LNG Unlimited

LNG JOURNAL PUBLICATION 26 November 2019

US issues landmark LNG permits on path to being the World No. 1

Cheniere Corpus Christi expansion and approval of three other plants opens outflow of surplus gas

LNG Journal editor

US LNG exports received a regulatory boost when Cheniere Energy Corpus Christi expansion was approved along with three other development projects in Texas proposed by NextDecade Corp., Texas LNG Brownsville and Annova LNG. With other projects under construction, the US is on track to be the world's No. 1 exporter by 2025 and beyond with output of over 120 million tonnes per annum.

Cheniere's Stage 3 expansion of its Corpus Christi export facilities will take the Houston-based company to 52 million tonnes per annum of output by around 2024 at the same time as three other Texas projects cleared their final regulatory hurdles for a total of 37 MTPA of output.

Proposals

The Federal Energy Regulatory Commission approved Cheniere's Stage 3 project comprising seven mid-scale liquefaction Trains adjacent to the Corpus Christi plant, each with an expected nominal production capacity of around 1.4 MTPA of LNG.

The total expected nominal production capacity of the seven mid-scale Trains is around 10 MTPA.

"The Corpus Christi Stage 3 site is adjacent to the three liquefaction Trains operating or under construction at the Corpus Christi Liquefaction Project, and together the two projects are expected to have a total nominal production capacity of approximately 25 MTPA," said Cheniere.

With the 27 MTPA from the completed six Trains at Sabine Pass and the Corpus Christi Trains, Cheniere's output rises to 52 MTPA, making it the third-largest in the world behind the nations of Australia currently with 80 MTPA and Qatar with 78 MTPA, though ahead of Malaysia with 24.5 MTPA.

Cheniere's President and Chief Executive Jack Fusco said his company was pleased to receive regulatory approval from the FERC, opening the way to a positive final investment decision for the Stage 3 venture.

"Our continued progress on Corpus Christi Stage 3, including the regulatory approval and our continued commercial success, is a testament to the global competitiveness of the project and reinforces our confidence in our ability to expand our world-scale liquefaction platform in Corpus Christi," stated Fusco.

The other export projects around the Texas Port of Brownsville also moved forward comprising multiple liquefaction Trains and almost $39 million of investment to create thousands of jobs on the Gulf Coast.

Texas LNG Brownsville, Annova LNG and NextDecade's Rio Grande project, as well as its associated Rio Bravo Pipeline, were all approved by the FERC and represent a huge investment in the Rio Grande Valley.

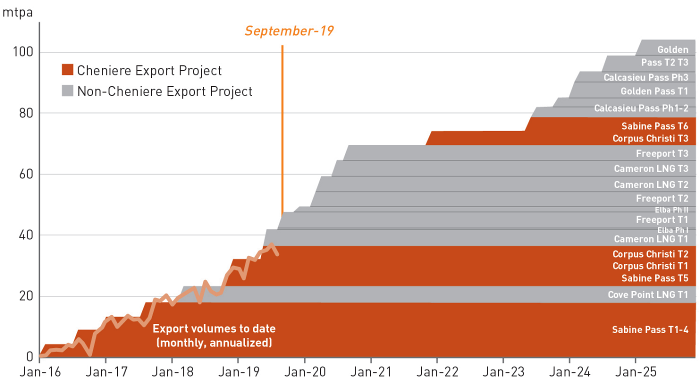
The largest plant approved was the Rio Grande LNG export facility in Brownsville with 27 MTPA of production and its associated Rio Bravo Pipeline with 4.5 billion cubic feet per day of transport capacity from the Agua Dulce natural gas hub to the plant.

"Issuance of the FERC order marks an extremely important milestone for our project," said Matt Schatzman, Chairman and Chief Executive of Rio Grande LNG development company NextDecade.

The smaller Texas LNG Brownsville venture with 4 MTPA of output said the approval vote by the FERC followed comprehensive environmental, safety and other reviews of extensive engineering and design information.

"With the Texas LNG Brownsville project, we are developing a mid-sized LNG export facility to better connect abundant and low cost US natural gas with the world's growing appetite for clean fuels," said Texas LNG Chief Executive Vivek Chandra.

The third project moving forward is the Annova LNG venture with capacity of 6 MTPA of LNG at the Brownsville site. ■



How liquefaction plant developments are gathering pace

LNG-powered vessels named at China yard for Siem Car Carriers to use on Europe-to US route

LNG Journal editor

Siem Industries, the company run by Norwegian Kristian Siem and whose interests include shipping and offshore oil and gas engineering and services through the Subsea 7 company and Siem Offshore Inc., has attended the naming ceremony for its two LNG-powered car carriers at the Chinese Xiamen Shipbuilding yard in southeastern Fujian province.

The two roll-on-roll-off vessels, each with 7,500 parking spaces, were named “Siem Confucius” and “Siem Aristotle” and will be part of the Siem Car Carriers fleet delivering vehicles from Europe to North America, according to the bunkering deal set up.

Shell fuel

Siem Car Carriers has already signed an LNG supply agreement for the newbuilds with Royal Dutch Shell.

“Fueled with LNG, each ship has safety features, is environmentally friendly and is energy-saving in performance,” said Li Zhenjun, deputy general manager of Fujian Shipbuilding Industry Group, the parent of Xiamen Shipbuilding, at the shipyard ceremony.

The ships are almost 200 metres in length and 38 metres wide and with 13-storey car decks.

Siem Car Carriers currently operates 11 vessels, two under its ownership, seven chartered and two owned by affiliate Siem Shipping.

Parent company Siem Industries is based in Grand Cayman in the Cayman Islands and noted in the most recent earnings report that the car carrier sector is well supplied by vessels available from owners “who have no operating capabilities” and the market charter rates are favourable compared to the cost of ownership.

“We see the need for ocean transport of cars to continue for the foreseeable future, but with less growth than has been experienced historically,” said Siem.

Shipping companies such as Siem are adapting to tougher pollution regulations and choosing cleaner fuel such as LNG.

This follows the creation in recent years of Emission Control Areas (ECAs) in regions such as Northwest Europe and North America and the International Maritime Organization’s sulfur cap on marine fuel coming into force from 2020.

Shell said in October 2017 that two of its fuel subsidiaries had signed long-term agreements with Siem Car Carriers to supply LNG for the new vessels to be used to transport German vehicles from Europe to North America.

The fuel deals were signed with Shell LNG and Shell Western units.

Shell said at the time that the two car carriers would be the first such vessels to be powered by LNG and the first to operate trans-Atlantic on the commercial trade route between Europe and the US.

Shell plans to refuel the vessels in Northwest Europe and at a second supply point in the US. ■

Ceremony for ‘Siem Confucius’ held at Xiamen Shipbuilding

Norway’s Hoegh posts steady earnings and expects lower prices to improve FSRU market in Asia

Hoegh LNG, the Norwegian shipping and project company, said the global market continued to grow as it was selected for three floating storage and regasification unit (FSRU) contracts and with various tenders also being processed as lower natural gas prices are helping import infrastructure demand in Asia.

Hoegh gave a business update in the third-quarter earnings statement, reporting total income of $82.16 million, little changed from the $82.25 posted in the same three months a year ago, though higher than the $75.5M logged in the second quarter.

However, the company recorded a drop of 47 percent in net profit to $3.16 million compared with $5.96M in the same quarter of 2018. But that result improved on the $3.62M loss reported in the second quarter of 2019.

Operating cash flows rose in the third quarter to $49.92M compared with $44.54M in the year-ago period.

The shipping operator also signalled its strategy transition by opening a new office in Shanghai, China, to seek new opportunities while closing its office in South Korea now that its newbuilding programme has ended.

“Hoegh’s results show strong improvement compared to the previous quarter due to no negative one-off effects and solid operating performance across the fleet,” said President and Chief Executive Sveinung J.S. Stohle.

“I am pleased to see continued healthy demand for FSRUs in the market, as reflected by two new projects where Hoegh is participating in the formal tender process,” he added.

“The rapid growth in the LNG market continues with 15 percent volume growth in the year to date, driven by more LNG coming to the market at competitive prices. This supports continued demand for LNG, particularly in the high growth economies in Asia,” stated the Hoegh CEO.

Hoegh took delivery of the “Hoegh Galleon”, its 10th FSRU, on 27 August 2019.

“This high-specification FSRU has been constructed at Samsung Heavy Industries in South Korea and has a storage capacity of 170,000 cubic metres of LNG and a regasification capacity of 750 million standard cubic feet per day,” said Hoegh.

“The delivery marks the completion of Hoegh LNG’s newbuilding programme and confirms the company’s position as the industry leader in the FSRU market,” it added.

“The newbuilding programme was completed during the third quarter, and the company’s office in South Korea was subsequently closed,” stated Hoegh.

At the same time, Hoegh officially opened its representative office in Shanghai to pursue additional FSRU projects. Hoegh noted that terms of the charter ensure that the “Hoegh Galleon” will be available to serve Australia Industrial Energy ■

Canadian producers considers barge plan

Rockies LNG, a firm set up by a group of Canadian natural gas exploration and production companies, is considering developing its own barge-based export project on the Pacific Coast of British Columbia as an outlet for abundant gas resources.

Rockies LNG Chief Executive Greg Kist said that the nine companies in the group were considering a project that could produce around 12 million tonnes per annum of LNG.

The Canadian E&P consortium hired experienced executive Kist in 2018 as a consultant. He is the former President of the Pacific NorthWest LNG project company formed by Petronas of Malaysia.

Petronas eventually cancelled the Pacific Northwest venture planned for BC and instead joined the LNG Canada project led by Royal Dutch Shell.

There were more than 20 LNG proposals in BC just six years ago from a range of different companies to build projects on Canada's West Coast.

However, LNG Canada is the only industrial-scale plant making progress and announced a final investment decisions in October 2018.

The Rockies LNG group is "a collaboration amongst competing producers" that collectively produce 20 percent of Canada's natural gas and 40 percent of natural gas products such as propane, butane and ethane.

The group is made up of Calgary, Alberta-based producers including Advantage Oil & Gas Ltd. and Peyto Exploration & Development Corp. and first came together in 2018 to seek new outlets for their gas, now competing with the US shale glut and pipelines bottlenecks in Canada.

The Rockies venture expects to select a potential site for the planned near-shore barge project by the first quarter of 2020. ■

Mitsui Osk Lines orders Japan's first LNG ferries on key route

LNG Journal editor

Mitsui Osk Lines, the Japanese shipping company with an operating fleet of almost 100 liquefied natural gas carriers, said it planned to order the first two LNG-powered ferries for Japan from Mitsubishi Shipbuilding.

MOL said the ferries had been tentatively named "Sunflower Kurenai" and "Sunflower Murasaki".

Charters

The Japanese ferry line, Ferry Sunflower Ltd, will charter the ferries after their delivery and use them on the route from Osaka to the spa resort of Beppu from the end of 2022 as replacements for vessels currently in service.

"The vessel names are derived from the 'Kurenai Maru' and 'Murasaki Maru', which MOL's corporate forerunner Osaka Shosen Kaisha launched on the Osaka-Beppu route in the 1910s," explained MOL.

"The new ferries will feature amenities worthy of the tradition they inherit on the Osaka-Beppu route. It has a proud history of more than 100 years and the vessels will further expand the 'casual cruise concept," added MOL.

Sunflower is based in Oita in Kyushu and has offices in other cities such as Kobe, Osaka, Kagoshima and Tokyo.

"The ferries will be equipped with high-performance dual-fuel engines and will provide passengers with comfortable accommodation and reliable schedules," said MOL.

"The use of LNG fuel will achieve excellent environmental performance, reducing carbon-dioxide emissions by 20 percent compared to the current vessels and virtually eliminating sulfur-oxide emissions," added MOL.

Each of the ferries will be able to carry 763 passengers and about 136 trucks and vehicles. Their gross tonnage will be 17,300 tons and they will be able to travel at 22.5 knots.

"MOL is developing the technology for LNG-fueled vessels and establishing safe operation and promoting the wider use of LNG fuel," it said.

MOL completed LNG bunkering trials at the Port of Kobe in September 2019 as the company aims to help bring cleaner LNG to shipping in Japan and elsewhere. ■

Ferries like this will be replaced by versions using LNG

Maritime LNG group signs up US equipment firm Chart as member

Sea-LNG, a global coalition of energy and shipping companies and other sector participants backing the increased use of liquefied natural gas as a maritime fuel, has signed up US LNG equipment-maker Chart Industries as the newest member.

Chart is one of the main equipment and systems providers of applications that utilise clean-burning and economical natural gas as fuel.

The liquefaction technology that is used includes specialized heat exchangers, cryogenic storage and delivery expertise to support global LNG infrastructure, including small-scale LNG for transportation, marine and power generation.

Sea-LNG said that Chart, whose headquarters are near the city of Atlanta, continued to help the marine sector meet the challenges set by the International Maritime Organization's 2020 sulfur cap on fuel.

Sea-LNG noted that Chart built its first bunkering station in 2003 and more recently completed fuel stations at the Baltic port of Klaipeda in Lithuania and at the US port of Jacksonville in Florida.

Chart fuel systems are also on board multiple LNG-powered vessels, including the "Francisco" high-speed ferry that operates in South America and various fleets of barges.

"We are thrilled to welcome another member from North America," said Peter Keller, the Sea-LNG Chairman.

"Chart is a highly respected equipment and solution provider working across the LNG value chain and we look forward to working together with a company that is at the heart of the energy revolution," added Keller.

Sea-LNG's members include energy and shipping companies as well as US and Canadian ports and others in Asia,

"Chart LNG systems not only offer innovative solutions for marine applications, they provide green energy to ships during port layovers, improving air quality in the local area," said Jill Evanko, President and Chief Executive of Chart.

"As members of Sea-LNG, we expect to further enhance LNG as a commercially viable and environmentally sound marine fuel for 2020 and beyond, while contributing to a cleaner future for the communities in which our equipment and solutions are used," stated the Chart CEO. ■

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NEWS NUDGES

Woodside and BHP accord

Australian LNG plant operator Woodside Petroleum and commodities company and LNG equity holder BHP have agreed the tolling price for processing gas from the Scarborough offshore field for the expanding Pluto LNG facility on Western Australia's Burrup Peninsula. The tolling price is valid to 31 March 2020. BHP has a 25 percent interest in the Scarborough project. "This agreement on the tolling price, together with the increase in Scarborough gas resources announced earlier this month, provides a compelling and aligned basis for BHP and Woodside to finalise the required conditional binding agreements by the end of the first quarter of 2020," said Woodside Chief Executive Peter Coleman.

Naturgy bonds In demand

Naturgy Energy Group, the Spanish utility and importer of LNG volumes from the US and Russia, has completed its first corporate bond issuance in Europe under a new financing strategy. The bonds amounted to 750 million euros ($830M) and mature on 28 November 2029. "The issuance was set with an annual coupon of 0.75 percent and its price represented 99.751 percent of its nominal value," said Naturgy. The new Naturgy bonds were twice oversubscribed and were placed among 79 institutional investors globally.

Shell-Teekay fuel deal

Shell Global Downstream LNG said it signed a deal with Teekay Offshore Logistics to supply liquefied natural gas for two Teekay LNG-powered shuttle tankers in Europe. Teekay's 130,000-deadweight ton newbuilds will operate on a dual-fuel basis. The Teekay tankers are being built by Samsung Heavy Industries in South Korea. The vessels will be delivered in 2019 and 2020 and begin operations under partnership agreements with Norwegian energy company Equinor.

New Sonatrach CEO seals first LNG and gas deal with France

LNG Journal editor

Engie and Sonatrach executives at Algiers signing with CEO Kamel-Eddine Chikhi standing second from right

Sonatrach, the Algerian national energy company now under a new chief executive, said it signed medium-term and long-term LNG and pipeline natural gas contracts with French utility Engie, the last of its European customers to renew delivery agreements.

"Through these agreements, both parties confirm and consolidate their long-term partnership," said a statement.

Deliveries

"Sonatrach will deliver volumes of natural gas on the Trans-Mediterranean gas pipeline as well as in the form of LNG cargoes delivered to the Fos Tonkin import terminal," it added.

The accords were signed several days after Sonatrach appointed a new Chief Executive, Kamel-Eddine Chikhi, on November 17.

The Sonatrach-Engie agreements were signed in Algiers by Ahmed Mazighi, Vice-President of Sonatrach, and Edouard Neviaski, Engie's Global Energy Management Business Director.

New Sonatrach CEO Chikhi and Pierre Chareyre, joint director-general of the Engie group, were present at the signing.

Sonatrach has already renewed its LNG and pipeline contracts with other European customers, Naturgy of Spain, Galp Energia of Portugal, Botas of Turkey and Eni of Italy.

Algerian LNG exports have been falling and last year they dropped by 18.2 percent to 10.10 million tonnes compared with 12.34MT the previous year at its two liquefaction plants at Skikda and Arzew on the Mediterranean Coast.

Analysts said that Sonatrach faces a twin challenge in natural gas, as it does in oil, of aiming to maximise its exports while also meeting growing domestic demand.

The arrival of the new CEO comes as the Algerian state company is attempting to overhaul operations and reform its activities.

Sonatrach CEO Chikhi in his inauguration speech said that he would focus his efforts in exploration and production operations to increase the level of reserves that have been dwindling year by year and to guarantee long-term energy security for Algeria.

"It will be for us to focus our efforts on making better use of our production potential to better respond to growing national needs, and to keep our traditional international markets, especially those of LNG," said the CEO. ■

Woodside outlines progress on Burrup Hub and Myanmar gas

Australian LNG producer Woodside is advancing with its boosted seven-Train integrated LNG and gas hub in Western Australia and with overseas projects, including its offshore Myanmar gas venture to supply Rangoon and Thailand.

"Our vision for an integrated seven-Train LNG processing centre on the Burrup Hub is taking shape, with a final investment decision reached on the Pluto-Karratha Gas Plant Interconnector pipeline," said Chief Executive Peter Coleman.

Coleman gave his operational update in a presentation at an Investor Day briefing at the Sofitel at Darling Harbour in Sydney.

The Woodside CEO said the Perth-based company's main corporate augmentations since early 2018 have included firstly, finding that the Scarborough natural gas field resources were 52 percent more than previously estimated at 11.1 trillion cubic feet.

Secondly, being able to increase the Pluto LNG plant output with a second Train with 5 million tonnes per annum of output while thirdly, preserving the "competitive cost" of the Burrup Peninsula Gas Hub venture at US$11.4 billion.

The Burrup Gas Hub also involves bringing 13.9 Tcf of Browse Basin dry gas to the North West Shelf liquefaction facility and enabling 10 MTPA of LNG output, helped by feed-gas flows on the Pluto LNG-Karratha Gas Plant Interconnector.

The seven Trains the CEO was referring to are the existing five Trains at the NWS plant, and two at Pluto LNG. ■

Canada's TC Energy outlines plan for pipeline investment to help boost North America exports

LNG Journal editor

TC Energy, the Canadian pipeline company building feed-gas links to LNG projects in North America, is planning huge investments to transport more Appalachian shale gas and constructing the Coastal Gaslink in British Colombia as well as the natural gas "infrastructure backbone" of Mexico.

The statements came in TC Energy's Investor Day presentations in Toronto as it outlined the future investment path that would also substantially boost earnings by the end of 2022.

Spending

"Our C$100 billion (US$75.7Bln) portfolio of high-quality, long-life energy infrastructure assets are expected to generate record financial results again in 2019 underpinned by strong market fundamentals," said Russ Girling, TC Energy's President and Chief Executive.

TC Energy said its low-risk business model has consistently produced results with events such as oil price collapses being offset by others like the "shale revolution" and natural gas boom, which have made oil and gas more accessible at economical prices for export.

CEO Girling told investors the company's natural gas pipeline network had expanded across the region and was backed by even more projects like providing feed-gas for LNG exports in BC and pipelines exports from the US to Mexico.

In natural gas, TC Energy's assets include Columbia Gas Transmission from New York state to the Gulf of Mexico with an incumbent position in 1,456 trillion cubic feet of US Appalachian shale-gas resources.

The assets also include the Canadian Mainline crossing the nation to valuable eastern markets and said its Mexican natural gas network is the "backbone" of that country's infrastructure.

Girling stated that the growth opportunities include Columbia Gas expansions for US shale and the Coastal Gaslink in BC, taking Montney shale gas to the Pacific Coast for liquefaction.

The Coastal GasLink in BC is 670 kilometres (415 miles) in length and will take feed-gas from the Dawson Creek area of northern BC to facilities near the town of Kitimat where Royal Dutch Shell is leading a consortium of Asian nations to build the LNG Canada project.

"In addition to helping deliver cleaner energy to Asia, construction of this important line is projected to create between 2,000 and 2,500 jobs, generate property tax revenues and give an economic boost to communities in northern BC," said the TC Energy CEO.

"Looking forward, we continue to advance $30 billion of commercially secured projects that

Russ Girling, TC Energy CEO, explains his future strategy

will expand and extend our asset footprint across North America," added Girling.

"As those projects enter service, TC Energy expects comparable earnings before interest, taxes, depreciation and amortization (EBITDA) to exceed $10 billion in 2022," added the CEO.

"This represents an increase of more than 16 percent when compared to comparable EBITDA of $8.6 billion in 2018 despite significant asset sales that have accelerated the strengthening of the company's balance sheet," he stated.

The company already operates one of North America's largest natural gas pipeline networks with 92,600 kilometres (57,500 miles) of pipelines, 653 billion cubic feet of storage capacity and deliveries of 23 Bcf per day, or 25 percent of continental demand.

Tracy Robinson, Vice President of TC Energy and President of Canadian Natural Gas Pipelines, said the company was aiming to further connect the Western Canadian Sedimentary Basin (WCSB) to key domestic and global markets.

She noted that resource estimates in the WCSB and in Appalachia have grown significantly.

"At the same time, North American gas demand is being driven by global LNG requirements and continental power generation," she added.

"There is transformational shift in Canadian natural gas pipelines with a current investment base of $15.7Bln," she said.

This would rise to $23.4Bln in 2023 and beyond, assuming TC Energy's 25 percent ownership interest in the Coastal Gaslink LNG feed-gas pipeline to Kitimat.

This Dawson Creek-Kitimat pipeline will cost C$6.6Bln (US$5Bln) to construct and have capacity of more than 2.1 billion cubic feet per day.

"TC Energy continues to advance funding plans for this pipeline project through a combination of the sale of up to 75 percent ownership interest and arrangement of project financing, which are both proceeding as planned," the company has said. ■

UK terminal send-out hits record with LNG cargoes

Europe's largest liquefied natural gas import terminal, the UK Isle of Grain facility located southeast of London, handled its highest ever send-out of natural gas in a single day on November 13.

National Grid plc, the UK gas grid operator and regas terminal owner, said the facility sent out 698 gigawatt hours of supply into the gas grid, the National Transmission System (NTS), surpassing the previous record by more than 100 GWh.

The 698 GWh send-out represented around a quarter of UK gas demand and was enough to supply all of London and the Southeast region.

"Grain LNG is a critical part of the UK's energy infrastructure and the terminal offers market participants direct access to the UK's National Balancing Point, one of the world's leading gas trading hubs," said National Grid.

The November 13 record was part of a broader trend that has seen rising demand for capacity from key market players at the UK terminal over the last year.

The UK National Balancing Point price was last at $5.20 per million British thermal units and the Dutch Title Transfer price, the main Continental European value, was at the equivalent of $5.00 per MMBtu.

"UK gas demand is actually only slightly higher than what we'd normally see this time of year," said Nicola Duffin, Commercial Manager for Grain LNG.

"The record activity is due to a global LNG oversupply, which has seen significantly more cargos head for Northwest Europe. As a result, we've seen a sharp increase in demand for capacity at the terminal," explained Duffin.

"We expect utilisation will remain high throughout the winter and beyond. This is good news for UK consumers, who will benefit from more secure and more competitively priced gas supplies," she stated. ■

Small-scale US export ventures get permits to ship ISO containers

LNG Journal editor

The US Department of Energy has authorised two small-scale LNG export projects to ship ISO containers of the fuel overseas after being delivered by trucks to cargo vessels at various ports in the states of Alabama, Louisiana, Mississippi and Texas.

The two companies given the go-ahead are Blue Water Fuels, based in the town of Center in Texas and a subsidiary of NuBlu Energy, and a Houston-based and Delaware-registered firm called SpotX Energy.

Free trade

"Under DoE's regulations, small-scale natural gas exports are deemed to be consistent with the public interest under the Natural Gas Act," said the DoE.

Both Blue Water Fuels and SpotX have been authorized to export the LNG to nations without a Free Trade Agreement with the US.

Blue Water Fuels seeks to export 3.4 billion cubic feet per annum in ISO containers for a period of 20 years from two existing small-scale liquefaction facilities.

One facility is the NuBlu LNG plant located in Port Allen in Louisiana and owned by NuBlu Energy and from the Spectrum LNG plant located in Ehrenberg, Arizona, and owned by Spectrum LNG.

"Blue Water Fuels states that it will take delivery of the LNG at the facilities. The LNG will then be loaded into approved ISO containers and transported by truck to ports of export located in Alabama, Louisiana, Mississippi, and other states," said the DoE.

Blue Water Fuels told the DoE that it expected to begin entering into long-term sales agreements with customers worldwide.

The second exporter will be SpotX with a 20-year permit to ship 51.75 Bcf per annum in ISO containers loaded from any of 20 identified liquefaction facilities located on the Gulf Coast.

"SpotX will transport the LNG in ISO containers from the liquefaction facilities to nearby ports, where the containers will be loaded onto container vessels," said the DoE.

"It intends to export the LNG primarily to emerging markets in the Caribbean, Central America and Africa," it added.

The Houston company had requested authorization to export LNG on its own behalf and as an agent for other entities who held title to the LNG. ■

One US company supplying ISO containers for safe transportation of LNG is NJ-based Corban Energy. More ISO containers are sent to the Caribbean

Final environmental report issued for Jordan Cove project in Oregon

US energy regulators have completed the Final Environmental Impact Statement (EIS) for the proposed Jordan Cove liquefied natural project being developed by Pembina Pipeline Corp. of Canada at Coos Bay in the northwest state of Oregon.

The EIS was issued by the Federal Energy Regulatory Commission and concluded that while constructing and operating the project would result in "temporary, long-term, and permanent impacts" on the environment, many would not be significant and would be reduced to less than significant levels with mitigation measures.

"However, some of these impacts would be adverse and significant. Specifically, the final EIS concludes that constructing the project would temporarily, but significantly impact housing in Coos Bay," said the FERC report.

The regulator also stated that constructing and operating the project would "permanently and significantly impact" the visual character of Coos Bay and the surrounding area.

"The project could have a significant impact on the Southwest Oregon Regional Airport operations and further, constructing and operating the project is likely to adversely affect 18 federally-listed or proposed threatened and endangered species," it added.

The liquefaction plant and other facilities are planned for a 200-acre site and comprise five small-scale Trains each with 1.5 million tonnes per annum of output for a total of 7.8 MTPA.

The Jordan Cove venture's other facilities would include two full-containment LNG storage tanks with total capacity of 320,000 cubic metres, gas treating facilities, an export jetty and access to more than 25 billion cubic feet per day of gas supply from Western Canada and the US Rockies.

The US Coast Guard has already issued a Letter of Recommendation indicating that the Coos Bay Federal Navigation Channel would be considered suitable for the LNG marine traffic associated with the project. The plant would be visited by about 120 carriers a year. ■

Noble Energy of US makes LNG progress with Equatorial Guinea and East Med ventures

LNG Journal editor

Noble Energy of the US said it was still actively exploring a floating LNG export project using East Mediterranean resources from the Leviathan gas field offshore Israel while its LNG production venture in Equatorial Guinea in West Africa was progressing.

Noble confirmed that production decks were installed in the Leviathan field during the third quarter and first production is anticipated during December.

Capital

"The total project capital estimate has been lowered by around $150 million to $3.6 billion," said Noble in a presentation by Keith Elliot, senior Vice President for Offshore activities, to the Bank of America Merrill Lynch Global Energy Conference on November 14 in Miami Beach in Florida.

"In the East Med, we have 35 trillion cubic feet of gas in place and we are aiming to get it into the market," said Elliot.

He explained that Noble has three tranches in its expanding supply strategy for the East Med. The first is domestic demand growth in Israel as coal-fired power is shut down for environmental reasons by 2025.

The second is an increase in pipeline supplies for Jordan and Egypt and the third is LNG exports using some of the Leviathan field's 22 Tcf of resources.

Noble operates the Leviathan field and its partner is the Delek Group of Israel. Both companies recently expanded their long-term sales agreements with Dolphinus Holding of Egypt.

Both companies completed the acquisition of an interest in the East Mediterranean Gas (EMG) pipeline to deliver the volumes from Israel to Egypt.

"The acquisition of an interest (10 percent) in the EMG pipeline closed in early November 2019 and we are progressing with the FLNG front-end engineering and design," added Noble.

Equatorial Guinea LNG export jetty is at Punta Europa. It is located on the northwest side of Bioko Island in the West Africa nation

The EMG pipeline runs from Ashkelon in Israel to El Arish in Egypt.

"The mechanical integrity of the EMG pipeline was confirmed and certified by a third party," explained Noble.

"The EMG pipeline was flow-tested from Israel into Egypt, confirming sales capability," said the company.

The upgrading of the gas supply contracts with Dolphinus of Egypt meant sales volumes would rise from 1.15 Tcf to 3 Tcf of total contracted quantities.

This will comprise 2.1 Tcf from the Leviathan field and 0.9 Tcf from the Tamar field. However, Israeli competition regulators require Delek's full disposal of a 22 percent stake in the Tamar field by end of 2021.

Noble said it was also continuing to make progress offshore Equatorial Guinea with the Alen gas project to provide additional feed-gas for the West African nation's liquefaction and export plant on Bioko Island.

The company explained that the start of the Alen project for Equatorial Guinea LNG is scheduled for the first half of 2021 and is also providing the Houston-based company with "capital efficient development accessing global LNG markets" in the next couple of years.

Noble told investors that minor modifications to the Alen platform would take place and a 70-kilometre offshore pipeline would connect to the Alba gas processing facilities to deliver around 600 billion cubic feet equivalent of recoverable resources.

Noble said its future opportunities in the East Med and in West Africa include expansion of the Tamar field up to 2 Bcf per day and Leviathan to 2.1 Bcf per day.

Its plans also include the development of the Aphrodite field offshore Cyprus with 4 Tcf equivalent of gross recoverable resources.

The company also sees expansion by more than 2 Tcf equivalent of additional gross recoverable resources in Equatorial Guinea and neighbouring Cameroon. ■

Papua New Guinea starts talks on agreement for P'Nyang gas to clear away for build-out

Papua New Guinea said it was preparing to start talks with ExxonMobil Corp. and partners in one of two feed-gas projects to negotiate better terms for the government and its holdings in the development of the PNG LNG expansion.

PNG Minister for Petroleum Kerenga Kua said the discussions would cover the P'Nyang Gas Agreement following the negotiation of a better deal for the government on the Papua Gas Agreement.

"All things going well we can expect to sign a P'Nyang Gas Agreement around the end of this month," said Kua.

The P'nyang field licence, controlled by PNG LNG plant operator ExxonMobil, also includes Australian-listed Santos as well as PNG-based Oil Search.

The Papua Gas Agreement is with holders of the Elk-Antelope gas field licence, led by Total and also including shareholders in the P'nyang field lease, ExxonMobil and Oil Search.

Elk-Antelope onshore gas fields are covered by petroleum retention licence PRL15 and by the Papua Gas Agreement and the P'nyang onshore gas fields are in the PRL3 licence area of PNG. The PRL3 shareholders are ExxonMobil 36.86 percent (operator), Oil Search 36.8 percent, Santos 14.32 percent and JX Nippon 11.96 percent.

All the companies have said finalization of the P'nyang Gas Agreement and the passing of associated legislative changes are pre-requisites for launching the front-end engineering and design phase of the proposed three-Train LNG development.

A timely decision on P'Nyang Gas Project would finally remove uncertainty over the LNG expansion plans that arose after new Prime Minister James Marape came to power in May 2019 promising to win more benefits from the international oil and gas companies backing the projects.

Talks over the P'Nyang Gas Agreement were temporarily suspended after the change of government.

There was then a revision of a separate accord, the Papua Gas Agreement. This is with French energy major Total and ExxonMobil is also a party. ■