership position in LNG," said the IEA in launching the report.

The IEA said there were signs that spending by some global oil and gas companies was also starting to diversify.

IEA analysis suggested capital spending by the industry on cleaner energy investments suggests it could rise from 1 percent to 4 percent in 2021.

"LNG liquefaction investment dropped by more than a third in 2020 but is expected to grow by more than two-thirds in 2021 to over $23 billion," said the report.

"Qatar, Russia and the United States are set to pick up construction project activity, although the outlook remains very uncertain in Mozambique due to security concerns," explained the report in the section on LNG and natural gas pipelines.

The IEA said that market signals for LNG picked up in late 2020, with a sharp rebound in prices due to colder weather across Asia, a drop in nuclear and coal in Japan and South Korea, and unplanned outages of LNG plants.

The report noted that the announcement in February 2021 of a final investment decision for Qatar Petroleum's 33 million tonnes per annum North Field East expansion, gave the go-ahead to the largest single LNG project by capacity ever sanctioned.

On the LNG import side, there are nearly 200 billion cubic metres of regasification capacity under construction worldwide.

"Despite construction delays due to Covid-19 and project specific issues, a pipeline of new projects, particularly in Asia, is aiming to ensure that infrastructure is in place to satisfy anticipated growth in demand," added the EIA.

The report also covered other sectors such as oil and gas upstream upstream, electricity and renewables.

Oil and natural gas investment is expected to rebound by about 14 percent in 2021 to nearly $710Bln in 2021 after dropping by 25 percent last year.

Upstream spending will rise even as the hydrocarbons industry remains under strong pressure from the pandemic and from energy transition idealogues.

"The oil and gas industry has never seen a year like 2020, and the reverberations are still being felt in the finances and strategies of companies across the sector," said the EIA.

"After a sharp decline in 2020, our bottom-up analysis of publicly announced oil and gas company spending plans shows an 8 percent increase in upstream spending in 2021, taking the total spending to over $350Bln, but this remains well below 2019 levels," added the report.

Power sector

Power sector investment worldwide is set to increase by around 5 percent in 2021 to more than $820Bln, its highest ever level, after staying flat in 2020.

"Renewables are dominating investment in new power generation capacity and are expected to account for 70 percent of the total this year," stated the IEA.

The rising share of renewables in new power generation investment has been accompanied by a sharp drop in approvals for new coal-fired power plants, which are some 80 percent below where they were five years ago.

"However, there was a slight increase in go-aheads for new coal-fired projects in 2020. This was largely due to China, where the government lowered restrictions on building new plants, giving a green light for construction in more provinces," stated the IEA.

"Cambodia, Indonesia and Pakistan were other countries where coal-fired final investment decisions (FIDs) picked up in 2020," added the EIA.

Excelerate sites FSRU at Bahia Blanca in Argentina

Excelerate Energy, the US pioneer of floating liquefied natural gas import terminals, said the FSRU “Exemplar” has returned to the Argentine port of Bahia Blanca to support the South American nation’s peak energy demand in the Southern Hemisphere winter.

“The ‘Exemplar’ has begun operations in Bahia Blanca, a port city located 400 miles south of the Argentine capital Buenos Aires,” said Excelerate.

The FSRU has storage capacity of 150,900 cubic metres and deliver regasified LNG for the 2021 winter season in Argentina, providing reliability and stability in the challenging conditions of the South Atlantic.

The vessel has been chartered for use by Integración Energética Sociedad Anónima (IEASA), previously known as Enarsa (Energía Argentina S.A.), a state-owned company and the national oil and gas company, and Yacimientos Petrolíferos Fiscales (YPF) S.A. to deliver an energy solution.

“We are excited to return to Bahia Blanca and continue our partnership with IEASA and YPF to deliver an energy solution that is flexible, cost-effective, and environmentally-friendly during a critical period of peak demand,” said Daniel Bustos, Excelerate’s Chief Commercial Officer.

“We are confident the ‘Exemplar’ can perform again with our local Argentine crew to support the country’s energy transition and post-Covid economic recovery this winter,” added Bustos.

The return of the FSRU comes after Excelerate recently won an international, competitive tender for seasonal regasification service in Bahia Blanca.

Höegh reports loss amid takeover and mixed tender and project results

LNG News Editor

Höegh LNG Holdings, the Norwegian shipping company acquired in a takeover by Norwegian interests and a unit of US investment bank Morgan Stanley, posted a wider loss in the first quarter of 2021 as it reported setbacks in its tenders for projects.

Höegh reported a net loss of $2.26 million compared with a loss of $1.02M in the first three months of 2020.

‘Höegh Esperanza’ FSRU is steady earner at Tianjin port

Floating terminals

Total quarterly income also declined to $83.97M versus $86.73M in the prior-year quarter.

Höegh noted that it still had a “healthy pipeline” of floating storage and regasification unit (FSRU) projects at various stages of development.

It said the most important developments since the previous quarterly report related to the two Australian projects .

Höegh reported that the negotiations for the time-charter with Australian Industrial Energy for the Port Kembla project in New South Wales was in the final stages.

However, a second Australian venture at Crib Point in the Australian state of Victoria would not be proceeding after permits were refused.

Another project the company missed out on was in the Philippines after the first quarter ended.

“In April 2021, First Gen awarded the conditional FSRU contract for their Batangas LNG project in the Philippines to a competitor of Höegh,” said the company.

Höegh also cited another issue of the “Höegh Galleon” commencing the extension of the charter with Cheniere Energy of the US at a lower time-charter rate.

“These factors were partly offset by ‘Arctic Lady’ operating for the full quarter and ‘Höegh Esperanza’ operating in FSRU mode (at Tianjin in China) during the quarter,” explained Höegh.

Burckhardt Compression increases LNG and other equipment sales

Burckhardt Compression, the Swiss manufacturer of compressor systems and a service provider for LNG and other markets, has closed its fiscal year with higher sales and profits as it forecast a brighter 2021.

Burckhardt reported higher order intake of 676.6 million Swiss francs ($751.5M), a year-on-year increase of 11.4 percent.

The Winterthur-based company saw improvements in its two divisions, Systems and Services, as fiscal year net income came to 47.20M Swiss francs compared with 39.87M Swiss francs in the previous fiscal year.

There was also a significant 36 percent increase in earnings per share to 13 Swiss francs, up from 9.56 Swiss francs.

The pay-out was helped by the improved financial results and the acquisition in January 2021 of all the remaining shares Burckhardt didn’t already own in the Chinese company, Shenyang Yuanda Compressor.

“Business with the petrochemical-chemical industry, gas transport and storage, and industrial gases has recovered and returned to pre-pandemic levels,” explained the company.

“Burckhardt also took further orders in the LNG and liquefied petroleum gas (LPG) maritime sector and achieved initial successes with the newly developed compact marine compressor,” stated Burckhardt.

The company additionally noted an increase in activity in the hydrogen mobility and energy business.

Guidance for the new fiscal year pointed to sales of between 620M Swiss francs and 650M Swiss francs, as well as slightly higher profit margins compared with the previous year.

“Temporary lockdowns in all parts of the world dominated the entire 2020 fiscal year,” said Burckhardt in its review.

“Asian markets, especially China, but also Central Asia, recovered the fastest,” added the company.

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Australian mining company signs 15-year LNG supply deal for project to produce premium ore

LNG News Editor

A Western Australian mining company targeting one of the largest known remaining global resources of premium ore called kaolin has advanced towards the start-up of its project by signing a 15-year agreement for the supply of liquefied natural gas for power and fuel.

The company called WA Kaolin has signed a supply accord with Mid-West LNG for its Wickepin kaolin project located 220 kilometres southeast of Perth.

Powering kiln

The $22 million LNG supply agreement will power Wickepin's rotary kiln which is used to dry its kaolin ore.

This is part of WA Kaolin's proprietary dry processing method of accessing kaolin.

The Wickepin kaolin project has a mineral resources of 644.5 million tonnes of high-grade premium kaolinized granite.

It is one of the largest known remaining resources of premium kaolin in the world.

WA Kaolin's premium ore plant will benefit from LNG use

WA Kaolin acquired the world-class kaolin resource from mining giant Rio Tinto in 1999 and since then WA Kaolin co-founders and owners have invested over A$42 million (US$32M) to develop the Wickepin Kaolin Project.

The LNG for the project will be provided by Mid-West LNG, a subsidiary of the Clean Energy Fuels Australia (CEFA) group.

CEFA is currently investing in new production plants and associated LNG infrastructure to provide a lower emissions fuel to the rural regions of Australia.

CEFA, through Mid-West LNG, is in the process of building a new LNG plant in Mount Magnet, located approximately 600km north of the Wickepin project, and the plant will be the second customer supplied from this new facility.

WA Kaolin said the Australian kaolin it will produce is characterised by its purity, quality and brightness, which has typically attracted higher prices.

The demand for kaolin, previously a little-known product, is growing in the Asia-Pacific region and has numerous applications from making concrete construction materials to ceramics, paints, pharmaceuticals and cosmetics.

WA Kaolin Chief Executive Andrew Sorensen said the LNG agreement was a crucial part of the company's goal to enter production by the end of 2021.

"We are thrilled to have entered into a 15-year contract with CEFA, one of Western Australia's leading energy solution providers," said Sorensen.

"As we continue to progress our stage one work program towards our target to be producing by year-end 2021, it is vital for our development program that we lock in such important long-term supplier agreements like this," he added.

The commercial LNG supply will start on January 1, 2022, with the gas commissioning process beginning earlier in September 2021.

WA Kaolin stated that the 15-year LNG contract would be reviewed in its fifth and 10th years, with two options five-year extensions.

LNG operator Woodside agrees renewable plan for Burrup Peninsula with 210,000 solar panels

Woodside Petroleum, the operator of two liquefied natural gas export plants, said it had agreed a project to install more than 210,000 solar panels on the Burrup Peninsula of Western Australia for environmental reasons and to help supply 50 megawatts of electricity for the Pluto LNG facility.

Woodside said the solar project for Pluto LNG would be one of the largest in Western Australia and was going ahead after the company had undertaken a range of environmental, geotechnical and engineering studies.

The company, which also operates the North West Shelf LNG plant at Karratha as a one-sixth shareholder, said it was progressing on key stakeholder consultations ahead of seeking regulatory approvals for the solar power project.

> **"Woodside's vision is for large-scale supply of renewable energy to existing and future industry on the Burrup Peninsula"**
>
> *- Meg O'Neill , Acting CEO , Woodside*

Woodside Acting CEO Meg O'Neill said Western Australia was uniquely placed to capitalise on the state's world-class renewable energy resources and the willingness of industry, government and others to cooperate on these new projects.

"Woodside's vision is for large-scale supply of renewable energy to existing and future industry on the Burrup Peninsula," explained O'Neill.

"We are lucky to have access to abundant natural resources, safe and reliable energy operations and both industry and government that are motivated to drive sustainable energy outcomes," she added.

Woodside will be working on the solar project with the Perth-based Perdaman group.

"Our work with Perdaman is another demonstration of the important role the gas industry can play in driving the energy transition," said O'Neill.

Perdaman Chairman Vikas Rambal said the initiative was strategically in line with Perdaman's commitments to greenhouse gas management.

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