LNG Unlimited

LNG JOURNAL PUBLICATION 10 March 2020

Philippines LNG and power hub for Manila region aims for early start

First Gen Corp. plans to fast-track Batangas joint venture with initial FSRU charter

LNG Journal editor

First Gen Corp. of the Philippines plans fast-track the LNG and power hub near Batangas City with the interim use of a floating storage and regasification unit to be able to receive LNG as early as the third quarter of 2022 and guarantee energy security for the capital Manila.

First Gen said in a statement to the Philippines Stock Exchange that it had submitted an application to the Department of Energy to start construction in May 2020.

Partners

The company is partnered by Tokyo Gas in jointly developing the LNG hub in Batangas province to meet the nation's growing gas-fired power needs.

The only other completed regasification facility in the Philippines is at Pagbilao in Quezon province where Australia-listed Energy World Corp. has a facility linked to a power project that has not yet begun imports.

First Gen said its work start-up on the LNG terminal project and infrastructure was based on a Notice to Proceed granted by the DOE in March 2019.

First Gen Chairman and Chief Executive Federico Lopez now intends to fast-track the project.

The Batangas LNG and power hub has been previously declared by the Energy Investment Coordinating Council (EICC) through the DOE as an "Energy Project of National Significance".

The company has already completed pre-development work to make the site construction-ready.

Ground-breaking for Batangas LNG project has taken place

"First Gen plans construction of an interim offshore LNG terminal within the First Gen Clean Energy Complex in Batangas City consisting of construction works necessary to enable multiple-use by large and small-scale LNG vessels of an onshore gas receiving facility," said the company.

"Once completed, the project will allow First Gen to be able to bring in a Floating Storage and Regasification Unit (FSRU) on an interim basis and thus accelerate FGEN LNG's ability to introduce LNG to the Philippines," added the PSE statement.

"This innovation can readily serve the natural gas requirements of existing and future gas-fired power plants of third parties and First Gen affiliates, and bring the country closer to its goals of energy security, expanded energy access and a low-carbon future," said First Gen.

"First Gen anticipates that it will be able to commence construction of the project as early as May in order to be able to receive LNG as early as the third quarter of 2022," explained the company.

First Gen said it believed that the LNG hub project would play a critical role in ensuring the energy security of the Luzon Grid and Manila. "This will be necessary particularly as the indigenous Malampaya gas resource (offshore) are expected to be less reliable in producing and providing sufficient fuel supply for the country's existing gas-fired power plants, and even less so for additional gas-fired power plants," the company explained.

"The entry of LNG will encourage new gas-fired power plant developments and encourage industry and transport to replace polluting fuels with natural gas," stated First Gen.

The First Gen-Tokyo Gas project is on a large scale and will help guarantee supplies for First Gen's four gas-fired power plants with total capacity of about 2,000 megawatts, all of them in Batangas province.

The project has estimated costs of at least US$1 billion. In September 2019, the company announced a partnership with Japan's JGC Corp., which will handle the engineering, procurement and construction (EPC) of the Batangas City project.

First Gen said it expected the continuing reduction in gas supply from the Malampaya gas field up to the expiration of contracts by 2024. ■

UNLIMITED AGENDA

Shell trades a third 'carbon neutral' LNG cargo with Taiwan shipment based on purchased credits

LNG Journal editor

Royal Dutch Shell is marketing what it calls "carbon neutral" LNG cargoes and has traded three so far to boost its green corporate credentials and those of the buyer as energy majors and other companies seek to prevent any negative impacts from environmentally activist shareholders.

The Shell trade to Taiwan comes amid a market glut in LNG volumes and rock-bottom prices from Europe to Asia.

LNG carrier 'Grand Aniva' unloaded at Yung-An terminal

Arrival

Shell said in a statement that the 147,200 cubic metres capacity LNG carrier "Grand Aniva" carrying Taiwan's first shipment of "carbon neutral" LNG at the Yung-An terminal in the southern harbour city of Kaohsiung. Shell did not disclose how much the LNG cargo cost in comparison with a normal shipment.

The terminal is owned by CPC Corp. the government-owned energy company of Chinese Taipei, the name by which Taiwan is also known.

Shell said the shipment amounting to 64,000 tonnes of LNG was provided by the Anglo-Dutch major's Singapore-based Asian unit, Shell Eastern Trading Pte Ltd.

CPC noted that the cargo's arrival coincides with the 30th anniversary of LNG imports to Taiwan and signified CPC's commitment to reducing carbon emissions and promoting sustainable business practices.

Taiwan is Asia's fifth-largest LNG importer, receiving around 17 million tonnes per annum of LNG.

"Nature-based carbon credits have been used to compensate the full carbon dioxide (CO2) emissions generated - from exploring for and producing the natural gas," said Shell.

"The cargo, which was delivered at the Yung-An LNG receiving terminal, will provide enough carbon-neutral LNG to power nearly 150,000 homes for a year," it added.

Shell stated that the "carbon credits" used for this deal are purchased from Shell's global portfolio of nature-based projects, including the Katingan Peatland Restoration and Conservation Project in Indonesia, the Cordillera Azul National Park Project in Peru and The Form Reforestation Project in Ghana.

"Nature-based projects protect, transform or restore land and enable nature to add oxygen and absorb CO2 emissions from the atmosphere," said Shell.

"Each carbon credit is subject to a third-party verification process and represents the avoidance or removal of 1 tonne of CO2," it added.

This is the third "carbon neutral" LNG cargo that Shell has delivered to its customers.

Analysts said that in the current climate-change corporate policy surge and over-supplied market it can make an LNG trading desk stand out from the crowd by selling an LNG cargo that, for example, indirectly helps save or preserve endangered apes in Indonesia or other rare wildlife and plants.

"The first two were delivered to Tokyo Gas in Japan and GS Energy in Korea in 2019," noted Shell.

"This is enabling the companies to offer carbon neutral energy to their customers," it explained.

"A recent example is the launch of Tokyo Gas's third Hydrogen refuelling station that processes Hydrogen using the carbon neutral LNG," it added.

Slavko Preocanin, Vice President Shell LNG Marketing & Trading, said he was very happy to be partnering with CPC to further extend our carbon neutral LNG offer. ■

Cryopeak LNG completes largest truck delivery in North America to mine in British Columbia

Cryopeak LNG Solutions, a small-scale liquefied natural gas supplier, said it completed the largest ever North American delivery of LNG by truck and trailer to a mine in the Canadian province of British Columbia.

Cryopeak is an LNG distributor in Canada and the US and provides fuel for power generation, industrial heat, and pipeline supply.

The shipment of LNG to the Silvertip Mine, owned by Coeur Silvertip Holdings, totalled about 18,000 gallons and was carried in Cryopeak's "Super B-Train" truck.

Mining companies in BC and elsewhere in Canada are turning to LNG as a source of gas-fired power to replace diesel fuel.

The province of British Columbia has lagged in developing high volume LNG export plants but is a North American leader in truck-supplied LNG to remote areas and in LNG-powered-ferry services around Vancouver.

The Silvertip mine is located in BC, just below the Yukon border. Yukon is the smallest and westernmost of Canada's three territories and was the base for the 19th-century Klondike gold rush.

Cryopeak said its Super B-Train is designed to have up to 70 percent greater load capacity than standard trailers operating in Canada, improving LNG's competitiveness as a fuel source for remote mining location and communities.

Calum McClure, Chief Executive of Cryopeak, said lowering LNG costs through maximising transportation payload is an important initiative for Cryopeak and its customers.

"We are excited that this technology is now proven and going forward we will seek to extend the operation of this new trailer across Canada," added CEO McClure.

Cryopeak is the leading truck distributor of LNG to remote areas in Canada and currently has a fleet of 16 tankers operating, as well as equipment and technologies for storage, regasification and fuel dispensing.

The company uses its ISO 9001 certified tank and has emergency response plans approved by Transport Canada.

Cryopeak was founded in 2012 and is a portfolio company of BP Energy Partners. ■

Kate Energy and Ferus Gas sign deal on small LNG

Kate Energy Holdings Inc., the Canadian company based in Calgary, has entered into a long-term master services agreement with Ferus Natural Gas Fuels Inc. to secure liquefied natural gas from the Dawson Creek liquefaction facility in northeast British Columbia.

Kate Energy said the agreement would provide it and Ferus NGF clients, including Yukon Energy Corp. with a cost-effective fuel solution delivered from Canada's northernmost LNG facility.

Ferus NGF and Yukon Energy entered into a four-year contract for the supply and delivery of LNG for power generation in Whitehorse, in the Yukon territory.

“In effect since January 1, 2020, the contract was the result of a competitive tender process in the fall of 2019 that saw Kate Energy and Ferus NGF enter a ‘co-bid’ led by Ferus NGF,” said in a statement.

LNG as the cleanest fossil fuel is being sought by companies using diesel for power and other heavy machinery in isolated areas.

“There is ever-increasing need for remote communities and industrial operations to replace diesel and other distillates as power and heating fuels,” said Thomas Elwell, Chief Executive of Kate Energy.

Elwell explained that the collaboration between Kate Energy and Ferus NGF showcases how uniquely positioned, Western Canadian energy companies can work together to service the ongoing needs of larger communities in an efficient and effective manner.

Singapore-based firm awaits LNG Ltd shareholder approval

LNG Journal editor

The Australian project developer of the US Magnolia export plant in Louisiana with an agreement to supply shipments to Vietnam is now likely to be taken over by a Singapore-based private company.

LNG Limited, which is listed on the Australian Securities Exchange, has urged its shareholders to accept an all cash takeover offer from a private Singaporean investor with ambitions in the LNG sector.

Graphic of LNGL’s US plant proposed for at Lake Charles

Value

The deal, which values LNG Ltd. At US$75 million (A$114 million), and represents a 72 percent premium on its last closing price, follows the developer's recent warning that it needed to raise new funds to continue operating normally.

The proposed Magnolia plant has an accord to supply a $4-billion power project on the Mekong Delta in Vietnam.

The LNG-led project is the biggest foreign investment in the Bac Lieu province of the Mekong Delta region so far. LNG Ltd has signed a supply agreement with the Bac Lieu import terminal from 2023.

Its Magnolia plant near Lake Charles would supply 2 million tonnes per annum to the Vietnamese.

The Louisiana shipments would be on a free-on-board (FOB) basis for a 20-year term with options to extend the term.

Additionally, LNG Ltd. has told the ASX that First Wall Street Capital Corp. has agreed to provide it was bridge financing in the form of a non-revocable Senior Secured Convertible Note facility for the purposes of facilitating ongoing marketing and development of its projects.

LNG Ltd. also has the Bear Head LNG venture in the Canadian province of Nova Scotia as part of its portfolio.

“The offer represents a compelling premium to LNGL’s current trading price,” LNG Ltd told its shareholders.

“At the current burn rate, LNGL’s existing available liquidity is insufficient to sustain operations beyond the current quarter based on existing funds, or beyond the third quarter of 2020 inclusive of the bridge financing facility,” it explained in its statement.

US export plant at Elba Island gets permit to start fifth Train

Elba Island LNG, the small US export facility near Savannah in Georgia, was been given permission by regulators to start commercial services from the fifth Train in its Moveable Modular Liquefaction System pioneered by Royal Dutch Shell.

The Federal Energy Regulatory Commission granted a request by US pipeline company Kinder Morgan to start exporting from Train 5 of the 10 completed small-scale Trains.

Elba Island has nameplate output of 2.5 million tonnes per annum and is the smallest of the six US export plants currently on stream.

The fifth export plant at Cove Point in Maryland, owned by Dominion Energy, and like the Georgia plant located on the Atlantic Coast, is the next smallest with 5.2 MTPA of output.

The other four liquefaction facilities are on the Gulf Coast and are on a larger commercial scale of up to 27 MTPA. Two are owned by Cheniere Energy at Sabine Pass in Louisiana and Corpus Christi in Texas.

There is also the Sempra Energy-owned Cameron plant in Louisiana and the Freeport plant at Quintana Island in Texas.

Kinder Morgan had initially expected the first Train at Elba Island to come on stream by the end of March 2019 and the remaining Trains following during the year.

However, the project was hit by construction delays and the original start-up day was gradually pushed back with the first cargo being shipped in December 2019.

Using Shell's Movable Modular Liquefaction System meant that the Trains were largely assembled off-site and delivered to Elba Island.

The Georgia project is supported by a 20-year supply contract with Shell, which was one of the original investors.

THE ONLY COMMERCIAL FORUM IN JAPAN FOR THE LNG & GAS INDUSTRY

PRODUCED BY: CWC

3RD CWC JAPAN LNG & GAS SUMMIT

23 - 24 APRIL 2020 • TOKYO

TOKYO MARRIOTT HOTEL

HOST SPONSORS:

JERA

TOKYO GAS

SUPPORTED BY

IEE JAPAN

DISTINGUISHED SPEAKERS INCLUDE

TAKESHI SODA
Director - Oil & Gas Division
Ministry of Economy, Trade & Industry - Japan (METI)

YOSHIMASA NAKAJIMA
Marketing Director - Ports & Harbours Bureau
Ministry of Land, Infrastructure, Transport and Tourism - Japan

SATOSHI TANAZAWA
Executive Officer & Senior General Manager, Gas Resources Dept.
Tokyo Gas

HITOSHI NISHIZAWA
Executive Officer, Senior Operating Officer, Optimization Dept.
JERA Co. Inc.

WUTTIKORN STITHIT
Senior Executive Vice President, Gas Business Unit
PTT

TETSUYA FURUHATA
Director General - Research and Analysis Department & Director - LNG Supply Security Study Team
JOGMEC

EZHAR YAZID JAAFAR
Chief Executive Officer
Petronas LNG Ltd

YUKARI NIWA YAMASHITA
Board Member, Director
The Institute of Energy Economics, Japan (IEEJ)

DISCOVER THE SUMMIT BROCHURE ONLINE: CWCJAPANLNG.COM

GOLD SPONSOR

VENTURE GLOBAL LNG

BRONZE SPONSORS

MOL Mitsui O.S.K. Lines · CHENIERE · COMET Community of Energy Transactors · BRG ENERGY · KING & SPALDING

INSTITUTIONAL SUPPORT

ASCOPE ASEAN COUNCIL ON PETROLEUM · ERIA · ACCESS Women in Energy

OFFICIAL RESEARCH PARTNER

Wood Mackenzie A Verisk Business

MEET WITH THE LEADERS OF JAPAN'S LNG & GAS INDUSTRY

To secure your place, please contact Tyler Forbes or Elliot McGinn on +44 20 7978 000 or email JapanLNG@thecwcgroup.com

WWW.CWCJAPANLNG.COM

#CWCJAPAN

NEWS NUDGES

Cry-powered regas approval

Bureau Veritas, the French classification society, has granted approval for the design of a "cryo-powered regas" system for an LNG floating storage and regasification unit. The system recovers cold energy during regasification and uses it for power generation. The approval was issued to both Japanese shipping company Mitsui Osk Lines (MOL) and Daewoo Shipbuilding and Marine Engineering. The system is based on the Organic Rankine Cycle, a proven technology used in multiple onshore LNG terminals for decades.

Pembina LNG project wait

Pembina Pipeline Corp., the Canadian energy infrastructure company developing the US Jordan Cove LNG export plant in the northwest state of Oregon, said the regulatory processes were ongoing. "The US Federal Energy Regulatory Commission delayed a decision originally expected on February 13, 2020," said the Calgary-based company in its latest earnings. "Pembina looks forward to obtaining a final decision.

Spot charter rates fall

Shipping charter rates for LNG carriers in the spot market have fallen again amid the global over-hang of volumes. Rates were quoted at an average of between $39,000 per day and $34,000 per day West of Suez and $38,000 per day and $33,000 per day East of Suez for vessels of between 155,000-165,000 cubic metres capacity, according to various brokers. One-year time charters for vessels of between 155,000-160,000 cubic metres capacity were seen at around $61,000 per day.

McDermott sale of Lummus to investment funds to get Texas court confirmation on March 12

LNG Journal editor

David Dickson, President and CEO of the troubled company

McDermott International, the US LNG and energy engineering company overhauling its finances after Chapter 11 bankruptcy protection proceedings, said it was moving forward with the previously agreed sale of its Lummus Technology business.

McDermott said it had received no higher bids for Lummus and would now execute the previously announced share and asset purchase agreement to sell all of Lummus to a joint partnership between The Chatterjee Group, the New York-based investment fund, and Rhône Capital, a global private equity firm with offices in London and New York.

"McDermott did not receive a higher or better bid during the solicitation period, and the auction previously scheduled for Monday, March 9, 2020, will not occur," explained the Houston-based company.

Subsidiaries of McDermott had entered into an agreement in January 2020 to sell Lummus to The Chatterjee Group and Rhône Capital for a base purchase price of $2.72 billion, subject to higher or otherwise better bids received through the court-supervised auction process.

Under the terms of the agreement, McDermott will have the option to retain or purchase, as applicable, a 10 percent common equity ownership interest in the entity purchasing Lummus Technology.

McDermott said the sale hearing to confirm the sale of Lummus Technology to the joint partnership will take place on Thursday, March 12, 2020, at 9:00 am.

The equity-for-debt plan agreed with the court would eliminate more than $4.6Bln of McDermott's debt.

The restructuring transaction has been implemented through a pre-packaged Chapter 11 process, which under US law gives protection from bankruptcy.

It is being financed by a debtor-in-possession (DIP) financing facility of $2.81 billion.

"Proceeds from the sale of Lummus Technology are expected to repay McDermott's DIP financing in full, as well as fund emergence costs and provide cash to the balance sheet for long-term liquidity," said the company.

McDermott is involved in some of the world's leading LNG construction projects, including several on the US Gulf Coast and the North Field Expansion in Qatar.

Currently McDermott is working with other firms on both the Cameron LNG project at Hackberry in Louisiana and the Freeport export facility at Quintana Island in Texas.

McDermott has additionally been engaged as a contractor on the Golden Pass LNG export project for Qatar Petroleum and ExxonMobil venture in Texas.

Takeover

The company has suffered financial problems since it completed the $6 billion deal in 2018 to buy LNG rival engineering, procurement and construction company Chicago Bridge & Iron (CB&I).

The restructuring transaction will strengthen its balance sheet and normalize its trade debt.

All of McDermott's businesses have operated as normal during the financial restructuring.

> "Proceeds from the sale of Lummus Technology are expected to repay McDermott's DIP financing in full, as well as fund emergence costs and provide cash to the balance sheet for long-term liquidity"

Damietta LNG plant in Egypt is set to re-open to give nation two operating facilities and more exports

LNG Journal editor

Italian energy company Eni has signed a series of agreements with the government of Egypt and state-owned companies to prepare for the re-opening of the nation's Damietta liquefaction plant by June 2020.

Eni said the accords were signed with Egyptian General Petroleum Corp. (EGPC), the Egyptian Natural Gas Holding Company (EGAS) and the Spanish company Naturgy, formerly Gas Natural Fenosa.

The compact Damietta liquefaction plant is east of Alexandria

Joint venture

The owner of the liquefaction plant, a joint venture called Segas, is 40 percent-owned by Eni through Union Fenosa Gas (50 percent Eni and 50 percent Naturgy).

The plant has a nameplate capacity of 7.56 billion cubic metres of gas per annum (5.5 million tonnes of LNG), but has been idle since November 2012 when Egypt suffered natural gas shortages.

Rather than setting aside feedgas for LNG exports, the Egyptian government had to meet rising domestic natural gas demand.

Since those days, which Egypt became an LNG importer with two chartered floating storage and regasification units (FSRUs) at Ain Sokhna port in the Gulf of Suez, several natural gas discoveries were made.

Not least was the discovery by Eni of the huge Zohr gas field in the East Mediterranean that helped transform the Arab nation's LNG and domestic gas fortunes.

"Thanks to the fast time to market of Eni's new natural gas discoveries, especially the ones in the Zohr and Nooros fields, Egypt has regained its full capacity to meet domestic demand and can allocate surplus production for export through its LNG plants," said Eni.

In addition to Damietta LNG, Egypt has a second export plant, the Idku facility operated by Royal Dutch Shell and which has been back in commercial operation since 2017.

Eni said the agreements just signed by the Egyptian energy companies and the various parties mean an amicable resolution of the disputes over Union Fenosa Gas and its corporate restructuring.

Its assets will be divided between the shareholders Eni and Naturgy.

In particular, the participation of Union Fenosa Gas in the Damietta plant (80 percent) will be transferred 50 percent to Eni and 30 percent to EGAS.

Eni explained that the resulting shareholding of Segas would therefore be Eni 50 percent, EGAS 40 percent and EGPC 10 percent.

The Italian company would also take over the contract for the purchase of natural gas for the plant and would receive corresponding liquefaction rights, thus increasing the volumes of LNG in its portfolio by 3.78 billion cubic metres per year.

Eni said these volumes would be available on a free-on-board (FOB) with no destination restrictions.

"The agreement is of primary relevance for all the parties involved and resolves all pending disputes," said Eni.

"In particular, Egypt continues along the path of valorization of the important energy resources developed in the country by Eni and reactivates a strategic asset, while Eni completes an important reorganization of its portfolio in the Mediterranean area," it added.

New Fortress narrows loss with Jamaica LNG revenue

New Fortress Energy, the developer of liquefied natural gas and power projects in Latin America and the Caribbean, narrowed its fourth-quarter losses while revenues rose as it embarked on new LNG import projects in Nicaragua and Mexico and was set to bring a venture on stream in Puerto Rico.

New Fortress said it fourth-quarter losses amounted to $38.4 million compared with $54.4M in the previous quarter ending in September 2019.

Revenues during the three months increased to $69.8M from $49.7M in the previous three months.

"The company had its first quarter of positive operating margin as we continue to transform from a development company to an operating business," said the earnings statement.

Annual total revenues continued to rise, reaching $189.1M in 2019, from $112.3M in 2018 and $97.2M in 2017.

New Fortress said income increased from the third quarter primarily due to revenue generated from the Old Harbour terminal. There were increases in volumes sold to industrial end-users in Jamaica and additional sales at the Caribbean nation's Montego Bay LNG terminal.

"The increase was also due to the recognition of revenue of $13.2M for development services in the fourth quarter, primarily attributable to the conversion of our customer's infrastructure in Puerto Rico," said New Fortress.

"The decrease in net loss resulted from a positive operating margin in the fourth quarter as well as decreases in selling, general and administrative (SG&A) expenses," said the company.

Eni of Italy and Sonatrach set to boost Berkine Basin gas output

LNG Journal editor

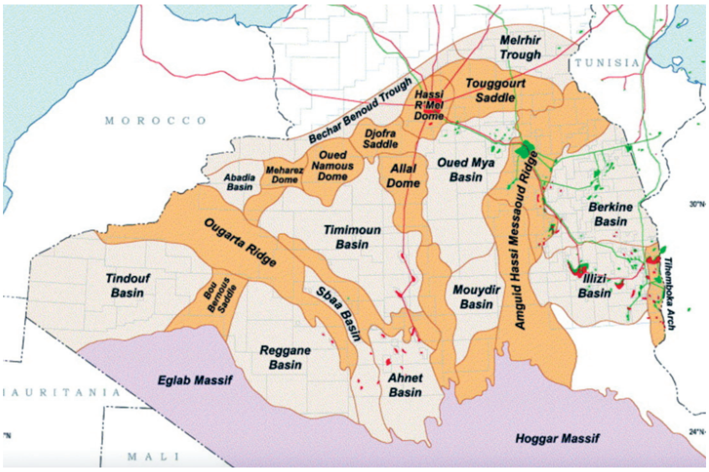
Italian energy company Eni and Sonatrach, the Algerian state-run company and LNG producer, have completed the construction of the natural gas pipeline connecting the Bir Rebaa Nord and Menzel Ledjmet Est fields in the Berkine Basin in southeast Algeria.

The completion comes as Algeria is making three-pronged marketing efforts to direct new gas finds into domestic industry, for export as pipeline gas to Europe and as LNG to mostly European markets amid low prices and high global volumes.

LNG drop

Algerian LNG exports have been falling and in the most recent official annual figures dropped by over 18 percent to about 10 million tonnes compared with 12.34MT the previous year from its two liquefaction plants at Skikda and Arzew on the Mediterranean Coast.

The new Berkine Basin pipeline is 185 kilometres in length and 16 inches in diameter and will transport capacity of 7 million standard cubic meters of gas per day to markets.



Algerian oil and gas resources include the Berkine Basin in the eastern part of the North African LNG nation

"The project will allow for the export of the associated gas produced in Block 403 and the development of the gas fields of the blocks of North Berkine, where the drilling of the first four wells was completed and linked," said Eni.

Sonatrach has been increasing the capacity of its export infrastructure like the Medgaz gas pipeline to Spain, and building a new LNG jetty at the Skikda liquefaction plant.

This pipeline project completion comes just a a year after the farm-in agreements in the concessions of Sif Fatima II, Zemlet El Arbi and Ourhoud II came into force in February 2019.

Production from the oil fields in the same blocks began in May 2019 and will continue to develop during the current year.

European subsea firms win contracts for Barossa gas

Australian LNG plant operator Santos has awarded contracts to European firms for the supply and installation of subsea infrastructure for the Barossa natural gas field that will provide future feedgas for the Darwin LNG export plant in the Northern Territory.

Santos, operator of the Gladstone LNG plant in Queensland and with stakes in Darwin LNG and the Papua New Guinea plant, said these contract awards were the final commitment made prior to the final investment decision for the Barossa project.

The contract for the transport and installation of all the subsea umbilicals, risers, and flowlines, as well as the supply of the in-field flowlines, was awarded to European firm Subsea 7, while Aker Solutions of Norway will supply the umbilicals and National Oilwell Varco Denmark I/S will supply the flexible risers.

"These are the final major facilities contracts for Barossa as we get closer to pushing the button on the project's development in the second quarter," said Santos Chief Executive Kevin Gallagher.

"They follow the award of the floating production, storage and offloading (FPSO) unit, subsea wells and subsea production system, and gas export pipeline tenders, with the contract for the drilling of the production wells to be awarded in the near future," explained Gallagher. "They represent the final stages of the front-end engineering design phase and give us greater certainty over cost and schedule for the Barossa development," stated the CEO of the Adelaide-based company.

The Barossa project area encompasses petroleum permit NT-RL5 located in Commonwealth waters, 300 kilometres north of Darwin, offshore the Northern Territory.

The development concept consists of an FPSO, six subsea production wells, supporting in-field subsea infrastructure and a gas export pipeline tied into the existing Bayu-Undan-to-Darwin pipeline, supplying gas to Darwin LNG.

Capacity Development, Creating In-Country Value & Developing the Next Generation of Papua New Guinean Leaders

PRODUCED BY:

CWC

4TH CWC PAPUA NEW GUINEA

PETROLEUM & ENERGY SUMMIT

2 - 4 JUNE 2020

PORT MORESBY, PAPUA NEW GUINEA

ENDORSED BY:

THE MINISTRY OF PETROLEUM & ENERGY

HOST SPONSOR:

KUMUL PETROLEUM

Sponsors:

CHIYODA CORPORATION

HIGH ARCTIC ENERGY SERVICES

ANZ

kinabank together it's possible

JX Nippon Oil & Gas Exploration

Official Print Media Partner

The National

Tap Into Exciting Business Opportunities in Papua New Guinea

Please contact **Elliott McGinn** on **UAE +971 506659505** | **UK +44 20 7978 0000**
or email **png@thecwcgroup.com**

pngsummit.com

#CWCPNG

Saudi Aramco-backed Port Arthur LNG project in Texas signs contract with engineers Bechtel

LNG Journal editor

Sempra Energy, the California company operating the Cameron LNG export plant in Louisiana, has signed a fixed-price contract with US engineer Bechtel to construct its second Gulf Coast plant at Port Arthur in Texas to be backed by a subsidiary of Saudi Aramco, the largest oil producing company.

Sempra's engineering, procurement and construction (EPC) contract for the Port Arthur facility is part of its plan to be a major North American exporter of LNG, with a third facility being developed at Costa Azul on the Pacific Coast of Mexico, and with total overall volumes of more than 65 million tonnes per annum.

Critical

"Building new export infrastructure in the US is critical to providing overseas markets with cleaner fuel alternatives," said Jeffrey W. Martin, Chairman and Chief Executive of Sempra Energy.

"Partnering with a world-class construction firm like Bechtel bolsters our execution plan for one of the world's largest LNG development projects," added Martin.

Port Arthur plant is just across the Louisiana border

Bechtel's Chairman and CEO Brendan Bechtel said he was honored and grateful that Sempra had chosen privately-held and San Francisco-based Bechtel as its trusted EPC partner.

"Together, we will deliver an important, clean and sustainable energy source to the world while creating jobs and building economic opportunities for the Gulf Coast community," stated the Bechtel CEO.

Sempra said that as part of the EPC contract, Bechtel would perform the detailed engineering, procurement, construction, commissioning, start-up, performance testing and operator training activities for the project. "The scope of the agreement also includes continuing pre-final investment decision engineering to better assure project cost and schedule certainty," said Sempra.

The Port Arthur LNG project is expected to initially include two liquefaction Trains, two storage tanks, a marine berth and associated loading facilities and related infrastructure for exports of 13.5 MTPA.

The project site sits on nearly 3,000 acres of land along three miles of the Sabine-Neches waterway and has the potential to become one of the largest LNG export projects in North America, with expansion capabilities of up to eight liquefaction Trains and around 45 MTPA of capacity.

"Port Arthur LNG plays an important role in Sempra's goal of becoming one of North America's largest developers of liquefaction-export infrastructure projects and we look forward to continuing to move the project forward," added CEO Martin.

Sempra noted that in January 2020 it signed an Interim Project Participation Agreement (IPPA) with Aramco Services Company, a subsidiary of Saudi Aramco.

The IPPA follows a heads of agreement for the potential purchase of 5 MTPA of LNG by the Saudis who are also expected to take a 25 percent equity investment in the project.

The future Port Arthur plant received authorization in May 2019 from the US Department of Energy to export domestically produced LNG to countries that do not have a free trade agreement with the US.

Additionally, the Federal Energy Regulatory Commission issued the approval almost a year ago to site, construct and operate the liquefaction-export facility. ■

Texan liquefaction plant will have the largest US processing Trains and seeks an expansion permit

The Port Arthur liquefied natural gas export project in Texas proposed by Sempra Energy has formally filed with regulators for authorization for an expansion at the plant which will have the largest liquefaction Trains of any so far constructed in the US.

Sempra's expansion will include two liquefaction trains (Train 3 and Train 4), which are identical to the trains (Train 1 and Train 2) previously approved by the Federal Energy Regulatory Commission.

"Each of the two incremental liquefaction trains will be capable of producing under optimal conditions 6.73 million tonnes per annum or approximately 13.5 MTPA in the aggregate," San Diego, California-based Sempra to the FERC.

The addition of Train 3 and Train 4 would double the facility's output from the current 13.46 MTPA to a total of almost 27 MTPA.

The company plans to build the plant on a site along the west side of the Sabine-Neches Ship Channel, about five miles south of the city of Port Arthur.

The expansion will utilize the same liquefaction Train design as that put forward for the initial plant so that much of the initial engineering design has already been completed. Experienced US liquefaction plant builders, Bechtel, designed the original two-Train plant and has been retained as the engineering, procurement and construction (EPC) contractor.

In the FERC application, Sempra request that the Commission issues authorization for the siting, construction, and operation of the expansion project by no later than January 2021.

Sempra anticipates requesting authorization to begin construction by March 2022.

Sempra first received its environmental impact statement from regulators in October 2018 for the Port Arthur project.

The previous FERC review addressed the potential environmental effects of the construction and operation of the various proposed facilities. as well as the Texas Connector and Louisiana Connector pipelines.

The original filing covered two liquefaction Trains, three LNG storage tanks, each with a capacity of 160,000 cubic metres, a new marine terminal with two LNG vessel berths, an area for support vessels, an LNG transfer system and a truck-loading area. ■

THE PREMIER MEETING PLACE FOR LNG BUYERS AND SELLERS IN ASIA PACIFIC

PRODUCED BY: CWC

RESEARCH PARTNER: Wood Mackenzie – A Verisk Business

OFFICIAL SUPPORTER: MALAYSIAN Gas ASSOCIATION

CWC WORLD LNG & GAS SERIES
12TH ASIA PACIFIC SUMMIT

KUALA LUMPUR, MALAYSIA | 15-18 JUNE 2020

Qatar Petroleum CEO says he is pleased with pace of work on advancing LNG expansion

LNG Journal editor

Qatar Petroleum President and Chief Executive Saad bin Sherida Al-Kaabi said that the work in implementing the project to increase Qatar's production of liquefied natural gas from 77 million tonnes to 126 MTPA by 2027 was going well and rejected claims the expansion was delayed.

Qatar's new first stage expansion facilities when completed will receive about 4.6 billion standard cubic feet per day of feed gas from the southern sector of Qatar's North Field gas reserves in the Arab Gulf.

Gulf stake

Qatar has the southern portion of the North Field in Gulf waters and the other part is under the jurisdiction of neighbouring Iran.

Al-Kaabi reiterated that Qatar has more than ample reserves for many decades of LNG output as new studies had revealed that the North Field's productive layers extended well into Qatari land around the area of Ras Laffan, paving the way for a future new production project in the north of Qatar.

Chief Executive Al-Kaabi is confident on North Field project

He confirmed that gas reserves of the North Field exceed 1,760 trillion cubic feet, in addition to more than 70 billion barrels of condensates and massive quantities of liquefied petroleum gas, ethane and helium.

Qatar Petroleum has already awarded front-end engineering and design contracts for the North Field expansion project's offshore pipelines and topsides facilities.

The contract scope includes the design of installation of eight unmanned wellhead platform topsides, four 38-inch trunk lines and four 28-inch intrafield lines.

The fabrication has been completed of the first two steel tubular structures required for the offshore facilities as part of its North Field expansion.

Offshore platforms are fixed and their decks are supported by these steel structures, known as Jackets.

The contract was carried out by US energy engineering company, Houston-based McDermott Inc.

McDermott also won the front-end engineering and design contract for the associated topsides and pipelines.

The scope of the onshore expansion at the Ras Laffan production complex involves an additional four Trains, each with 8.0 MTPA of output.

Qatar has also short-listed several international energy majors for a stake in its expanded North Field project and is hoping the prospective partners offer value.

Qatar has the southern portion of the North Field in Gulf waters and the other part is under the jurisdiction of neighbouring Iran.

Invitations to bid were sent out in August 2019 and the result is due to be announced in the first half of 2020.

The Qatar Petroleum CEO declined to say how large were the stakes being offered to partners to own nor which energy majors had been short-listed.

However, over the past 18 months the Qataris have been invited to join upstream ventures around the world with companies such as main global partner, ExxonMobil, as well as Royal Dutch Shell, French major Total and Eni of Italy. ■

Lake Charles LNG owner launches additional open season for Bayou Bridge Pipeline system near plant

Energy Transfer, the US pipeline and infrastructure company developing the Lake Charles LNG export plant with Royal Dutch Shell, has launched a binding supplemental open season for the Bayou Bridge Pipeline system from Texas to Louisiana.

The Dallas, Texas-based company said it was soliciting additional shipper commitments for transportation service from Nederland in Texas to Lake Charles in Louisiana.

The company said that "bona fide" potential shippers who desire to receive copies of the open season documents were required to execute a confidentiality agreement.

The Bayou Bridge Pipeline to near the existing Lake Charles LNG import terminal which is being transformed into an export plant, will provide light and heavy crude oil services from multiple sources to Lake Charles and the St. James crude oil hub, which are both home to important refineries located in the Gulf Coast region.

The 30-inch Nederland-to-Lake Charles segment went into service in April 2016 and the 24-inch Lake Charles-to-St. James portion was completed in March 2019.

"The Bayou Bridge pipeline offers producers, refiners, and marketers an efficient option to move crude oil from origins in the Nederland, Texas, area to the refining demand centers around Lake Charles and St. James," said Energy Transfer.

The pipeline, owned 60 percent by Energy Transfer and 40 percent by Phillips 66 Partners, is operated by Energy Transfer.

In addition to its other energy transportation projects and commitments, LNG will be a significant part of the Energy Transfer portfolio on the Gulf Coast.

Energy Transfer had announced in December 2019 with Shell US LNG a comprehensive commercial tender package for engineering, procurement and construction contractors for Lake Charles LNG.

The proposed Lake Charles LNG liquefaction project being jointly developed by Energy Transfer and Shell on a 50-50 basis would modify Energy Transfer's existing LNG import facility in Lake Charles to add LNG liquefaction capacity of 16.45 million tonnes per annum for export.

Energy Transfer also noted that in October 2019 that the Permian Express pipeline expansion went into full service.

The Lake Charles facility was the longest-serving US import terminal before the shale-gas boom and previously imported cargoes from Trinidad and Equatorial Guinea.

Under the transformation, Lake Charles will become an export facility and the successful EPC bidder is expected to be chosen after the second quarter of 2020.

The commercial tender focused on the technical scope of the project, specifically verifications of the engineering and design of the liquefaction facility. ■