LNG Unlimited

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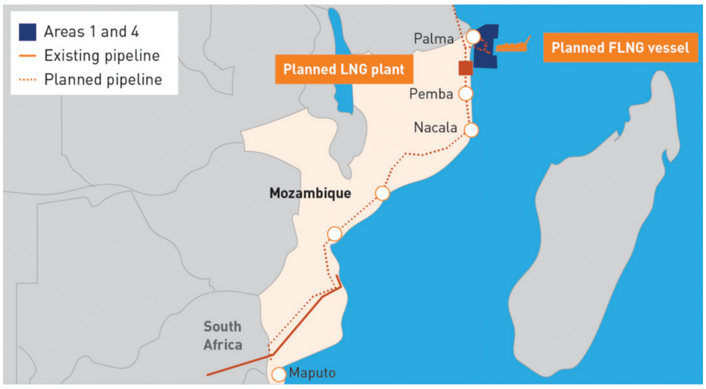
Mozambique LNG developer Eni caught in Italy's EU budget crisis

The Italian government 'severely constrains' any upside potential for Eni's credit rating

LNG Journal editor



Milan-based Eni has to help finance its LNG plants

Italian energy company Eni, the developer of LNG projects in Mozambique and other world-class natural gas ventures worldwide, has had its debt rating reduced by the main US ratings agency because of concern over Italian government debt arising from the worsening budget dispute with the European Commission.

Milan-based Eni said that US ratings agency Moody's Investors Service has downgraded Eni's long-term credit rating to "Baa1" from 'A3' as the Italian state still holds around 30 percent of the shares in Eni.

Huge investment

Eni's main current multi-billion-dollar projects are its floating LNG and onshore liquefaction joint ventures in Mozambique's Area 4 licence of the Rovuma Basin.

The Coral FLNG venture is under construction and Eni also has a large share in the onshore Mamba complex and LNG plant.

Eni is also ramping up the huge Egyptian Zohr natural gas field in the East Mediterranean that has already transformed the energy prospects of the Arab nation.

The rating action on Eni follows the downgrade on the Italian sovereign rating to "Baa3" from "Baa2" and reflected Moody's view that despite the favorable prospects for Eni, the lower Italy sovereign rating had to be taken into account.

The executive arm of the European Union has ruled that Italy's budget contains excessive spending for a country where debt is 130 percent of gross domestic product

The level of Italy's debt is more than twice the European Commission's official but rarely met budget limit for member states of 60 percent of GDP and is the EU's second-worst after Greece.

Five other major Italian companies with links to the state have also had their debt ratings reduced.

"Eni's 'Baa1' issuer rating is positioned above the 'Baa3' rating of the Italian sovereign debt to reflect Eni's standalone credit strength combined with the global scope of its upstream operations," said Moody's.

"However, Eni's rating is constrained by Italy's sovereign rating due to the degree of linkage with Italy, through the government's 30.1 percent equity holding and its ability to submit slates of candidates for the board of directors," stated Moody's.

Analysts said that Eni projects such as Coral FLNG joint venture with capacity of around 3.4 million tonnes per annum will proceed as normal to come on stream in 2022, underwritten by the creditworthiness of all shareholding companies. The onshore development project in Mozambique includes the construction of a liquefaction plant composed of an initial two large-scale Trains each with 7.6 MTPA of output for a total 15.2 MTPA of LNG production with prospects of expansion

The onshore Mamba project is expected to be sanctioned in 2019 and production is scheduled to start in 2024.

"The Baa3-stable rating for the Italian government severely constrains any upside potential for Eni's rating, and a positive rating action on Eni is unlikely in the absence of a higher rating for Italy," explained Moody's.

"A downgrade of the Italian government rating would likely lead to a downgrade of Eni's rating," said the agency.

The Area 4 consortium is formed by Mozambique Rovuma Ventures, comprising Eni 25 percent, ExxonMobil 25 percent and China National Petroleum Corp. with 20 percent.

The remaining 30 percent of shares in the licence are held in parcels of 10 percent by South Korean utility and energy company Korea Gas Corp., Galp Energia of Portugal and Mozambique's ENH. ■

UNLIMITED AGENDA

US Calcasieu Pass LNG advances on permits with much of its volumes pointed at Europe

LNG Journal editor

US regulators have released their final environmental impact statement (EIS) for the Venture Global Calcasieu Pass liquefaction and export plant and its affiliated pipeline planned for Cameron Parish and with its LNG volumes pointed at European buyers.

The Federal Energy Regulatory Commission approved the proposed project along with the mitigation measures recommended in the EIS.

Calcasieu Ship Channel has attracted several projects

Conclusion

"The FERC staff concluded that the construction and operation of the project would result in some adverse environmental impacts, but these impacts would be reduced to less-than-significant levels," said the Commission.

"This determination is based on a review of the information provided by Venture Global LNG and the TransCameron Pipeline and further developed from data requests, field investigations, scoping, research, alternatives analyses and contacts with the federal, state, and local agencies," it added. Among the LNG buyers, Spanish energy company Repsol agreed in September 2018 to buy 1 million tonnes per annum of LNG under a 20-year agreement signed with the Calcasieu Pass plant built by Venture Global, becoming the Washington DC-based developer's fifth European customer.

Repsol would purchase the cargoes on a free on board (FOB) basis after the start of commercial operations at the Cameron Parish facility.

The start-up of the planned 12 MTPA Calcasieu Pass plant, located at the intersection of the Calcasieu Ship Channel and the Gulf of Mexico, is expected in 2022.

The Venture Global plant is proposed for a 1,000-acre site along with associated facilities, including the TransCameron Pipeline.

The Calcasieu LNG project has already signed several other 20-year sales and purchase agreements, including with BP of the UK and Galp Energia, the Portuguese oil and gas company.

The project's pipeline will be 23.4 miles long and be linked-up to other intra-state and interstate natural gas connections.

Other facilities will include two full-containment LNG above-ground storage tanks, each with capacity of around 200,000 cubic metres.

A 720 megawatts electric generating plant would provide power and the largest LNG carriers would be received at the planned marine terminal consisting of a turning basin and ship berths.

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

The Mississippi River project will produce 20 MTPA of LNG and will also include small-scale liquefaction Trains, four LNG storage tanks and three marine loading berths.

Three other European companies Royal Dutch Shell, Edison SpA of Italy and Polish Oil & Gas Company are among the buyers of volumes from Venture Global's projects. ■

Exelon Corp-backed Brownsville LNG project takes its two US contractors as investors

The US Annova liquefied natural gas export project planned for the south bank of the Brownsville Ship Channel in Texas, and whose owners included Chicago-based power company Exelon Corp. is moving forward with its plans by signing up several contractors as investors.

The Annova joint venture would include six small-scale liquefaction Trains producing a total of 6 million tonnes per year of LNG, an interconnected pipeline and marine export facilities.

The Brownsville project was one of 12 ventures that the US Federal Energy Regulatory Commission issued environmental schedules for in September 2018, shortening the waiting time for permits by between up to nine months and a year.

FERC said the schedules reflected the regulator's efforts in recent months to streamline its review process for LNG project applications.

Now the Kansas-based liquefaction plant engineering company and equipment-maker Black & Veatch Corp. and Omaha, Nebraska-based construction company, Kiewit Energy Group, have both made an equity investment in the Annova project.

Both companies cited the Brownsville project's recent commercial progress as a reason for their investment.

Concurrently, Black & Veatch and Kiewit have been awarded the engineering, procurement and construction (EPC) contract for the Annova project on a joint basis.

"Black & Veatch's role in the Brownsville export facility underscores our reputation as a go-to EPC provider in the global oil and gas space," said Hoe Wai Cheong, president of the Black & Veatch's oil and gas business.

"This project aligns with our key strengths, LNG facilities and our EPC expertise," he added.

"Our long-standing partnership with Annova and Exelon on this project started from original inception through to the FEED stage," said Hoe.

He said he believed that the project would bolster the region's economic future and further position the US as a vital supplier to export markets worldwide.

"Annova LNG is pleased to welcome Black & Veatch and Kiewit as both equity investors and strategic partners that will provide unparalleled expertise in the design, engineering and construction of our LNG facility," said Omar Khayum, Chief Executive of Annova LNG. ■

OLT Offshore picks LNG tender winner for peak-shave

OLT Offshore LNG Toscana, the floating terminal offshore the Italian Mediterranean port of Livorno, has chosen the winner of a liquefied natural gas cargo tender from six offers received.

"The company that was awarded the service will provide Snam Rete Gas with a quantity of approximately 109,000 cubic metres of LNG, which will have to be discharged by December 31, 2018," said the company.

"This year the company expresses particular satisfaction with the interest of the market for the activities of the Terminal," added OLT Offshore, while declining to name the winner of the tender.

The Italian company said the peak-shaving service is one of the emergency measures established by the decree of the Ministry of the Economic Development within the emergency energy plan to cope with "unfavorable events" in the national gas system in the coming winter season.

OLT offshore operates the "FSRU Toscana", moored 22 kilometres off the coast between the cities of Livorno and Pisa and connected to the Italian national gas transmission grid through a 36.5km pipeline from the shore to the mainland operated by Snam Rete Gas.

OLT Offshore is providing the peak-shaving service for the sixth consecutive year.

At full capacity, the OLT offshore terminal can regasify 3.75 billion cubic metres per annum of natural gas, the equivalent of 2.77 million tonnes a year of LNG, or around 4 percent of Italy's annual needs.

LNG Producer-Consumer event Nagoya hears Qatar future plan

LNG Journal editor

Qatar's Al Sada (right) and US Deputy Secretary Brouillette

The seventh LNG Producer-Consumer Conference held in the Japanese city of Nagoya heard Qatar outline the positive benefits for the global trade of the production expansion planned by Qatar and of a new wave of export ventures in North America and in nations such as Mozambique.

The Japanese conference has become one of the most important non-commercial event on the LNG calendar and in recent years has attracted government ministers and senior energy industry executives to discuss market developments.

Castle venue

The 2018 conference was held at the Hotel Nagoya Castle in Japan's Aichi Prefecture and was attended by 1,200 delegates involved in the LNG industry from over 30 countries.

The Qatar Minister of Energy and Industry, Mohammad bin Saleh Al Sada, who is also Chairman of Qatar Petroleum, said that the addition of four world-class LNG processing Trains in Qatar, in addition to new facilities in the US, Canada and Mozambique, would further boost international LNG trade.

The Minister pointed out that by 2040, LNG was expected to exceed the volumes of natural gas delivered by pipeline and would make up the bulk of the gas trading sector for the first time.

He said that Qatar, with its 77 million tonnes per annum of LNG output currently accounts for around one-quarter of global LNG trade and it was pressing ahead with its plans to increase production by 43 percent to 110 MTPA.

"This production is planned to commence by 2024, thereby largely contributing to global efforts to bridge the gap between the supply and demand of LNG, which is expected to emerge starting in the mid-2020s due to demand growth," stated Al Sada.

The Qatari minister also held "friendly talks" with the US government representative at the LNG conference, US Deputy Secretary of Energy Dan Brouillette.

Earlier, host country Japan again called for buyers and sellers of LNG to rework supply contracts to remove restrictions on the resale of cargoes which the Japanese anti-monopoly watchdog ruled in June 2017 amounted to a restrictive practice.

Australian Ichthys LNG export plant finally ships first cargo

The Australian Ichthys LNG export plant, the joint venture involving Inpex Corp. of Japan and French major total, has finally begun full commercial operations by shipping its first LNG cargo from the liquefaction and export plant at Bladin Point, near Darwin.

"The first shipment of LNG departed the onshore gas liquefaction plant in Darwin in the Northern Territory of Australia enroute to the Inpex-operated Naoetsu LNG Terminal in Niigata Prefecture, Japan," said the main shareholder.

The LNG carrier "Pacific Breeze" lifted the cargo and is scheduled to arrive at the Japanese terminal on October 30.

This vessel, operated by Japanese shipping line Kawasaki Kisen Kaisha (K Line), is the world's largest LNG carrier with Moss-type spherical storage tanks and with capacity of around 182,000 cubic metres. It was built in Japan by Kawasaki especially for the Ichthys plant.

The departure of the first LNG cargo follows the project's first shipment of condensate (ultra-light crude oil), which commenced on October 1, 2018.

The Ichthys plant has a nameplate capacity of 8.9 million tonnes per annum of LNG with prospects for future expansion.

Inpex holds 62 percent of the shares in Ichthys LNG with French energy major Total the second-largest stakeholder with 30 percent.

"Following the production start-up at the end of July, LNG is currently being produced from the first liquefaction Train, with the second Train expected to start up as well in the coming weeks," said shareholder Total.

Smaller states are held by foundation customers such as CPC Corp. of Taiwan and the Japanese utilities, Tokyo Gas, Osaka Gas, Kansai Electric Power, Jera Co. Inc. and Toho Gas.

NEWS NUDGES

IMO moves on fuel

The International Maritime Organization said it had moved forward on its strategy of reducing greenhouse-gas emissions from ships with use of cleaner fuels such as LNG by approving a programme of follow-up actions on its global cap on sulfur from 2020. The IMO's Marine Environment Protection Committee (MEPC) approved the follow-up programme at a meeting in London. "The programme of follow-up actions is intended to be used as a planning tool in meeting the timelines identified in the initial IMO strategy, which was adopted in April 2018," said the IMO.

China-Total LNG deal

French energy major Total and China National Offshore Oil Corp. have signed an amendment to their existing sale and purchase agreement for liquefied natural gas supply. They have increased the contract volume from 1 million tonnes per annum to 1.5 MTPA of LNG, sourced from Total's global portfolio and have extended the term of the contract to 20 years. The first long-term contract was signed in 2008, with an annual volume of 1 MTPA for a period of 15 years.

Jerat Trading credit rating

Jerat Trading, the LNG and energy trading arm created by the merger of Jera Co. Inc. and French firm EDF Trading, has been assigned an "A" credit rating from the Japanese agency, Rating and Investment Inc. Jerat is now two-thirds owned by Jera Co. Inc. and EDF Trading holds one third of the shares.

Chart Industries posts solid results as strategy adapts to evolving LNG and industrial gases markets

LNG Journal editor

Chart Industries, the US-based global manufacturer of engineered equipment for the LNG, industrial gas and energy industries reported solid third-quarter results and said it expected more LNG project orders through 2019 as developers moved to its products.

Both the Asia-Pacific and European regions also experienced strength driven by standard tanks and LNG trailers.

Anticipate

"While we do not anticipate large LNG project orders until the first half of 2019, we do expect to receive a small LNG-related order (less than $20 million) in the fourth quarter of 2018," said Chart.

The company said its Integrated Pre-cooled Single Mixed Refrigerant (IPSMR) technology continued to be well received in the market.

"Within the quarter, a major oil and gas company completed an initial technical evaluation of Chart IPSMR LNG liquefaction technology. They have indicated that they may consider IPSMR for inclusion to compete in future LNG projects," stated Chart.

In the Energy and Chemicals division, Chart said orders in the third quarter increased 38 percent, excluding the Hudson acquisition.

"This reflects the continued strength in the United States natural gas processing market, where year-to-date we have sold equipment to 28 cryogenic gas plants in the West Texas Permian and Marcellus Basins," it added.

"Additionally, in the third quarter, we received $3.3M of orders for an on-ship boil off gas re-liquefaction system," said Chart.

Net income from continuing operations for the third quarter of 2018 was $21.5 million or $0.65 per diluted share, excluding $700,000 of income from discontinued operations, compared with loss of $600,000 in the year-ago quarter.

Demand for small-scale LNG plants is increasing

Sales of $272M grew 34 percent organically over the third quarter of 2017, on a continuing operations basis, driven by strength in natural gas processing and US packaged gas.

"During the third quarter of 2018, we announced the completion of our strategic review of the oxygen-related products with a definitive agreement to sell CAIRE Medical to NGK Spark Plug Co. for $133.5 million, a gain on the sale," said Chart.

Outside of quarterly activities, Chart also signed an agreement to acquire Italian company VRV S.p.a., an engineer and designer of cryogenic equipment that will complement Chart's own offerings.

VRV, located near Monza, northeast of Milan, is a family-led business and was established in 1956 with two divisions, the Cryogenic division and the Energy & Petrochemical unit.

The Italian company is one of Europe's leading niche manufacturers of pressure equipment for the cryogenic, petrochemical, refining and energy industries.

Chart agreed to pay 125 million euros ($147M), which will be funded by a combination of Chart's available cash in hand and credit and will also assume VRV's outstanding debts of up to $83M.

"The VRV acquisition is expected to add initial annual net sales of $120M, achieve significant cost synergies related to operational efficiencies and sourcing and close in the fourth quarter of 2018," said Chart in its earnings statement.

To support these strategic moves as well as Chart's expanded focus on geographic expansion outside of North America, the company said it was realigning its divisions.

It now reports its results in Energy & Chemicals (E&C), Distribution & Storage Western Hemisphere (the Americas; D&S West), and Distribution & Storage Eastern Hemisphere (Europe, Middle East, and Asia including China; D&S East).

The CryoBiological product line that previously was reported through BioMedical and is not included in the pending sale of CAIRE is reflected in the D&S West segment

"The sequential gross margin as a percent of sales improvement in our continuing operations reflects the execution on our right-sizing efforts that have continued throughout 2018," stated Chief Executive Jill Evanko.

"Coupling those efforts with our recent launch of the 80/20 process in D&S West, we expect further margin expansion in 2019," added Evanko.

Italian truck maker claims LNG record from UK to Madrid

LNG Journal editor

A liquefied natural gas -powered truck built by Turin-based Italian truck and bus maker IVECO said one of its vehicles had broken the European record for travel on a single LNG tank from the UK to the Spanish capital Madrid.

The IVECO Stralis NP (Natural Power) 460 horsepower truck set off from London and, after the short sea crossing from Dover to Calais, completed the 1,728 kilometres road journey to Madrid without needing to refuel, exceeding the vehicle's official range of 1,600km to set a new distance record.

Diesel comparison

"This equates to an impressive LNG fuel cost saving of circa 228 euros ($260) for the outward journey, or 40 percent, versus the comparable cost for diesel fuel," said IVECO.

IVECO, a brand of the CNH Industrial group listed on the Milan and New York stock exchanges, last year accomplished an almost similar LNG-powered journey.

A 400hp Stralis NP truck completed the 1,347km journey from the far north of the UK to the far south - John O'Groats to Land's End - on a single fill-up.

"Despite the heavy traffic on the UK side of the English Channel, a strong head wind in France and the hilly Spanish section of the route, the Stralis NP recorded an impressive average fuel consumption of 22.6 kg per 100 km," said IVECO parent company CNH.

"Prior to the trip, IVECO carefully planned the journey using MyBestRoute: a web-based application developed by Michelin for Stralis NP customers," it explained.

"It allows drivers and fleet managers to select the optimum route for any European journey, including plotting LNG refueling stations and estimating the total cost of the trip for both diesel and natural gas-powered trucks," added CNH.

The Italian company said the journey demonstrated that natural gas is a viable, realistic, safe and cost-effective alternative to diesel, available from a growing network of fuel providers in the UK and across Europe.

"Compared with an equivalent Euro VI diesel, a Stralis NP running on LNG emits around 90 percent less nitrogen dioxide emissions, 99 percent less particulate matter and up to 15 percent less carbon-dioxide," the company added.

IVECO noted that it was the first commercial vehicle manufacturer to look at the potential of natural gas in 199, allowing the company to develop a full range of natural gas trucks, vans and buses.

Currently, more than 25,000 IVECO gas-powered vehicles have been delivered into service. ■

IVECO Stralis truck covered 1,728 kilometres without fill-up

Pavilion charters two more LNG ships from BW to expand trade

Pavilion Energy of Singapore and its shipping partner BW Group have signed an agreement for Pavilion to charter two more LNG carriers, each with capacity of 173,400 cubic metres and scheduled for delivery between 2019 and 2020.

The vessels will be used to enable wider distribution of Pavilion's volumes of LNG as the Asian city-state company increases its trading activities.

Pavilion, owned by the Singaporean wealth fund Temasek, already operated two carriers from the BW shipping line, the "BW Pavilion Vanda" and the "BW Pavilion Leeara".

"The long-term charters of these MEGI newbuilds from our long-standing shipping partner BW will strengthen Pavilion Energy's global LNG trading activities, especially on long-haul voyages from Atlantic liquefaction plants to Singapore and Asian markets," explained Frederic Barnaud, Group Chief Executive of Pavilion Energy.

"This will reinforce our already strong Asian LNG supply and trading strategy to connect markets and supplies regionally and globally," added Barnaud.

Yngvil Asheim, Managing Director of BW LNG, said, the shipping company remained committed to its partnership with Pavilion.

"The vessel design incorporates BW LNG's many years of LNG experience and we look forward to further serving Pavilion Energy's need for safe and efficient transport," added Asheim.

The companies said the two vessels are also equipped with the M-type, electronically controlled, gas injection (MEGI) propulsion system.

Indian LNG imports rise for seventh month cargo costs rise to $4.9Bln

LNG Journal editor

Indian LNG imports rose 3.2 percent in September, the seventh straight month of increases as shipments were received from nations such as Qatar, Angola and Nigeria, while the costs of the cargoes also continued to rise for the Asian nation and amounted to about $800 million last month.

The 'Sonangol Sambizanga' delivered in September

LNG deliveries to India's three main import terminals at Dahej, Hazira and Dabhol near the West Coast port of Mumbai in September amounted to 1.71 million tonnes (2.35 billion cubic metres) compared with the 1.66MT logged in September 2017.

Momentum

The imports totalled 10.41MT for the first six months of the fiscal year from April to September, a rise of 15.4 percent compared with the 9.02MT of shipments received in the corresponding period of the previous fiscal year, according to the figures from the Indian Ministry of Petroleum and Natural Gas.

The figures showed that September LNG shipments cost India around $800M versus $600M in the same month of 2017.

On a cumulative basis, the cargoes cost $4.9 billion for the April-to-September period compared with $3.1Bln in the same six months of the previous fiscal year.

The August LNG imports had amounted to 1.70MT versus 1.55MT in the same month of 2017, an increase of 9.9 percent.

The government figures show that imports of the fuel have risen for seven consecutive months of the calendar year since March 2018 after they had declined by 1 percent in February.

The imports rose as India's own natural gas production decreased in September to 2.68 billion cubic metres, which was 1.4 percent lower than in September 2017.

The cumulative domestic production of natural gas was 16.25 Bcm for the six months of the fiscal year to September, down 1.0 percent from last year.

The Dubai-Kuwait-India index price for September LNG cargoes in the spot market quoted in Singapore averaged about US$10.95 per million British thermal units in September, higher than long-term contract prices.

The latest Indian LNG import figures were released as the energy company owned by the Indian West Coast state of Gujarat inaugurated its Mundra import terminal and one of the shareholders, the Adani Group in India, signed an LNG cooperation agreement with French energy major Total.

ABS approves LNG deepwater production hull from Hyundai yard in South Korea

The American Bureau of Shipping, the US maritime classification society, has granted approval to a deepwater floating liquefied natural gas production hull designed by Hyundai Heavy Industries of South Korea.

The US class society said the FLNG hull design is based on that of a conventional LNG carrier, combined with the requirements of FLNG production, such as structural reinforcements to take topside module loads and with an operational lifespan of 25 years without dry-docking.

"ABS is the market leader in the classification of offshore drilling and production units, including FLNG vessels, with more than 150 floating oil and gas facilities in the ABS-classed fleet," said ABS Vice President Global Gas Solutions, Patrick Janssens.

"We have partnered in leading innovation in the offshore sector for 60 years, and we are proud to enable this latest advanced deepwater FLNG Hull approach from HHI," stated Janssens.

ABS explained that Hyundai had developed a technically feasible FLNG hull approach, combining the latest industry trends with first-class shipbuilding practices and ABS rules.

A low-cost South Korean Near-Shore FLNG Hull was successfully developed and achieved ABS Approval in Principle in 2017.

ABS said the same team from HHI and ABS has now worked to deliver this harsh environment Deepwater Hull to meet increasing market demand.

"In the current emerging gas market, a ready-to-convert offshore FLNG hull, with ABS certification, at affordable capital expenditure is an important product for monetization of gas reserves around the globe," said Hyungkwan Kim, Executive Vice President at the HHI Shipbuilding Division.

LNG Canada faces federal regulatory hearing on new claims about TransCanada pipeline

LNG Journal editor

The Canadian National Energy Board (NEB) has decided to consider a jurisdiction claim by environmentalists that pipeline company TransCanada Corp. needs more than British Columbian provincial permits to build the Coastal GasLink feed-gas supply line for the Royal Dutch Shell-led LNG Canada project.

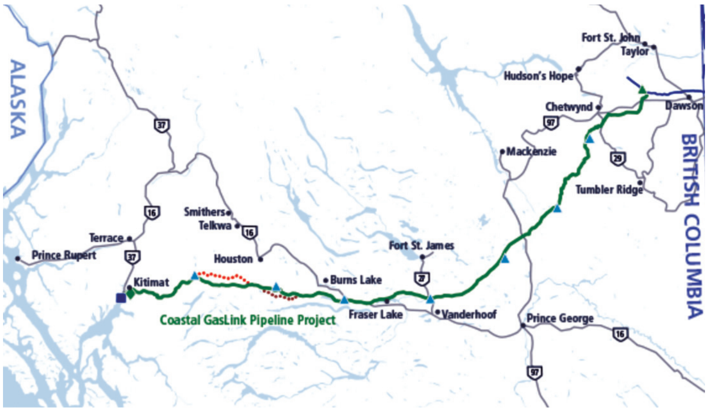
Shell and its Asian partners had decided earlier in October to go ahead with the LNG Canada joint venture costing tens of billions of dollars.

Coastal GasLink

The environmental activists are challenging TransCanada's US$5-billion Coastal GasLink pipeline of 670 kilometres that will transport shale-gas from northeast BC to the proposed liquefaction plant near Kitimat.

The NEB decision included invitations to all Canadian provincial and federal attorneys general to participate in reviewing jurisdictional issues surrounding the project.

"The Board has determined that there is a 'prima facie' case



Coastal GasLink to run from northeast BC to Kitimat

that the Project may form part of a federal undertaking and could be subject to regulation under the NEB Act," said the NEB ruling.

"In reaching its conclusion that there is a 'prima facie' case with respect to jurisdiction over the Project, the Board considered several factors," it added, including the expressed expectation that the proposed Coastal GasLink pipeline project would connect to the Nova Gas Transmission Ltd. (NGTL) system (a federally-regulated pipeline) in the future.

The Coastal GasLink and LNG Canada have been operating with approvals by the BC Oil and Gas Commission and BC Environmental Assessment Office. Analysts said the opening of a new federal review process in Ottawa has the potential to add years to the regulatory approval process for LNG Canada.

Shell and its four partners, Mitsubishi Corp. of Japan, Malaysian energy company Petronas, Chinese major PetroChina and Korea Gas Corp., had agreed in early October 2018 to start the immediate construction at a cost of up to US$31Bln of the plant and its associated facilities, with completion scheduled before 2025.

The liquefaction plant is to be constructed at a brownfield site near Kitimat that had been an energy products terminal before being acquired by Shell in October 2011.

The plant itself is expected to cost around US$11Bln using modular construction methods and will have two large liquefaction Trains initially, with each producing 7 million tonnes per annum of LNG. The plant would then be expanded.

Additional costs of up to US$20Bln will include feed-gas supplies for TransCanada's Coastal GasLink and other facilities.

LNG Canada already holds a 40-year export licence from the NEB for exports of domestic gas overseas, though further final permits are required.

The Shell-led project is working closely with the Haisla First Nation whose traditional lands are in the Kitimat coastal region.

Each shareholder in LNG Canada will individually offtake and market its own LNG.

Shell's Groundbirch Natural gas asset in northeast BC will provide the majority of Shell's equity share of feed-gas. Shell said it could also buy feed-gas from the market, depending on which option provides the most value. ■

Canadian Woodfibre LNG project expects construction first phase to commence in first quarter of 2019

Canadian Woodfibre LNG President David Keane said the small-scale liquefaction and export venture proposed for the district of Squamish in British Columbia was expected to move to the construction phase in the first quarter of 2019.

"We're hoping to move to a notice to proceed to construction in the first quarter of 2019," said Keane. "It will be sometime in February or March," he added.

The project is backed by Indonesian businessman Sukanto Tanoto and his Singapore-based Pacific Oil & Gas Ltd, part of the Royal Golden Eagle Group and has full regulatory permit approvals in place.

The liquefaction plan will be built on the site of a former pulp mill at Squamish, north of Vancouver, and is licensed to export more than 2 million tonnes per annum of LNG for 40 years.

The relatively small-scale project is expected to export cargoes when commercial operations start in about four years' time.

Woodfibre has already chosen US energy project construction company KBR Inc. for the engineering work. The selection of KBR for the engineering phase followed the completion of a competitive front-end engineering and design tender process.

Keane said the project was advancing and was working with contractor KBR on reducing costs.

Woodfibre has additionally recently signed a preliminary supply deal with a subsidiary of the largest Chinese LNG importer, China National Offshore Oil Corp.

The Woodfibre President has been in his post since August 2018 and was previously the Chief Executive of the BC LNG Alliance, an industry lobbying group backed by major energy companies.

Prior to taking that position, Keane was with BG Group of the UK for 10 years, serving as Vice President of Corporate Affairs.

Keane noted that Woodfibre was moving to finalize its benefit agreement with the local Squamish First Nation. That accord has been initialed, though needs to be formally signed by the First Nation council. ■