

LNG Unlimited

LNG JOURNAL PUBLICATION

24 April 2018

Australia's BHP advances \$10Bln sale of US southwest shale assets

Commodities and mining group holds around 838,000 net acres in four basins
[LNG Journal editor](#)

BHP Billiton, the Australian commodities company with petroleum and natural gas assets, including LNG stakes in Western Australia, said it was continuing the exit process for its onshore US assets in key shale basins of the southwest and expected to receive bids in the months ahead.

"We expect to receive bids by June 2018 and proceed with negotiations to potentially announce one or several transactions in the first half of the 2019 financial year," said BHP in its nine-month operational review to March 2018.

Data room

"Data rooms for all fields and mid-stream assets are now open and in parallel, we continue to explore potential asset swap opportunities and exit via demerger or an Initial Public Offering," explained the Australian company.

BHP holds around 838,000 net acres in four prolific US shale areas of the Eagle Ford, Permian, Haynesville and Fayetteville.

It has natural gas-focused assets in the Haynesville and Fayetteville shale plays of Texas, Louisiana and Arkansas.

The Australian company also has wells in the liquids-focused areas of the Eagle Ford and Permian basins. In total, the US shale assets could be worth at least US\$10 billion.

BHP is also a joint venture participant in the oldest Australian LNG facility, the North West Shelf plant, located 125 kilometres



Feed-gas from some BHP assets will be LNG exports

northwest of the port of Dampier in Western Australia and which came on stream in 1989.

It is currently investing in the North West Shelf Greater Western Flank-B project to maintain production with additional feed-gas throughput from which it has a one-sixth share.

BHP said the North West Shelf extension project was on schedule and budget and was 80 percent complete.

In another LNG production-linked move, BHP Billiton in March 2018 agreed to waive its right of pre-emption and provide consent to the sale by ExxonMobil of its 50 percent interest in the Scarborough gas field to Australia's Woodside Petroleum.

This results in Woodside and BHP holding 75 percent and 25 percent interests respectively and the Scarborough field will underpin Woodside's Pluto LNG expansion.

"BHP has an option to purchase an additional 10 percent interest in Scarborough on equivalent consideration and terms to the transaction with ExxonMobil," said BHP.

"This option may be exercised at any time prior to the earlier of

31 December 2019 and the date approval is given to commence the front-end engineering and design phase of the development of the Scarborough gas field," added the company.

BHP said that its onshore US development activity in the key shale basins of the southwest for the nine months ended March 2018 was US\$648M, though its operated rig count declined from nine to seven.

In the Permian Basin, BHP said it continued to see strong results from larger completions.

The Permian Basin is one of the largest US oil and gas areas spanning West Texas and the southeast of the US state of New Mexico.

"We expect rig count to remain unchanged through the June 2018 quarter as we focus on meeting hold by production obligations and progressing sub-surface trials," said BHP.

The Australian company said that in the Eagle Ford shale in South Texas, early trial results from wells with longer laterals in the Hawkville have exceeded expectations and early results in the Austin Chalk horizon have been positive.

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Australian LNG operator Woodside posts revenue surge helped by higher export prices

LNG Journal editor

Woodside Petroleum, the largest Australian LNG plant operator and stakeholder, posted an increase in first-quarter sales revenue of around 30 percent to almost US\$1.17 billion compared with US\$902 million in the same three months of 2017 because of higher average prices ranging from US\$7.80 per million British thermal units to US\$9.00 per MMBtu.

The Northwest Shelf project delivered 62 cargoes in the three months to the end of March, though production was lower.

The company's Pluto liquefaction plant shipped 18 cargoes in the quarter and the newest Wheatstone venture in which Woodside is a 13 percent shareholder sent out 14 cargoes in the three months.

Income

Woodside said its quarterly LNG revenue amounted to US\$276.1 million for North West Shelf, up from \$192M in the year-ago quarter.

Income was US\$536.1M from



Woodside's Karratha gas plant in Western Australia

the Pluto plant, an increase from the US\$428.1M posted in the same three months of 2017. Wheatstone revenue for Woodside was US\$42M versus US\$7M in the fourth quarter of 2017 just after the start-up.

Woodside Chief Executive Peter Coleman said the first quarter was highlighted by Train 1 at Wheatstone LNG achieving steady production and demonstrating production rates above nameplate capacity.

"Train 2 at Wheatstone is close to completion and is expected to start producing LNG this quarter. Once both LNG Trains and the domestic gas facility are fully operational, Wheatstone will contribute more than 13 million barrels of oil

equivalent of annual production," said Coleman.

"During the quarter we announced and completed the acquisition of an additional interest in the Scarborough gas field.

"We now operate both the Scarborough offshore gas resource and Pluto LNG onshore processing facility.

"It is our plan to accelerate the development of Scarborough through an expansion of Pluto LNG. Concept selections for both the offshore and onshore components of the project are targeted by the end of this year," explained Coleman.

Woodside said average realised prices for the NWS plant were

US\$7.80 per million British thermal units for the three months to the end of March 2018 compared with \$6.00 per MMBtu in the same three months to March 2017.

"Production was lower due to higher ambient temperatures," said Woodside whose one-sixth share of the volumes is 16.1 percent of the total.

"An integrated onshore and offshore turnaround involving LNG Train 1, LNG Train 2 and Goodwyn-A (platform) is scheduled in May 2018," the company point out.

Prices for Pluto LNG were \$9.00 per MMBtu versus \$8.70 in the year-ago period.

"Production was lower due to higher ambient temperatures and the annualised loadable LNG production rate for the quarter was 5.0 million tonnes per annum," said Woodside.

The Wheatstone prices were \$8.90 compared with \$7.70 per MMBtu in the previous quarter. It is Australia's newest plant and is operated by Chevron Corp., coming on stream in 2017.

Gorgon joint venture on Barrow Island plans new upstream development of offshore gas fields

Chevron Corp., the operator of the Gorgon LNG export plant on Barrow Island in Western Australia, is proceeding with the second stage of upstream development for 11 new feed-gas wells in the prolific offshore fields.

Chevron and its joint venture partners are investing in the upstream portion of the project in the Gorgon and Jansz-Io fields, including offshore pipelines and subsea structures to deliver the gas to the Barrow Island liquefaction plant producing 15.6 million tonnes per annum LNG.

The US\$54 billion Gorgon project came on stream in March 2016 and the new field investments would fit in with Chevron's

planned annual investment of up to \$20Bn through 2020 while its main partners ExxonMobil and Royal Dutch Shell would pay their shares as well.

The original budget for Gorgon was US\$37Bn when it was first given the go-ahead and costs rose through 2016 by US\$17Bn because of delays and the complexity of the project.

Chevron as the Gorgon operator holds a stake of 47.3 percent in the venture, while ExxonMobil and Shell each has a 25 percent stake.

Other small stakes in the venture are held by Japanese utilities Osaka Gas, Tokyo Gas and Jera Co. Inc, comprising Tokyo Electric Power Co. and Chubu Electric.

The same Japanese utilities are holders of long-term supply contracts with the Gorgon plant.

The largest supply accord held by Chevron on its own are for 8.91 MTP, with SK LNG Trading of South Korea purchasing 4.15MTPA.

The agreements also include 1.44 MTPA for Jera, 1.37 MTPA for Osaka Gas, 1.1 MTPA for Tokyo Gas, 300,000 tonnes per annum for Kyushu Electric, 300,000 tonnes per annum for JX Nippon Oil and 250,000 tonnes per annum for GS Caltex of South Korea.

Chevron is also the operator of Australia's newest export plant, the onshore Wheatstone venture near the Western Australian town of Ashburton in the Pilbara region.

"Through ongoing collaboration, we need to invest in both the infrastructure and the local skills and capability required to maintain our long-term energy position and contribute to the jobs of the future," said Chevron Australia Managing Director Nigel Hearne.

"Benefits are expected to flow through to Australian industry, arising from local project management, drilling and completion activities and subsea infrastructure installation," added Hearne.

According to Chevron, this Gorgon project illustrates the ongoing infrastructure investment required to keep the Trains full of feed-gas for processing.

Santos gives update on EIG takeover and expansion

Santos, the Australian stakeholder in three Asia-Pacific LNG export ventures, issued a solid first-quarter earnings report, including an update on the US\$10.4-billion takeover bid from Harbour Energy, a subsidiary of US equity firm EIG Global Energy Partners.

"Harbour Energy has commenced confirmatory due diligence as part of an engagement process to determine if a proposal can be developed that is capable of being recommended by the Santos Board to shareholders," said Santos.

"There is no certainty that the Harbour Proposal will result in an offer for Santos capable of being recommended by the Board for consideration by shareholders," said the Adelaide-based company.

"Santos Directors reiterate that shareholders should take no action in relation to the Harbour proposal," it added.

Santos Chief Executive Kevin Gallagher said the company's first-quarter results highlighted the benefits of a diversified portfolio of natural gas asset and an operating model focused on cash generation.

"In the first quarter of 2018, we generated \$246 million in free cash flow, reduced net debt by 8 percent to \$2.5 billion and maintained our 2018 forecast free cash flow breakeven at US\$36 per barrel, despite the significant increase in drilling activity in Queensland and the Cooper Basin, and the temporary shutdown in PNG following major earthquake activity," said the CEO.

Oil Search of PNG posts output drop and opens Japan office

LNG Journal editor

Oil Search, the Papua New Guinea-focused energy company, posted a 36 percent drop in production as a result of the earthquake in PNG in February, though was optimistic about liquefied natural gas expansion plans for the Oceania nation.

The Oil Search-operated Central Processing Facility resumed operations in late March, with the company saying oil production at Kutubu commenced at an initial rate of approximately 4,000 barrels of oil per day.

Re-start

It added that the PNG LNG plant safely recommenced LNG production in mid-April, ahead of operator ExxonMobil's previously estimated eight-week timeframe. LNG exports have resumed.

Peter Botten, Managing Director of Oil Search, said the first quarter of 2018 had been one of the most challenging in Oil Search's and PNG's history.

"Very fortunately, all Oil Search staff and contractors located at the company's operating sites were accounted for, with only minor injuries reported," said Botten.



Papua New Guinea recently held post-quake LNG event

"While the PNG Highlands earthquake disrupted our production operations during the quarter, it had no impact on the progress of LNG expansion activities, which have accelerated following the achievement of broad alignment on the preferred downstream development concept between Oil Search, Total and ExxonMobil in early 2018," explained Botten.

"The proposed development concept comprises the construction of three LNG Trains, with total capacity of approximately 8 million tonnes per annum on the existing PNG LNG plant site," said Botten.

"Two of these Trains are ex-

pected to be dedicated to Papua LNG, supplied with gas from the Elk-Antelope fields, with the third expansion Train underpinned by gas from the existing PNG LNG fields and the P'nyang field," added Botten.

Botten also stated that because of the LNG expansion, during the quarter Oil Search established an office in Japan, staffed by a highly experienced LNG marketing team.

"The team will target customers in North-East and South-East Asian markets for offtake agreements covering Oil Search's share of expansion LNG," he said.

Australian Northern Territory lifts fracking ban and may boost LNG

Australian liquefied natural gas producers have welcomed the decisions by the Northern Territory government to lift a ban on hydraulic fracturing for onshore shale gas exploration and said it was an opportunity for the next LNG supply gap in the 2020s.

The first exploration fracking by energy companies is expected to occur early in 2018 after the implementation of a regulatory regime and new laws, which the government insists will be strict.

An independent report into hydraulic fracturing completed for the Northern Territory by an Aus-

tralian federal judge found that the risks associated with the fracking of gas deposits could be managed and regulated.

Northern Territory Chief Minister Michael Gunner said the oil and gas industry would create jobs in one of Australia's most remote areas.

"Forty-nine percent of the Territory will be 'frack-free', including in national parks, conservation areas, Indigenous protected areas, towns, residential and strategic assets, and areas of high cultural, environmental or tourism value," stated Gunner.

"We promised an independent,

scientific inquiry after which we would either ban fracking or allow it in highly regulated circumstances in tightly prescribed areas," he explained.

Australian Petroleum Production and Exploration Association said natural gas and oil companies were ready to spend billions in the Territory.

Among the other individual companies that welcomed the decision by the Northern Territory government was Santos, the Adelaide-based operator of the Gladstone LNG plant.

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NEWS NUDGES

Chart contract in Croatia

Chart Ferox, a subsidiary of US LNG equipment company Chart Industries, said it was awarded a contract for the design, manufacture and commissioning of the first LNG vehicle fueling station in the Balkan state of Croatia. "The skidded design incorporates our recently introduced 60 cubic metres horizontal cryogenic storage tank together with many other innovative features for enhanced reliability and economy," said Chart. The company added that its proprietary vaporization technology would ensure that the station was capable of fueling all LNG vehicles available on the market, regardless of whether they are equipped with spark ignited or compression engines.

Sempra plans for Mexico

Sempra Energy, the California-based utility transforming its Cameron LNG terminal in Louisiana and Costa Azul facility on the Pacific coast of Mexico into export plants, said it was scaling back its Mexican liquefaction plans. The Sempra Mexican subsidiary, Infraestructura Energetica Nova (IEnova), is now looking at a small-scale plant with 2.5 million tonnes per annum of output by around 2023 instead of a larger plant constructed later with up to 12 MTPA of capacity and closer to the size of Cameron LNG.

Enel LNG ship charter

Flex LNG, the Norway-listed shipping and project company, has chartered an LNG carrier for 12 months to Italian energy company Enel Trade SpA. Flex said the charter would start in the second half of 2019 with an option to extend for 12 months.

Lloyd's Register and China's Dalian yard advance ballast-free LNG carrier

LNG Journal editor

UK maritime classification society Lloyd's Register and the Chinese Dalian Shipbuilding Corp., as well as French ship storage technology company GTT, are advancing with a 30,000 cubic metres capacity, ballast-free LNG carrier design and have just brought Belgian shipping line Exmar on board the joint development project.

A meeting was held at Lloyd's Register's premises in the Chinese port of Shanghai to commence Phase II of the project and to welcome Exmar as a new partner in the venture.

First phase

The first phase of the project performed by Dalian Shipbuilding, GTT and Lloyd's Register developed a new design of ballast-free medium-sized LNG carrier, fully compliant with the new International Maritime Organization "Ballast Water Management Convention" and using membrane containment systems.

"It showed the potential for competitive advantages for the ship-owners, combining environ-



Joint development project expands to include Exmar

mentally-friendly features with increased efficiency," the companies said.

They added that initial work had indicated potentially lower construction and operational costs.

The small-scale LNG carrier design received an Approval in Principle from Lloyd's Register in December 2017.

The partners said Phase II aimed to develop the design further and to validate the initial results by applying more detailed analysis and verification, including model testing.

They believed the addition of Exmar brought a wealth of experience in operation of LNG and liquefied petroleum gas ships to the project team, which would help take the design from a concept to

a viable, practical vessel meeting the requirements of end users.

"The ballast-free concept is a well-suited solution in the context of a shipping world with growing environmental requirements and concerns," said Pierre Dincq, Managing Director of Shipping at Exmar.

"By eliminating the need for ballast water, there is an absolute certainty that no invasive species will be transported on board of the vessel," he added.

"Moreover, the ballast water treatment plant can be omitted, reducing the maintenance requirements and the energy consumption of the vessel which has a positive impact on the CO2 footprint of the vessel," explained the Exmar executive.

Malaysian line AET charters two new LNG-fueled Aframax tankers to Shell

AET Inc., the petroleum logistics unit of Malaysian International Shipping Corp. with an operational fleet of 94 vessels, has signed a charter deal with Shell International Trading and Shipping Co. for the long-term charter of AET's two newbuild LNG dual-fuelled Aframax tankers.

AET's two 113,000 deadweight-ton vessels are currently being built by Samsung Heavy Industries in South Korea and are due for delivery from third quarter of 2018.

The agreement will see Shell take both vessels on a long-term charter commencing in the fourth quarter of this year.

"As a world-leading owner and

operator of petroleum vessels, we have a responsibility to embrace the future of sustainable shipping," said AET's President and CEO, Captain Rajalingam Subramaniam.

AET is based in Singapore though also has offices in Kuala Lumpur, London, Panama, Rio de Janeiro and Galveston, Texas.

"We took the decision to begin building LNG dual-fuelled Aframax vessels some time ago and these two Aframax are amongst the first to take their place in our global fleet," said Subramaniam.

The Aframax class is a medium-sized crude tanker and its name derives from AFRA which stands

for Average Freight Rate Assessment. The system was created in 1954 by Shell Oil to standardize contract terms.

"As part of the MISC Group, AET upholds our environmental stewardship by consistently evaluating greener solutions, and our investment in the LNG dual-fuelled Aframax tankers is a further tribute to this," he added.

When operating in LNG mode, the two AET tankers will emit up to 30 percent less carbon-dioxide, 85 percent less nitrogen-oxide and 99 percent sulphur oxide, making them among the cleanest Aframax tankers in the market.

Golar LNG signs financing accord for LNG and gas-fired power project in northeastern Brazil

LNG Journal editor

Golar LNG said its power venture subsidiary set up with Stonepeak Infrastructure Partners closed a financial agreement for a project in northeast Brazil involving a power plant and a liquefied natural gas import facility.

The project in the small north-east Brazilian state of Sergipe will include “a fully flexible and highly efficient natural gas-fired plant” that will enable Brazil to increase its energy security while continuing to expand its development of renewable energy resources.

Ship charter

In connection with financial close of the project, Golar Power has also executed final agreements for the venture to charter the “Golar Nanook”, a newbuild 170,000 cubic metres capacity floating storage and regasification unit for a term of 26 years.

The annual earnings contribution for Golar Power is currently projected to be around US\$41 million and with upside potential for Golar to use the remaining two-



Port of Sergipe to be location of import and gas plants

thirds of FSRU capacity not utilized by the project.

The terminal is located in a strategic entry point in northern Brazil, within 20 kilometres of the main gas distribution network, and has the potential to unlock future LNG distribution opportunities in the country.

Centrais Elétricas de Sergipe, the joint venture company 50 percent held by Golar Power, will receive \$1.34 billion under the project financing accord.

The proceeds will go towards funding a 1.5-gigawatts power

plant, a dedicated 34-kilometres high-voltage transmission line, an associated gas pipeline and the mooring infrastructure required for the LNG import terminal facility.

“Total expenditure is estimated at \$1.74Bln and the total equity contribution of approximately \$400M has been fully paid-in and includes US\$123M in cash reserve accounts that were pre-funded by the project sponsors,” said Golar.

The power project is expected to generate gross earnings of around \$323M at current exchange rates. The start of power station

commercial operations is scheduled for January 2020.

Payments under the executed power purchase agreement are inflation indexed and provide for pass-through of fuel costs to the counterparties.

“This innovative financing represents a key milestone in the development of Golar Power infrastructure projects globally, establishing a precedent for financing in local currency in support of projects receiving revenues in local currency which are adjusted based on inflation,” said Golar Power Chief Executive Eduardo Antonello.

“The project bond issuance has attracted the interest of multiple international investors and opens a new horizon of opportunities for infrastructure development,” added Antonello.

“With this experience, we believe Golar Power is uniquely positioned to help deliver these opportunities globally to new and underserved customers and geographies,” he stated.

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TechnipFMC wins contract for Senegal and Mauritania

TechnipFMC, the French-US energy engineering company, was awarded a front-end engineering design contract by BP for a floating production storage and offloading (FPSO) unit that will be part of the LNG production project planned for offshore the West African states of Senegal and Mauritania.

The FPSO will be deployed as part of the Tortue-Ahmeyim Field Development for the LNG venture on the offshore maritime border between Mauritania and Senegal.

The FLNG project is being developed by BP and its Dallas, Texas-based partner Kosmos Energy for the Tortue natural gas discoveries and will comprise two FLNG processing hulls as well as the FPSO and other offshore infrastructure.

BP and Kosmos have estimated that the Greater Tortue Complex has resources for LNG production of around 25 trillion cubic feet of feed-gas and an additional 15 Tcf is contained in nearby fields.

The first gas from the Kosmos-BP FLNG Train 1 is scheduled for 2021 and the start of the second FLNG Train is set for 2023.

TechnipFMC said its agreement with BP was expected to lead to an Engineering, Procurement, Construction and Installation (EPCI) contract at a later stage. The engineering company with offices in Paris and Houston said it would work on defining the technology and equipment scope, including the possibility of fabrication at a Chinese shipyard.

"We are very honored to be awarded this contract in West Africa which further demonstrates our leading position in offshore gas monetization," said Nello Uccelletti, President of TechnipFMC's Onshore-Offshore business.

US LNG data shows Mexico leads table of top 10 importers

LNG Journal editor

After two years of liquefied natural gas exports from the Sabine Pass plant in Louisiana, the top 10 recipients of cargoes have been led by Mexico with 57 shipments, South Korea with 55 cargoes, China with 42 cargoes and Japan with 21 cargoes.

According to the US Department of Energy LNG export data for February, which marked a full two years of exports started in February 2016, the other six nations in the top 10 were; 5th. Chile (20 cargoes); 6th. Jordan (15 cargoes); 7th. India (12 cargoes); 8th. Turkey (12 cargoes); 9th. Argentina (11 cargoes); and 10th. Spain (11 cargoes).

New wave

The top 10 buyers of the US cargoes during the two years accounted for 76.8 percent of the exported volumes from Sabine Pass, owned by Houston, Texas-based Cheniere Energy.

Since the new wave of US LNG exports began in February 2016, a total of 25 nations have received LNG cargoes from Sabine Pass.



Manzanillo import facility on Mexican Pacific coast

Two other countries in the Caribbean, Barbados and the Bahamas, have taken delivery of LNG shipments in ISO containers on conventional vessels from Florida.

Barbados received 96 containers over the two-year period and the Bahamas imported 10 shipments.

In total five Free Trade Agreement countries were sold LNG shipments (48.8 percent of the total) from the February 2016-February 2018 period while 22 Non-FTA nations received (51.2 percent) the shipments.

Spot LNG cargoes made up 257.3 billion cubic feet of deliveries (24.8 percent) in the two-year period from the total of 1,036.3 Bcf of the total volume of shipments.

Starting from March 2018, the

DoE figures will include data from the single-Train Cove Point export plant in Maryland, owned by Dominion Energy and with total capacity of 5.2 million tonnes per annum.

The Sabine Pass plant now has four liquefaction Trains on stream, each with nameplate capacity of 4.5 MTPA, giving a total of 18 MTPA.

The latest DoE figures showed that a total of 21 cargoes were shipped from Sabine Pass during February 2018.

South Korea received eight cargoes in February, Mexico four cargoes, China, Japan and Taiwan imported two each and single shipments were sent to Chile, Jordan and Turkey.

Japanese LNG imports drop as Australia offsets Asian fall

Japanese liquefied natural gas imports dropped 2.6 percent as Australian and spot volumes offset a large fall in shipments from Asia and thermal coal was preferred to LNG for power generation.

The nation's LNG imports amounted to 7.93 million tonnes in March compared with 8.14MT in the same month of 2017, according to the preliminary trade figures from the Japanese Finance Ministry.

LNG shipments fell as imports of thermal coal for power generation increased by 2.6 percent during March to 9.90MT.

Japan's imports of LNG had

risen by 6.5 percent in February to 8.29MT compared with 7.79MT in February 2017.

The cost of the shipments jumped by around 12 percent in March 2018 to 413.43 billion yen (\$3.85Bln) compared with 368.74Bln yen (\$3.43Bln) in March 2017.

Japan's nuclear power plants, numbering more than 50, were largely still offline in March 2018 with only four currently operating.

The Ministry data for March showed that Asian shipments from nations such as Malaysia and Indonesia, Papua New Guinea and Brunei declined by 12.7 per-

cent from March 2017 to 2.19MT.

Imports from the Middle East region dropped 1.1 percent with shipments from countries like Qatar, the United Arab Emirates and Oman totalling 1.81MT in March.

Russian monthly shipments from the Sakhalin Island plant in the Far East were down 8.9 percent at 653,000 tonnes.

Imports from the US during March from the Cheniere Energy-owned Sabine Pass plant in Louisiana amounted to 129,000 tonnes, a fall of 7.8 percent versus March 2017.



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Lake Charles export venture proposed at Louisiana terminal extends construction start-up permit to 2019

LNG Journal editor

Lake Charles LNG, the liquefaction and project owned by US pipeline company Energy Transfer and involving Royal Dutch Shell, has asked regulators to extend the deadline for the start of construction to November 2019.

The proposed project facilities include the construction, modification, and operation of terminal and pipeline facilities in Louisiana, Arkansas and Mississippi.



Export venture also involves Shell and Korea Gas Corp

Notifications

Lake Charles LNG stated that it had also requested from the Louisiana Department of Environmental Quality an additional 18-month extension of the deadline to start building the facility on the site of the existing import terminal.

"Most of the regulatory pre-work and notifications to complete filings have now expired," Energy Transfer noted in its letter to the Federal Energy Regulatory Commission.

The FERC issued a draft environmental impact statement in September 2015 for the Lake Charles export venture to produce

16.5 million tonnes per annum of LNG.

"The second construction extension request is currently undergoing a 30-day public notice period before final approval. The public notice was published on April 3, 2018 and the comment deadline is May 8, 2018," said Energy Transfer.

In addition to pursuing the Lake Charles export venture with Shell, Dallas-based Energy Transfer signed an accord in 2017 with South Korea-based Korea Gas Corp. to study the feasibility of joint participation in the Louisiana venture.

Shell gained its stake in the

Lake Charles facility's reserved capacity from its takeover of BG Group of the UK.

The project will include the construction of three liquefaction Trains and will use the existing LNG storage and marine berthing facilities owned by Equity Transfer since its takeover of Southern Union Co. in 2013 for more than \$5Bln.

The proposed Lake Charles liquefaction plant was first awarded a permit by the Department of Energy in August 2013 to ship cargoes to countries without a US Free Trade Agreement. Now the volumes for that permit has been increased.

Before the shale-gas boom Lake

Charles was one of the centres of US LNG imports, with BG bringing in cargoes from nations such as Trinidad and Equatorial Guinea.

BG and Energy Transfer had previously scheduled a commercial start-up for the plant in 2019.

The 440-acre site is located close to Henry Hub with access to many of the largest natural gas production areas in the US through Energy Transfer's existing and new pipelines like the Trunkline Gas System.

Deliveries

Energy Transfer's Trunkline Gas System amounts to a 2,200-mile pipeline that interconnects with more than a dozen interstate and intrastate pipelines to ship feed-gas to Lake Charles LNG and other projects along the Gulf Coast.

Energy Transfer began in 1995 as a small intra-state natural gas pipeline operator and is now one of the largest energy partnerships in the US.

It has grown from holding 200 miles of natural gas pipelines in 2002 to about 56,000 miles of natural gas pipelines now.

Rio Grande project developer in Texas opens offices in Singapore and Beijing and hires ex-Shell executive

NextDecade Corp, the developer of the Rio Grande export plant in Texas and with plans for other pipeline and liquefaction facilities, has opened offices in Singapore and Beijing to serve future customers in Asia.

NextDecade also hired a new executive formerly with Royal Dutch Shell, James MacTaggart, as Senior Vice President to head the US company's LNG marketing division in Asia.

MacTaggart has served more than 20 years with Shell in various marketing and trading positions.

NextDecade's plans centre on constructing an LNG portfolio of projects, including the Rio Grande

export plant at the port of Brownsville with capacity of 27 million tonnes per annum.

The company had made senior executive changes in January 2018 when Chief Executive Kathleen Eisbrenner handed over executive leadership to former BG Group executive Matthew K. Schatzman while she became Chairman.

Former Shell senior LNG executive Eisbrenner founded the company in 2010. It eventually became NextDecade and is now listed on the Nasdaq stock exchange.

Schatzman was previously Executive Vice President, Global Energy Marketing and Shipping, and a member of the Group Exec-

utive Committee at BG, now part of Shell.

The new CEO is now emphasizing the importance of the Asian market to the company's development by opening the Singapore and Beijing offices.

"The appointment of MacTaggart and the opening of these offices reinforce our commitment to serving the world's largest and fastest growing LNG markets," said Schatzman.

"We believe focusing on these markets is key to achieving a successful Final Investment Decision on our Rio Grande LNG project," added the CEO.

Before joining NextDecade,

MacTaggart was General Manager of Shell's New Gas and LNG Markets business in Asia, India and the Middle East.

"I am honored to join the seasoned and highly capable team at NextDecade," said MacTaggart, who is based in Singapore and will lead Asian operations from there.

"I am eager to bring to NextDecade's prospective customers the significant competitive advantages of the Rio Grande LNG project, including its market-leading EPC costs and its proximity to abundant, low-cost natural gas resources in the Permian Basin and Eagle Ford Shale," added MacTaggart.