LNG Unlimited

LNG JOURNAL PUBLICATION 26 March 2019

Chart Industries signs key accord with Indian Oil for LNG sector

US company said India is a significant market and is committed to policies for cleaner fuel

LNG Journal editor

Washington DC signing may give Chart India foothold

Chart Industries, the US LNG equipment-maker for production, storage and distribution, and Indian Oil Corp, owner of the first import terminal to start up on the Indian East Coast, have signed an accord to promote the development of the LNG market in the Asian nation.

The memorandum of understanding was signed in Washington DC by executives of both companies.

Offerings

The accord covers the development of the various LNG applications offered by Chart such as modular liquefaction, regasification, LNG bunkering for barges and LNG and compressed natural gas fuel stations.

The US company, based near Atlanta in Georgia, is also capable of supplying India with LNG transportation tanks for railways, ISO containers and systems to deliver the fuel to small-scale users.

Chart and Indian Oil (IOCL), the state-backed refining and fuel marketing company, said they had signed their agreement based on complementary synergies and mutually beneficial business objectives arising from the demand growth of natural gas in India.

They pledged to work together and explore opportunities for cooperation to promote natural gas and LNG development in multiple industrial and commercial sectors.

“The LNG opportunity in India is significant, as evidenced by the government’s commitment for clean fuel, and the double-digit LNG growth forecasts,” said Jill Evanko, Chart’s President and Chief Executive.

“We are excited about working with IOCL as it expands our reach into the LNG market in India, and provides IOCL with speed to market as well as expanded service access,” added Evanko.

“This opportunity originated from the recent acquisition of the VRV businesses now within our portfolio of offerings,” stated the CEO in reference to the Italian company that agreed to be acquired by Chart in September 2018.

IOCL’s East Coast LNG import terminal at Kamarajar Port in the state of Tamil Nadu was inaugurated earlier in March by Indian Prime Minister Narendra Modi.

The facility has 5 million tonnes per annum of import capacity and two tanks each with storage of 180,000 cubic metres.

The Kamarajar facility is located about 25 kilometres north of Chennai Port and initially the imports will supply natural gas to industry in the Manali area, including Madras Fertilizers Ltd., Chennai Petroleum Corp. and Tamil Nadu Petroproducts.

The terminal’s commissioning started at the end of on February with the arrival of an LNG cargo from Qatar.

IOCL’s terminal at Kamarajar, formerly one of India’s main coal ports and previously called Ennore, is India’s sixth LNG import terminal to be completed and is expected to promote industrial growth in the area.

This facility will also be a source for city-gas distribution networks, where natural gas would be supplied to domestic, transport, commercial and industrial sectors in various cities in Tamil Nadu.

During the fourth quarter Chart completed the sale of a medical sector unit for $133.5M while it closed the purchase for $147M of VRV, the Italian engineer and designer of cryogenic equipment that will complement Chart’s own offerings.

Chart posted a surge in 2018 sales to $1.08 billion from $842.9 million the previous year amid prospects of up to $500M of potential large LNG-related orders in 2019.

Chart reported a rise in fourth-quarter sales to $290.1M compared with $296.4M in the same three months of 2017. Annual net income almost doubled to $53.6M compared with $27.7M in 2017.

Chart said orders in the quarter amounted to $273.3M, including $11.2M of orders from VRV during Chart’s six-week period of ownership. ■

UNLIMITED AGENDA

US Gulf LNG export project in Mississippi port of Pascagoula moves forward on regulatory front

LNG Journal editor

The US Gulf LNG export project proposed by pipeline company Kinder Morgan for Pascagoula in Mississippi is moving forward on the regulatory front with the Federal Energy Regulatory Commission and other agencies.

Gulf LNG is an existing import terminal that is being transformed into a liquefaction plant to produce around 11.5 million tonnes per annum of LNG for export.

Aerial view of existing facilities at Pascagoula terminal

Previous role

The Pascagoula terminal had originally been constructed to import LNG cargoes from Angola in southwest Africa from a production plant developed by international oil companies, including Chevron Corp.

However, the US shale-gas boom made LNG imports into the US uneconomic and Kinder later decided to consider the export option.

Gulf LNG, co-owned by Kinder Morgan and several US equity funds, has just notified the FERC about the progress of the project and the issue of the final environmental impact statement.

The company said that on March 15, 2019, the Pipeline and Hazardous Materials Safety Administration, now playing a more active part of the FERC process, issued its letter of determination.

This stated that it had reviewed the company's application and determined that it had demonstrated that the siting of the project complies with Federal Pipeline Safety Standards.

In addition, the company had submitted three replies through March 4, 2019, to data requests from FERC staff on the Draft Environmental Impact Statement (DEIS).

Gulf LNG added that it was working on an update to the Mississippi Department of Environmental Quality's Permit to Construct and Operate Air Emissions Equipment and an update to the US Army Corps of Engineers certification in relation to the Rivers and Harbors Act.

"The comment period on the DEIS closed on February 25, 2019 and FERC is presently engaged in drafting the Final Environmental Impact Statement," said Gulf LNG.

The Gulf terminal was originally owned by US pipeline company El Paso and later acquired by Kinder, which has sold 50 percent of the project to US equity funds.

The Pascagoula terminal is located next to the Bayou Casotte Navigation Channel and already includes a five-mile send-out pipeline and two LNG storage tanks, each with a capacity of 160,000 cubic metres.

It is interconnected to several downstream pipelines, including Transco, Florida Gas Transmission, the Destin Pipeline and the Gulfstream Natural Gas Pipeline from where feed-gas can be transported for processing and export from Pascagoula.

This is Kinder's second LNG export project and it is currently completing the Elba Island export plant near Savannah in the state of Georgia.

In addition to the storage tanks and pipeline, the terminal has a single dock facility that is currently permitted to receive LNG carriers of up to 170,000 cubic metres capacity and is designed to handle even larger vessels.

An earthen berm would also be constructed extending from the northeast to the southeast boundaries of the terminal expansion site. This would be connected to new segments of the storm surge protection wall on the coast. ■

Elba Island export plant in state of Georgia expects first Train to come on stream in April

US pipeline company Kinder Morgan said it would start-up its Elba Island LNG export plant in Georgia in late April after receiving regulatory permission in early March to introduce feed-gas, back-up fuel and boil-off gas into its systems comprising 10 small-scale liquefaction Trains.

Kinder Morgan said it had expected the first train to come on line by the end of March and the remaining Trains following during the year.

However, the project has been hit by minor construction delays. The start-up had previously been expected by the end of 2018.

"Kinder Morgan has revised its initial in-service date expectations for the Elba Liquefaction Project as a result of delays during construction," said the company.

"The first unit of the project is now expected to be in commercial service in late April," it added.

Elba Island is an existing import terminal that has been transformed into an export plant to produce an initial 2.5 million tonnes per annum of LNG.

Kinder Morgan, based in Houston, has developed the plant at a cost of just $2 billion and will have feed-gas needs equivalent to around 350 million cubic feet per day.

The Georgia terminal is among three US liquefaction facilities that are expected to begin service in 2019, adding to the country's growing energy export industry.

Start-ups for Elba Island, Sempra Energy's Cameron LNG in Louisiana and the Freeport plant in Texas would double the number of US LNG export terminals in operation.

The Cameron and Freeport projects have also been delayed by holds ups and problems in construction.

According to the Federal Energy Regulatory Commission, the liquefaction Trains 1-6 at Elba Island are expected to start entering service at one-month intervals.

Elba Island's Trains 7-10 are then scheduled to come on stream in the third quarter of 2019.

The Georgia project is supported by a 20-year supply contract with Royal Dutch Shell.

The coming on stream of Elba Island on the east Coast follows the shipping of the first cargo a year ago from the Cove Point in Maryland on Chesapeake Bay, operated by Dominion Energy. ■

India's LNG imports fall as US to ship more cargoes

Indian liquefied natural gas imports fell last month by just over 9 percent with cargoes arriving at a slower pace from suppliers in Qatar, West Africa, Australia and the US as the nation also received its commissioning cargo in late February for the first import terminal on the East Coast.

The Asian nation's LNG imports during February 2019 amounted to 1.41 million tonnes compared with 1.56MT in February 2018.

The imports had also dropped in January by 11.6 percent to 1.57MT compared with 1.78MT in January 2018.

The cumulative Indian imports for the 11 months of the current fiscal year until February 2019 rose by 4.3 percent to 18.32MT versus 17.57MT in the same period in 2017-2018, according to the data from the Indian Ministry of Petroleum and Natural Gas.

The Ministry noted that LNG imports had cost around $600 million compared with $800M in February 2018.

The 11 months of imports from April 2018 to February 2019 are estimated to have cost $8.9 billion versus $6.8Bln in the previous fiscal year period.

The shipments were received at India's three main import terminals at Dahej, Hazira and Dabhol near the West Coast port of Mumbai and for the first time at the newest terminal at Kamarajar, 25 kilometres north of Chennai Port in Tamil Nadu.

Domestic natural gas output during February 2019 rose by 3.3 percent to 2.56 billion cubic metres compared with 2.48 Bcm in the same month the previous year.

Stratton Ridge Expansion set to start and supply Freeport LNG

LNG Journal editor

US regulators have approved the start-up of the Texas Eastern Transmission's portion of the Stratton Ridge Expansion pipeline project designed to provide feed-gas to the Freeport LNG export plant at Quintana Island in Texas.

The Texas LNG project is constructing three liquefaction Trains with 15.3 million tonnes per annum of output and has entered the permit process with the FERC to build a fourth Train.

Mid-July

The first of the three Trains under construction will be brought on stream by around mid-July after more than a year of delays as contractors missed schedules and some disruption was caused during the past two hurricane seasons.

The Federal Energy Regulatory Commission granted approval for the Stratton Ridge pipeline additions to help provide the 700 million cubic feet per day that will be needed for the three LNG Trains.

The Stratton Ridge Project was developed by pipeline company

Freeport is being built by Michael Smith and his partners

Enbridge Inc. and provides firm transportation services to deliver new incremental production from the growing shale-gas supplies in the region.

The expansion has cost $100 million and enables additional bi-directional flow on the Texas Eastern Transmission system to a delivery point near Stratton Ridge in Brazoria County, south of Houston.

The pipeline project includes the Angleton Compressor Station in Brazoria County and a 0.5-mile, 30-inch diameter pipeline.

Freeport is being developed by US energy entrepreneur Michael Smith and partners. Smith is the company's Chief Executive.

The FERC has already authorized the commissioning of Train 1 and the common area utilities at both the liquefaction and pre-treatment facilities.

However, Freeport has yet to request the delivery of feed-gas into the plant systems to begin commissioning.

About 13.4 MTPA of that Freeport production capacity from the first three Trains has been contracted under use-or-pay liquefaction tolling agreements with European and Japanese contract holders, BP of the UK, Germany's Uniper and Japan's Jera Co. Inc. and Osaka Gas.

Texas project with Samsung as partner makes permits progress

The Texas LNG export project proposed for Cameron County in the port of Brownsville made more progress as the Federal Energy Regulatory Commission delivered a final environmental impact statement.

"We determined that the impacts on the environment from the proposed project would be reduced to less than significant levels with the implementation of Texas LNG's proposed impact avoidance and minimization," said the FERC.

The Texas LNG terminal would be constructed in an area currently zoned for industrial use along the existing Brownsville Ship Channel.

The project is designed to produce up to 4 million tonnes per annum of LNG, which is around 550 million cubic feet per day of natural gas.

Texas LNG, whose development is led by industry veterans, Chief Executive Vivek Chandra and Chief Operating Officer Langtry Meyer, is one of several ventures planned for the Brownsville area.

The project involves building two liquefaction Trains and support facilities as well as two LNG storage tanks, each of around 210,000 cubic metres capacity.

The LNG carrier berthing dock will be capable of receiving vessels with capacities of between 130,000 cubic metres and 180,000 cubic metres. "We look forward to receiving FERC approval in the next few months which is one of the important steps to allow construction to begin and LNG production to commence by 2024," said COO Meyer.

"This project will bring jobs and investment to Cameron County and deliver clean, safe, abundant Texas natural gas energy to the world," he added.

A final investment decision for Texas LNG is scheduled to be taken in the months ahead and is contingent on factors such as completing the required commercial agreements and obtaining financing.

NEWS NUDGES

BW purchases Epic Gas

BW Group, the Singapore-based shipping line with a fleet of 20 LNG carriers and liquefied petroleum gas vessels, has acquired majority control of Epic Gas, the owner of a fleet of small pressurized LPG carriers. Epic, also based in Singapore, has a fleet of 39 vessels ranging from 3,500 cubic metres capacity to 11,000 cubic metres capacity serving the short-haul and regional LPG and chemicals trade. "BW is pleased to acquire this shareholding in Epic Gas with its strong operational platform and quality fleet," said Andreas Sohmen-Pao, Chairman of BW.

Swedish start for bunker ship

The 7,500 cubic metres capacity LNG bunkering vessel "Kairos" has conducted its first LNG supply operation for the newbuild ferry "Visborg" at the ferry pier of the port of Visby on the Swedish island of Gotland in the Baltic Sea. The "Kairos", built at the Hyundai Mipo Dockyard in South Korea and delivered to Hamburg in Germany at the end of 2018, is owned by the joint venture company Babcock Schulte Energy.

Greek vessel charters

Tsakos Energy Navigation, the Greek shipping company, has agreed charters for its two LNG carriers. Tsakos said that it signed deals for the "Neo Energy" and the "Maria Energy" for an aggregate period of 36 months. The revenues are expected to be in the region of $60 million. "With two vessels fixed on accretive medium-term charters, the company is examining further expansion in the sector," said Chief Operating Office George Saroglou.

Poland receives EU grant to help fund import terminal expansion

LNG Journal editor

Polish regas facility at Swinoujscie on the Baltic coast

The European Commission has approved a grant of 128 million euros ($145M) to support the expansion of the Polish onshore liquefied natural gas terminal at the Baltic port of Swinoujscie to enable regular future deliveries of US LNG.

The expansion is scheduled to be completed by 2022 and is aimed at helping ensure gas supply security in Poland and the wider Baltic market.

Boost

Regasification at the terminal will be increased to handle 5.55 million tonnes per annum of LNG, or 7.5 billion cubic metres of gas.

A second phase of the expansion will be completed by 2023 and includes a third LNG storage tank along with trans-transhipment facilities for rail loading onto ISO containers.

It will include the construction of an additional jetty. This project will be implemented in collaboration with the Szczecin and Swinoujscie Seaports Authority.

The new jetty will enable the provision of small-scale tanker loading and bunkering activities.

Polskie LNG, the terminal operator, has awarded a technical consulting contract to the European engineering company Tractebel, based in Belgium, to help with the terminal expansion programme.

The funding from the European Commission, the executive arm of the European Union, comes from the European Regional Development Fund and the Cohesion Fund under the 2014-2020 Infrastructure and Environment Operational Programme, which has among its priorities the improvement of energy security in Europe.

"The project will contribute to ensuring security of gas supplies in Poland and in the Baltic countries by making supplies more diverse and promoting new gas transport routes in the region," said an EU statement.

Poland's state-controlled oil and gas company is planning to increase its purchases of LNG to 7.5 MTPA, which is 2 MTPA more than the future handling capacity of the Swinoujscie terminal. This will enable the company to conduct some cargo trading on the international market.

UK import surge with varied cargo sources from Angola to re-loads

Imports of liquefied natural gas to the UK in March are at their highest levels since October 2015, helping benchmark National Balancing Point prices to decline to an 18-month low at around the equivalent of $5.00 per million British thermal units.

The UK and its three main import facilities, the Isle of Grain terminal in Kent, and the two Milford Haven terminals, South Hook LNG and Dragon LNG, are set to receive 14 cargoes in March, with six deliveries scheduled for the middle of the month.

The two latest deliveries arrived on March 18 from Qatar and Nigeria, onboard the 266,000 cubic metres capacity Q-Max vessel "Al Mayeda" and the 137,230 cubic metres capacity "LNG Rivers".

The three UK terminals are on track to import 1.18 million tonnes of LNG in March, amounting to 1.63 billion cubic metres of gas or 52 million cubic metres a day, according to shipping data.

UK LNG shipments have been boosted by a growing number of cargoes from the US and Russia, with the Russian deliveries being trans-shipped from other European terminals.

Analysts said that the high send-out rates of regasified gas into the UK pipeline system over the past six months has also increased the share of LNG in total gas supply to almost 30 percent in March from rates as low as 2 percent at the end of 2017.

Russian LNG from Novatek's Yamal LNG plant in Arctic Russia, which began shipping commercial cargoes in December 2017, has also changed the European LNG market.

However, Qatar remains the UK's main supplier, mainly to its South Hook terminal at Milford Haven, owned jointly with ExxonMobil.

The diversity of LNG supplies sent to the UK has widened because of new US and Russian plants coming on stream, and more flexible supply contracts and pricing mechanisms.

China's creation of single pipeline network company will benefit LNG and boost imports

LNG Journal editor

China, the world's largest combined importer of liquefied natural gas and pipeline volumes, is moving forward with its plans to create a single pipeline company from the existing assets of the Chinese energy majors, a move that is expected to benefit LNG imports rather than hinder them.

The new oil and gas pipeline company, which is likely to be established by around mid-2019, will operate in a market-oriented manner after the acquisition of the related pipeline assets.

Beijing HQ of main pipeline company China National Petroleum Corp, largest of the big three firms

Commission

The National Development and Reform Commission (NDRC) is currently finalizing its proposals with the companies involved.

They are China National Petroleum Corp. (CNPC), whose subsidiary is PetroChina, China Petroleum and Chemical Corp. (CPCC), also known as Sinopec, and China National Offshore Oil Corporation (CNOOC).

The three companies will spin-off their pipeline assets to form a new company whose name has yet to be decided.

China has more than 135,000 kilometres of pipelines with two-thirds of the network being operated by CNPC while Sinopec operates another 15 percent.

CNOOC owns just a small gas-related portion of the pipeline network, though it is the owner of nine LNG import terminals out of 19 operating in the country.

Following the spin-off, the country's pipeline network will also be restructured to separate pipeline transport and sales.

The newly formed Chinese national pipeline company could be worth at least US$45 billion, according to some estimates.

"The overall plan is for a state-level pipeline operator to govern long-distance and interconnection pipelines owned by the three majors and the pipelines that connect with LNG terminals," said the NDRC.

"The operator will also invest in and build new pipelines in the future," it added.

Analysts note that the monopolized structure of the sector has restricted construction of new pipelines and has led to market inefficiencies.

Better windows of access could spur plans to send more regasified LNG into the network by the few independent players who will likely have the same access as the state-run energy majors.

Natural gas transmission charges via long-distance pipelines vary in China and range from around 0.31 Chinese yuan per cubic metre (US$0.046 per cubic metre) to 0.79 yuan per cubic metre (US$0.11 per cubic metre).

Chinese LNG and pipeline natural gas imports rose 9.2 percent in February compared with a year ago to 7.57 million tonnes. The imports for the first two months of 2019 reached 17.36MT, up 18.5 percent from a year ago.

A more efficient pipeline system and a more competitive market is seen helping the development of the oil and gas sector and LNG import requirements.

Over the next few years, the NDRC also plans to restructure other areas of China's oil and gas industry with the next target likely to be the provision of better management of the exploration and production sector. ■

Sovcomflot posts solid earnings as rates improve

Sovcomflot Group, the Russian shipping line with 12 liquefied natural gas carriers in its fleet, narrowed its annual net losses as charter rates improved for LNG and energy trading sectors amid continuing difficult conditions during mid-2018.

SCF Group posted losses for 2018 of $45.6 million compared with a loss of $113M in the previous year.

The company also made a fourth-quarter profit of $11.9M versus a loss of $106.2M in the same three months of the prior-year period.

"There was a visible rebound in freight rates in the fourth quarter, reflecting a balancing between tanker supply and demand, following a sustained period of tanker fleet removals and an increase in crude oil demand from Asian refiners in particular," said SCF.

The current fleet comprises 144 vessels with a total deadweight of 12.5 million tonnes and 80 of the vessels have an ice-class rating.

The fleet services large oil and LNG projects at Sakhalin Island in the Russian Far East and other projects such as Novatek's Arctic Yamal LNG plant in Siberia and the Tangguh liquefaction and export facility in Indonesia.

The cooperation with Novatek has seen its further success, with the icebreaking LNG carrier "Christophe de Margerie" loading the first cargo from Yamal LNG's third train.

SCF's President and Chief Executive Sergey Frank said the shipping line achieved solid operating and financial results despite another difficult year for the conventional tanker market. ■

Papua New Guinea expansion accord on track for April signing

LNG Journal editor

Oil Search, a shareholder in the Papua New Guinea LNG export plant and its expansion project, said that the next stage of PNG's gas development must move forward in a timely and responsible way and be a project that is sustainable and beneficial for the nation.

The company's Managing Director Peter Botten stated that PNG was on the threshold of substantial new investment to double its LNG production to more than 16 million tonnes per annum in the coming years.

PNG PM Peter O'Neill addresses Port Moresby conference

Conference

Speaking at the PNG Petroleum and Energy Summit in the capital Port Moresby, Botten said that the PNG partners must bear in mind that the global LNG market was now highly competitive with other major new projects already moving to final investment decisions.

Botten, whose company is listed on the Australian Securities Exchange and focused on PNG gas and oil development, said good progress had been made on downstream pre-front-end engineering and design for the LNG plant expansion.

The PNG LNG plant, located northwest of Port Moresby and operated by ExxonMobil Corp., already produces around 8 MTPA.

Botten explained that the studies support new LNG capacity comprising three Trains each with 2.7 MTPA of output and the upstream pre-FEED study on the Elk-Antelope field providing feed-gas was also well advanced.

"Development concepts for our Associated Gas Expansion project planned for 2019 were also completed," said Botten.

An accord had been signed between Papua LNG and the PNG government, setting key terms and conditions for a gas agreement, including the equitable split of value between State and developers.

"The Papua LNG Gas Agreement will likely be finalised in early April 2019 with a gas agreement between the State and the P'nyang field joint venture to be finalised soon after," stated Botten.

"Additionally, joint venture partners are progressing commercial agreements supporting integration, including site and facility access," he added. ■

Koreans plan to sharply reduce LNG import surcharge by April

South Korea, the world's third-largest liquefied natural gas importer, said it planned to sharply reduce the import surcharge imposed on LNG in line with the government's efforts to increase natural gas use at the expense of coal to reduce serious air pollution.

The Ministry of Trade, Industry and Energy said the new rules would be introduced in April and cut the levy on LNG used for gas-fired power generation by 84 percent to 3.8 won ($0.003) per kilogramme from the previous 24.2 won ($0.021) per kilo.

The Ministry said the decision came as the existing surcharge on natural gas was excessively high considering the environmental benefits and ability to lower the country's dependence on coal.

As for thermal coal used for power generation in South Korea, the Ministry said it would increase its special consumption tax to 46 won ($0.040) per kilo from the current 36 won per kilo.

The Ministry said it will continue to roll out various projects to cut emissions and air pollution that are now regarded by the government as a major threat to public health.

In the coming months, the government is also planning to partially suspend the operation of 48 coal-fired power plants from at least a week to 45 days over the March-June period, and fully shut down six plants.

About 40 percent of South Korea's electricity generation currently comes from coal, 30 percent from nuclear and just over 20 percent from natural gas.

South Korean LNG imports rose 17.3 percent in 2018 to a record 44 million tonnes as shipments increased from traditional Middle East supplier Qatar and from new projects in Australia and the US.

The country already has ample LNG import capacity to replace coal and access to global LNG volumes as the current biggest recipient of growing US exports. ■


Atlas Copco
“Energy is a major cost driver in running an LNG plant. But with efficient Atlas Copco mixed-refrigerant compressors, we’re using less energy and saving more money.”
Zhang Jia-Hua, Operations Team Leader
Baotou Lu Ding Natural Gas Co. Ltd.
Inner Mongolia, China
Handle the Pressure
Although balancing the mechanics of your LNG plant can put a lot of stress on your budget, Atlas Copco Gas and Process can help you handle the pressure with highly efficient, integrally geared centrifugal compressor solutions that help keep costs under control.
Learn more about Atlas Copco Gas and Process at
www.atlascopco-gap.com

Japan's Inpex signs Abu Dhabi exploration deal and makes progress with LNG bunkering plan

LNG Journal editor

Abu Dhabi National Oil Company (Adnoc) in the United Arab Emirates has awarded LNG producer Inpex Corp. of Japan an exploration licence for the onshore Block 4 area as the Japanese company also advanced with LNG bunkering plans for the UAE.

The onshore Block 4 is located in a coastal area in the central part of the emirate of Abu Dhabi that includes Abu Dhabi City, and covers a surface area of around 6,116 square kilometres.

Inpex CEO Ueda with Adnoc counterpart Ahmed Al Jaber

Unlocking value

"Inpex looks forward to working in close cooperation with Adnoc to help it unlock value from Abu Dhabi's substantial hydrocarbon resources while further expanding and strengthening our own business portfolio," said Takayuki Ueda, President and Chief Executive Inpex.

The Japanese company recently became an LNG producer from the Ichthys liquefaction and export venture in the North Territory of Australia.

Inpex also has a stake in the Royal Dutch Shell Prelude floating LNG venture offshore northwest Australia.

The UAE is the oldest LNG producer in the Middle East from its Das Island plant offshore Abu Dhabi consisting of three Trains with nominal capacity of 5.5 million tonnes of LNG per annum.

The Japanese company added that it was working to finalize a joint venture with Adnoc on LNG bunkering in the UAE and Southeast Asia.

The logistics and services unit of Adnoc has signed the framework agreement with Inpex on developing the bunkering activities.

"We had already signed a memorandum of understanding with Adnoc about LNG bunkering, so I think there might be a lot of potential," said Ueda.

"We would like to quickly establish a joint venture with Adnoc in this area where there is demand," added the Inpex CEO.

The UAE is strategically located to become a major bunkering hub in the Gulf and the Arabian Peninsula.

Inpex is a long-term investor in Abu Dhabi's hydrocarbons industry, which accounts for 4.2 percent of the world's crude production.

Inpex's subsidiary Jodco Exploration will hold and manage its interest in the onshore Block 4 as part of a 35-year concession deal.

The Japanese company will hold a 100 per cent stake during the exploration phase for the concession, which straddles Abu Dhabi's border with Dubai.

There are two existing undeveloped oil and gas fields in the new concession area, Ramhan and Hudairiat, which both will be appraised by Inpex.

"The block's proximity to the onshore oil producing fields of Al Dabb'iya and Rumaitha as well as the offshore field of Umm Al Dalkh, suggests it has very promising potential," said the companies. ■

Japanese LNG imports slide amid coal and nuclear competition and price rises

Japanese liquefied natural gas imports plunged 11.4 percent with only Middle East volumes holding up as more coal-fired power use and nuclear generation offset the need for gas-fired power as the cost of LNG shipments also increased.

Cargoes delivered to Japan in February 2019 amounted to 7.35 million tonnes compared with 8.29MT in February 2018.

The January 2019 imports had amounted to 7.54MT, a drop of 8.7 percent compared with 8.26MT in January 2018.

Nine of Japan's nuclear power plants, which numbered 54 on line before the Fukushima disaster in 2011, have re-started to reduce LNG needs.

Thermal coal imports were preferred over LNG in February as 9.24MT was imported, a fall of 2.2 percent compared with February 2018.

The cost of the February 2019 cargoes came to 465.54 billion yen ($4.18Bln), a rise of 8.6 percent from the 428.72Bln yen ($3.85Bln) the cargoes cost in the same month a year ago.

The Ministry of Finance data for February showed that Asian LNG shipments from nations such as Malaysia and Indonesia, Papua New Guinea and Brunei dropped 20 percent year-on-year to 2.04MT.

Imports from the Middle East region rose by 1.8 percent versus 2018, with shipments from countries like Qatar, the United Arab Emirates and Oman totalling 1.54MT in February 2019.

US shipments of LNG amounted to 335,000 tonnes, more than double the volumes received in the same month last year.

Japan imported 2.49MT of US cargoes for all of 2018 and that figure will rise in 2019 as the nation has booked more volumes from new plants.

These will come from the Cheniere Energy-owned Sabine Pass plant in Louisiana and the Cove Point plant in Maryland operated by Dominion Energy, as well as the newest Cameron LNG plant in Louisiana set to start operations under Sempra Energy and with Japanese shareholders.

Monthly Russian shipments from the Sakhalin Island plant in the Far East dropped 15 percent in February to 604,000 tonnes.

The balance of imports from other countries amounted to 2.83MT, down 16 percent compared with the 3.37MT received in February 2018 mostly from Australia, though also including shipments from African nations and the spot market.

Japanese LNG imports had declined by 0.9 percent in 2018. The 2018 imports amounted to 82.85MT versus 83.63MT received in 2017.

Japan's 2018 import bill was 20.8 percent higher than in 2017 at 4,730Bln yen ($43.14Bln). The Japanese had paid 19.3 percent more in 2017 with an LNG bill of 3,915Bln yen ($35.58Bln). ■

Canadian pension fund joins US$3.8Bln US shale venture in US despite nation's energy wariness

LNG Journal editor

Williams, the owner of the largest US natural gas pipeline that underpins LNG feed-gas deliveries on the Gulf Coast and domestic supplies in the northeast, has signed an agreement with the largest Canadian pension fund for a US$3.8 billion joint venture in the prolific Marcellus and Utica Shale Basins in Pennsylvania and Ohio.

Williams and the Canada Pension Plan Investment Board have entered into a definitive agreement to establish the joint venture that will include Williams' 100 percent-owned Ohio Valley Midstream system and 100 percent of Utica East Ohio Midstream system. Both are natural gas and gas liquids gathering and storage systems.

Business

The Canadian pension fund will invest around US$1.34 billion for a 35 percent ownership stake in the joint venture company, while Williams will retain 65 percent ownership and will operate the combined business.

The fund has 20 million Canadian contributors and beneficiaries and at the start of 2019 had C$368.5 billion (US$276Bln) under management.

Harrison Hub plant owned by Williams in the Utica Shale

Analysts said that the fund was a surprise investor in US shale given the high proportion of Canadians who oppose hydrocarbon energy projects, even when thousands of jobs are on offer.

Williams, based in Tulsa, Oklahoma, owns the Transcontinental Gas Pipe Line (Transco) interstate system which in the past winter season delivered record amounts of natural gas to US distribution companies, power generators and LNG exporters because of the successful expansion in interconnections in recent years.

The Transco system extends almost 1,800 miles from South Texas to New York City and is part of the Williams network of 30,000 miles of interstate pipelines and natural gas storage facilities.

The abundant US natural gas supplies are being delivered into domestic markets when required as well as to liquefaction and LNG export plants. The LNG plants are set to double in number from three operational facilities to six by the end of 2019.

In addition to signing its joint venture with the Canadian fund, Williams also purchased the remaining 38 percent stake it did not already own in the Utica East Ohio (UEO) Midstream system from US company Momentum Midstream.

UEO is involved primarily in the processing and fractionation of natural gas and natural gas liquids in the Utica Shale play in eastern Ohio.

"Acquiring the remaining interest in UEO and forming a partnership with CPPIB continues to advance our already strong position in the Northeast," said Alan Armstrong, President and Chief Executive of Williams.

"These transactions create a platform for continued optimization and growth, provide deleveraging, reduce capital spending on processing and fractionation capacity and unlock further synergies through combined operatorship of the systems," he added.

Avik Dey, a managing director and head of energy and resource investments at the pension fund, said he was delighted to invest in the projects with Williams.

"The joint venture would provide additional exposure to the attractive North American natural gas market, aligning with our growing focus on energy transition," said Dey. ■

Venture Global of US plans to expand Gulf Coast projects to 60 MTPA because of high demand

Venture Global LNG said it planned to expand the scope of its LNG development business on the US Gulf Coast to 60 million tonnes per annum of production based on customer demand, almost doubling current plans for 32 MTPA of output.

The company's proposed liquefaction and export plant at Calcasieu Pass in Louisiana has current nameplate export volumes of 12 million tonnes per annum and is expected to come on stream in 2022, along with associated facilities, including the TransCameron Pipeline.

Venture Global, owned by former investment banker Michael Sabel and lawyer Robert Pender who act as joint chief executives, is also constructing a second plant at Plaquemines near river milemarker 55 on the west side of the Mississippi River, 30 miles south of New Orleans.

The Mississippi River project has current output targets of 20 MTPA of LNG and was set to include small-scale liquefaction Trains, four LNG storage tanks and three marine loading berths.

However, the company now says it is increasing the size of its 2016 process equipment supply agreement with Baker Hughes-GE to 60 MTPA, under which BHGE will deliver a comprehensive technology solution for Venture Global's two LNG export facilities.

"The agreement provides for the guaranteed supply of highly efficient and reliable modular liquefaction trains plus power generation and electrical distribution equipment that will be standardized across the company's Calcasieu Pass, Plaquemines LNG, and expansion projects," said Venture Global.

The company said that with this expanded 60 MTPA commitment from BH-GE it can expand its business to meet the increasing demand from international customers.

"Having fully contracted Calcasieu Pass and anticipating completion of Plaquemines LNG, we are pleased to announce this expansion to meet additional customer demand," said Co-CEOs Pender and Sabel.

"We believe our model of midscale modular liquefaction is the future of low-cost LNG production," they added.

Venture Global noted that the Calcasieu Pass project with its planned 10 MTPA of output has received all federal authorizations. ■