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Jordan Cove LNG project revived in latest battle for permit in Oregon

Venture back on FERC agenda after design changes and Japan supply deals

Our North America editor


Elizabeth Spomer is CEO of Oregon's Jordan Cove LNG

Jordan Cove LNG, the Canadian-run export project for the US northwest state of Oregon, has been given permission by the US Federal Energy Regulatory Commission to file a new application with an amended design that is expected to improve its chances of being approved.

The new filing with the FERC followed project design changes by the developer, Veresen Inc., based in Calgary, Alberta, to improve the overall plans.

Feedback

"Through feedback from stakeholders and extensive engineering work, we have designed a more efficient facility that does not require a power plant, and will reduce overall environmental impacts," Veresen said.

Jordan Cove has now formally removed its proposal to construct a 420-megawatt power plant adjacent to the facility planned for Coos Bay.

Veresen said that removing the power plant from the plan results in a facility that can be more efficiently and effectively operated with a smaller infrastructure footprint.

The Canadian company has Elizabeth Spomer as President and Chief Executive of the Jordan Cove LNG project and the affiliated Pacific Connector Gas Pipeline.

Spomer is a former senior LNG executive at BG Group of the UK who retired from the company before it was taken over by Royal Dutch Shell.

The FERC letter confirming the re-launch of the project was sent as a reply to Spomer's notification of re-filing.

"As stated in your letter, Jordan Cove intends to construct and operate an LNG export terminal at Coos Bay, Oregon," said the FERC in outlining the revised plans for Jordan Cove.

"The terminal would consist of a gas processing plant, liquefying equipment, two storage tanks, a transfer line, loading platform, marine berth and access channel," the FERC noted.

Jordan Cove will also have a planned capacity to liquefy about 7.8 million tonnes per annum of LNG, an increase from the previous 6 MTPA, "for export to markets across the Pacific Rim," according to the details revealed by FERC.

The US regulators had initially rejected the project in early 2016 citing a "lack of market support" as it had failed to sign any capacity agreements.

It subsequently did so. In March 2016 it signed a deal with Japan's JERA Co. Inc., a joint venture between Tokyo Electric Power Co and Chubu Electric, Japan's two largest importers of LNG cargoes.

It then signed a preliminary 20-year accord in April 2016 with the Japanese trading house Itochu Corp.

The two Japanese agreements give the Jordan Cove venture additional fire power for the approval process in addition to the revised design plans.

Infrastructure

Jordan Cove's affiliated Pacific Connector project also plans to construct and operate a 233-mile pipeline.

"It would originate at interconnections with the existing systems of the Ruby Pipeline and Gas Transmission Northwest near Malin, Oregon, and end at Jordan Cove's terminal at Coos Bay," the FERC noted.

"The pipeline would be capable of transporting about 1.2 billion cubic feet per day of natural gas," it added.

Associated with the pipeline would be the new Klamath compressor station at the eastern starting point near the town of Malin, along with metering facilities. ■

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Swiss-based International Standards body publishes requirements for LNG fuel bunkering

Our Europe editor

The Geneva, Switzerland-based International Standards body has published its new ISO 20519 standard for ships and marine technology relating to bunkering of liquefied natural gas-powered vessels.

The ISO said its requirements will help operators select vessel fuel providers that meet defined safety and fuel quality standards.

IGC Code

According to a statement from the Swiss body, ISO 20519 contains requirements that are not covered by the IGC Code, the prevailing international code for the safe carriage by sea of liquefied gases in bulk.

The working group for ISO 20519 included specialists from the maritime industry, equipment manufacturers, the Society for Gas as a Marine Fuel (SGMF), trading companies, class societies, international registries and the US Coast Guard.

ISO 20519 was produced at the request of the International Maritime Organization (IMO), the European Commission and the Baltic and International Maritime Council, the world's largest international shipping association.

Ships can take on LNG from trucks or other vessels

"This sharing of knowledge was important to produce a standard that was both practical and would promote safety during LNG bunkering operations," the ISO said.

"In recent years, the ships and vessels fuelled with LNG have become larger, transit greater distances and may bunker in a greater number of ports in different countries," the report said.

"As a result, the number of parties involved in LNG bunkering is growing rapidly," the ISO noted.

"Standardizing safety practices had become necessary to ensure that, no matter where the bunkering took place, there would be a common set of requirements that were understood across the board - from LNG provider to ship personnel," the ISO said.

The ISO 20519 requirements include: liquid and vapour transfer systems, operational procedures, requirement for the LNG provider to provide an LNG bunker delivery note, training and qualifications of personnel involved and requirements for LNG facilities to meet applicable ISO standards and local codes.

"The requirements of ISO 20519 can be incorporated as a management objective into existing management programmes and provide verifiable compliance," explained Steve O'Malley, Chairman of the technical committee ISO-TC 8 and convener of the working group that developed the standard.

"The requirement to comply with ISO standards is often incorporated into business contracts and may also be referenced by local regulations," O'Malley added.

The use of LNG as a vessel fuel is relatively new, so the standard is brought up to date periodically to incorporate lessons learned over time and technological changes.

To facilitate this, a group was created to track LNG bunkering incidents and help identify when the standard should be updated.

Egypt holds ceremony to hand BP stake in huge Zohr gas field that will change LNG market

The chief executives of Italian energy company Eni and UK major BP have held a signing ceremony with the Egyptian government in Cairo, completing the sale of a 10 percent stake to BP for around $500 million in the "supergiant" Zohr field that will impact regional LNG trading when it comes on stream in late 2017.

The ceremony included Eni CEO Claudio Descalzi, his BP counterpart Bob Dudley, Egyptian Prime Minister Sherif Ismail and Minister of Petroleum Tarek El Molla.

It involved the signing of a deed giving BP its share in the Zohr field, part of the Shorouk licence concession, following an initial agreement made in November 2016.

Eni currently holds a 90 percent stake in the licence, though Russian oil company Rosneft has agreed to acquire 30 percent of Eni's licence shareholding, subject to the Egyptian governmental approval.

The Zohr field when it comes on stream in late 2017 will affect regional LNG markets, especially for main player Egypt which was once an exporter and now imports LNG cargoes.

Egypt has two Floating Storage and Regasification Units deployed at the port of Ain Sokhna in the Gulf of Suez to import cargoes and satisfy natural gas demand.

During 2016, Egypt took delivery of almost 100 LNG cargoes from the spot and short-term market and it recently announced the result of a tender to buy a further 45 cargoes in the months ahead.

The Zohr field was discovered by Eni in August 2015 and is the largest offshore natural gas field in the East Mediterranean, with minimum resources in place of 30 trillion cubic feet and potentially much more.

Eni said it also confirmed to the Egytian government that the Zohr field would start production before the end of this year.

"Claudio Descalzi has been received by President Abdel Fattah el-Sisi. The meeting follows the one held in January during which Eni's CEO confirmed that the development of Zohr is progressing very quickly, having been fast-tracked, and that the start of production is confirmed for 2017, just two year after the discovery was made," Eni said.

In Egypt, Eni and BP are also partners in the Nooros field, discovered in July 2015 in the Nile Delta and which is already producing about 25 million standard cubic metres per day.

They are also awaiting the coming on stream of the Baltim SW field discovered in Egypt in June 2016. The start-up of Baltim SW is expected in 2019.

Norway-based compressors company supplies Cameroon project

Tamrotor Marine Compressors, the Norway-based equipment supplier, was awarded a contract by Golar LNG to supply a compressed air system to the former conventional carrier "Hilli" being transformed into a floating liquefaction production hull in Singapore.

The Hilli FLNG vessel will produce LNG when eventually deployed in a venture offshore the West African state of Cameroon.

The conversion work on the "FLNG Hilli" is being carried out at the Keppel Shipyard in Singapore.

The former carrier with Moss-type storage tanks was delivered in 1975 and was laid up by Golar before the market developed for FLNG production vessels.

Compressor company TMC said the scope of its work on the "FLNG Hilli" project, the contract value of which is undisclosed, includes the manufacturing and delivery of seven 365 kilowatts (kW) "Smart Air" compressors to be installed on board.

"Golar LNG's life-of-field approach to the on-board compressed air system will enable them to significantly reduce both energy costs and harmful emissions," said Per Kjellin, Managing Director of TMC.

"This type of thinking contributes towards making offshore field developments even more economically viable, so we are proud to be part of this project," added Kjellin.

"The 'FLNG Hilli' is a big installation that requires major compressor power," said the TMC CEO.

"Only compressors that are specially designed and built for marine applications can deliver the required reliability," he said. ■

Origin Energy posts wider first-half losses even as 45 LNG cargoes are delivered to Asia customers

Our Asia-Pacific editor

Curtis Island plant ships cargoes to China and Japan

Australia Pacific LNG plant stakeholder Origin Energy, which recently took a charge of US$1.45 billion as a write-down mainly on APLNG, has posted earnings showing wider fiscal first-half losses.

The Australian upstream coal-seam gas producer with additional utility and energy interests said first-half losses amounted to A$1.67 (US$1.28Bln) compared with a loss of A$254 million in the same six months of fiscal 2016.

Assessment

"APLNG has performed its own impairment assessment at 31 December 2016 and determined that an impairment of US$2.88Bln (A$3.92Bln) pre-tax should be recognised," said Origin.

Origin and LNG plant operator, the US major ConocoPhillips, each own 37.5 percent of the APLNG facility on Curtis Island, near the Queensland port of Gladstone, and Chinese energy company Sinopec is also a shareholder, owning the remaining 25 percent.

"As a result, the Group has taken up its 37.5 percent share (A$1.03Bln post-tax) of the impairment recognised by APLNG," it said in its earnings statement.

The Sydney-based company said APLNG continued to increase production. During the earnings period, 45 LNG cargoes were loaded and shipped to Asian customers, including long-term contract holders Sinopec and Kansai Electric of Japan.

"Accelerating debt reduction continues to be a key priority for Origin, with adjusted net debt targeted to be well below $9Bln by the end of the 2017 financial year," said Chief Executive Frank Calabria.

"Upon completion of the expected sale via initial public offering of the conventional upstream assets, Origin expects a further material reduction in debt," the CEO added.

Origin's overall group revenue increased in the fiscal first-half to A$6.32Bln compared with A$6.13Bln in the same period of the previous year.

The Integrated Gas division reported a $305M increase in underlying gross earnings to $442M and APLNG production increased by 76 percent with the start-up of exports from the second liquefaction Train.

"Train 2 revenue recognition commenced in November 2016, following the commencement of exports from that Train," Origin explained.

The Energy Markets division, including sales of gas and electricity and CSG to other LNG producers, reported underlying earnings of $734M, little changed from a year ago.

"While the market remains competitive, Origin's total customer accounts increased by 17,000 and churn was stable," the company said.

"The volume of gas sold to business customers, including LNG projects, increased by 24 percent. Origin also maintained a competitive cost of gas supply despite a reduction in the benefits of ramp gas compared to the prior period," it added.

"In Integrated Gas, completion of Australia Pacific LNG was a standout achievement. This, along with first gas from the Halladale and Speculant fields in the Otway Basin, delivered a significant increase in production," it said.

"During the period, Origin announced an intention to sell via IPO its conventional upstream assets and we are on track to complete this transaction in 2017.

"Other important developments included continued progress on asset sales and installation of a new leadership team, which earlier this week was bolstered by the appointment of Lawrie Tremaine (from Woodside Energy) as Chief Financial Officer," the company said.

Origin Chairman Gordon Cairns said the Board had decided not to pay a dividend in respect of earnings for the first half of the 2017 financial year.

"The board will continue to review each dividend decision in light of our focus on debt reduction," Cairns added. ■

"Accelerating debt reduction continues to be a key priority for Origin"

- Frank Calabria, Chief Executive, Origin Energy

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NEWS NUDGES

Cove Point LNG makes progress

The US Cove Point LNG export project in Maryland, owned by Dominion Energy, is almost 75 percent complete, according to the latest progress report filed with the Federal Energy Regulatory Commission. The existing import terminal on Chesapeake Bay is being transformed into a liquefaction plant and is scheduled to come on stream in 2018. “At the terminal, work continued on modifications to the existing plant in the areas of the jetty platforms and tie-in scope,” said Dominion. “Construction activities conducted during the January period included preliminary commissioning activities for new compressor units and associated equipment, final building completion activities, and earthwork for corrosion protection and electrical grounding,” it added.

Awilco LNG earnings

Awilco LNG, the small Norwegian fleet operator in the spot market, said the positive trend seen in the fourth quarter of 2016 persisted into 2017 as charter rates West of Suez further improved to $52,000 per day while East of Suez rates was reported at $38,000 per day. “Despite high activity and increasing spot market rates, the short-term and mid-term time charter rates have only slightly improved,” said Awilco as it reported lower full-year freight income of $34.8 million compared with $37.4M in 2015.

Golar raising market funds

Golar LNG, the global LNG fleet operator and floating storage and regasification unit specialist, is raising up to $400 million by selling a form of bond, Convertible Senior Notes due in 2022. Golar is offering $350M of the paper in a private placement to institutional buyers and with $52.5M added, depending on demand. ■

Japanese-French joint venture takes delivery of first LNG bunkering ship

Our Europe editor

Zeebrugge will be the home port of the vessel built in Korea

The French energy company Engie has taken delivery of a joint venture bunkering vessel to be based at the Zeebrugge liquefied natural gas import terminal in Belgium to lead the development of the LNG fuel market for shipping.

The vessel called “Engie Zeebrugge” is owned by the France-Japan bunkering venture set up in 2016 and which also has the Japanese trading house Mitsubishi Corp. and Japan’s NYK Line shipping company as shareholders.

Korean-built

The LNG bunkering ship was built at the Hanjin Heavy Industries and Construction Company shipyard in the port of Busan in South Korea.

“She will run on LNG for her maiden voyage, after a few days of loading LNG delivered by trucks at the shipyard,” the owners said.

Engie, Mitsubishi and NYK have set up a marketing company called Gas4Sea to develop the LNG fuel market in northwest Europe and elsewhere.

The 5,000 cubic metres capacity “Engie Zeebrugge” will use Zeebrugge in Belgium as its home port and operations will also involve the LNG terminal owner, Fluxys of Belgium.

Two LNG-fueled ferries operated by United European Car Carriers will be the first customers of the Zeebrugge bunkering ship.

The vessel will take on LNG at the Zeebrugge terminal where carriers deliver shipments from Qatar and elsewhere and where docking is also provided for small-scale tankers supplying the regional market on a break-bulk basis.

“Under the Gas4Sea brand, the three partners intend to support the development of LNG as a marine fuel, thus contributing to an environmentally friendly maritime industry,” the companies added.

“As international regulations on emissions for ships tighten, LNG is expected to become an important alternative fuel,” they said.

“Currently, the bunker market amounts to approximately 250 million tons of heavy fuel oil per year. The challenge in making LNG grow in the bunker market is to develop sufficient supply infrastructure to support the increasing number of LNG-fueled ships that are expected to come into operation,” the companies stated. ■

Norwegians plan to convert platform vessels into small-scale LNG fleet

Cryo Shipping AS, a company based in the Norwegian port of Bergen, said it had developed a new type of small-scale LNG carrier and bunkering ship through converting offshore industry vessels.

Cryo Shipping aims to become one of the largest LNG feeder and bunker operators with its fleet of conversions.

“The company aims to establish a fleet of flexible and efficient small-scale LNG tankers to be able to secure supply of LNG to consumers regardless of location,” said Nicholai H. Olsen, managing director and partner of Cryo Shipping.

“The ships will be able to perform both feeding and ship-to-ship (STS) bunkering operations in all types of waters and ports,” Olsen explained.

“We are working on projects to convert platform supply vessels into LNG tankers which should be in operation by the first half of 2018,” said Olsen.

“We have designed the LNG system by using known technology, but combined in a new way.

“We have also developed design for newbuildings with completely new and unique functionality that we aim to contract when our portfolio can meet the investment,” he added.

Cryo Shipping noted that by 2020 the expected numbers of LNG-powered ships was expected to rise to around 1,000.

“Today LNG logistics are predominantly done by road transport - giving costly logistics with high environmental and socioeconomical impact,” the company said.

“The few small-scale LNG tankers that exist are not designed to meet regular supply requirements in a growing LNG market.

“Use of LNG storage bunkering facilities will result in congested traffic at storage facilities and harbours and we therefore focus on providing direct STS bunkering both at port, anchor and at sea,” said Cryo Shipping. ■

Spanish natural gas network operator and LNG terminal owner Enagas sees demand surge

Our Europe editor

Huelva facility supplies southwest Spain with regasified LNG

Enagas, the Spanish natural gas transmission network operator and LNG terminal owner, posted a small increase in annual net profits as the nation's demand rose for a second consecutive year and more winter LNG cargoes were imported.

Enagas said profits for 2016 came in at 417.2 million euros ($443 million), which represents an increase of 1.1 compared with the previous year.

The Madrid-based company has four fully owned LNG regasification terminals in Barcelona, Cartagena, Huelva and Gijon.

Re-loads

It also has 50 percent of the Bahía Bizkaia Gas (BBG) plant in Bilbao and 72.5 percent of the Saggas terminal in Sagunto. All of them have the necessary technology for the unloading and reloading of carriers, which allows the company to reinforce the supply structure in Spain.

"So far in 2017, national demand for natural gas has grown 20 percent compared to the same period in 2016 due to the effect, among others, of the cold wave.

"On January 19, gas demand reached a record figure last recorded in February 2012, which was exceeded by meeting all demand due to the role of underground storage and regasification plants," said Enagas.

The network operator said demand for natural gas for gas-fired electricity generation so far in 2017 is up by 32 percent, which "highlights the fundamental role that natural gas plays" in guaranteeing power supplies.

Spanish demand for natural gas in 2016 grew by 2.1 percent compared with 2015, reaching 321,495 gigawatt hours, representing a second successive annual increase.

"This growth was mainly driven by industrial demand - the main consumer of natural gas - which rose 3.3 percent, in line with the evolution of the economy, and the growth in domestic demand, which increased by 3.2 percent," Enagas said.

Over the next three years, the company forecasts gas demand in Spain growing at around 3.5 percent a year, mainly due to the improvement of the economy and a greater penetration of gas in the energy mix.

British Columbia Premier praises First Nation deals from LNG plants

British Columbia Premier Christy Clark said benefit deals linked to LNG projects signed with two native North American First Nations were a milestone for the natural gas future of the Canadian province.

The provincial government said the Lax Kw'alaams and Metlakatla First Nations had reached multiple agreements "to ensure benefits accrue" as a result of the construction and operation of an LNG export industry in the Prince Rupert port area.

"Building this new industry is an unprecedented opportunity to create jobs and economic prospects for British Columbians and these agreements ensure members will directly benefit from the industry's growth," said Premier Clark.

The BC government said there were three key components: an LNG benefits agreement, a coastal fund benefits agreement and a pipeline benefits agreement.

"The LNG benefits agreement provides financial benefits including a trust fund and capital for road improvements and infrastructure," BC said.

"Upon Pacific NorthWest LNG's final investment decision, a predetermined amount of funds will be released from the trust, with the remaining balance available once facility construction begins," the province added in reference to a joint venture led by Malaysian energy company Petronas.

"A total of 1,942 hectares of Crown land will also be transferred to the Lax Kw'alaams as part of the benefits detailed in the agreement," it added.

The coastal fund agreement defines ongoing benefits during export operations, including those linked to PNW LNG and any additional LNG export facilities that may be built in the Prince Rupert area. ■

Plan for floating LNG hub to serve north Greece and Bulgaria advances

Our Europe editor

GasLog Ltd, the shipping line based in Monaco with a fleet of 27 LNG carriers, said progress had been made with the plan for a liquefied natural gas import hub offshore the northern Greek city of Alexandroupolis to serve customers in both Greece and Bulgaria.

The project company is called Gastrade and is Greek owned. It proposes to use a floating storage and regasification unit (FSRU) alongside onshore and offshore infrastructure.

GasLog said it had now closed the sale and purchase agreement to acquire a 20 percent shareholding in Gastrade, which has received a licence to develop an independent natural gas system offshore Alexandroupolis, the capital of the Evros area in the northern Greek region of East Macedonia and Thrace.

The northern Greek floating LNG and natural gas hub was first announced as a viable joint venture involving GasLog in December 2016, though Gastrade, a company incorporated in Greece, has been involved in the development of this FSRU project over a number of years.

US exports are expected for GasLog-backed project

The front-end engineering and design study is expected to be part-funded by a European Union grant, and is scheduled to commence in the first half of 2017.

It has been assigned the status of an EU Project of Common Interest (PCI) and designated as a priority EU energy infrastructure project.

Gastrade said it was currently in discussions with a number of additional potential investors, including DEPA, the Greek state-owned gas company, and Bulgarian Energy Holding, owned by the Bulgarian Ministry of Energy. "Other large-scale international companies have expressed an intention to participate in the ownership and development of the terminal," said GasLog.

"A number of companies have also expressed interest in supplying LNG to the project," it added.

"This FSRU project would provide a new route and a vital source of gas diversification to a number of countries that are currently highly dependent on pipeline gas in South East and Central Europe," said GasLog, which is also Greek owned under Chairman Peter Livanos. ■

Japanese focus on large US volumes set to head their way from 2020

Japanese energy companies are now focusing on the total of 60 million tonnes of LNG volumes becoming available on the Gulf Coast and Atlantic Coast of the US from 2020, with many of the cargoes pointing at Japan.

"American LNG will contribute to diversification of procurement LNG pricings," according to a new report from Tetsuo Morikawa, a senior economist at the Institute for Energy Economics in Japan.

"The first shipment of US LNG from the Lower 48 arrived in Japan on January 7," the report noted.

"The spot LNG price, which jumped to the mid-$9 range per million British thermal units in mid-January, came down to around $8 in the latter half of the month," the report said.

"This was due to the passing of peak winter spot procurement and the restart of Gorgon LNG Train 1.

"As there is still an oversupply of LNG, the spot price could tumble in the coming months," said Morikawa, while looking at the oil market to which long-term LNG contracts are linked.

"Since the start of 2017, the oil market is focusing on how well OPEC and non-OPEC countries observe the production cut agreed last year," he said.

"The compliance rate with the agreement is estimated at 80 percent so far, which is relatively high.

"Accordingly, Saudi Energy Minister Khalid al-Falih projected that supply and demand will rebalance by the time of the OPEC meeting in May," he added.

"Another focus is the growth in American oil output as a result of the rise in oil prices," the report said.

"US output was 8.81 million barrels per day in November 2016, up 230,000 barrels/day month-on-month.

"The number of operating rigs has been rising since May 2016, and shale oil productivity continues to improve," it added. ■

Driftwood LNG project company of former Cheniere CEO Charif Souki gains listing on Nasdaq global exchange

Our North America editor in New York

Tellurian Inc., the developer of the US Driftwood LNG export project in Louisiana and founded by ex-Cheniere Energy Chief Executive Charif Souki and Martin Houston former head of LNG at the UK BG Group, has completed a reverse takeover to gain a listing on the Nasdaq stock exchange.

Tellurian had arranged the takeover of small exploration and production company Magellan Petroleum Corp. and under the merger agreement its former CEO Antoine Lafargue becomes Chief Financial Officer of Tellurian.

Another former Cheniere executive Meg Gentle remains Tellurian's President and CEO.

Value

"We look forward to creating value for our shareholders by delivering clean, low-cost, and reliable LNG to the global market," said Gentle.

"We are developing large scale energy infrastructure on the US Gulf Coast, including the 26 million tonnes per annum Driftwood LNG facility in Calcasieu Parish, Louisiana, which is scheduled to begin construction in 2018," she added.

Graphic of proposed plant with 20 small-scale Trains

"We expect our next major milestone to be filing our formal permit application with the Federal Energy Regulatory Commission for Driftwood LNG.

"We appreciate the local, state and federal support for this project and anticipate an efficient regulatory review of the application," Gentle stated.

The project will have liquefaction nameplate capacity of 26 million tonnes per annum with the output coming from 20 small-scale processing Trains provided by US company Chart Industries, based in Cleveland, Ohio.

Each of the Trains with Chart heat exchangers will produce 1.3 million tonnes per annum of LNG.

Before the completion of the reverse takeover and the gaining of the Nasdaq listing to enable the raising of additional funds for Driftwood LNG and other planned ventures, Souki and Houston signed prominent industry players as stakeholders.

French energy company Total acquired a substantial stake in Tellurian in December 2016.

Total bought 23 percent of Tellurian after agreeing to pay $5.85 per share for an investment amounting to $207 million.

General Electric's energy subsidiary GE Oil & Gas also in late 2016 acquired $25M of preferred equity investment in Tellurian.

Tellurian and the Driftwood LNG project were set in motion by Souki after he left Cheniere just before the Texas-based company's Sabine Pass LNG export plant in Louisiana came on stream in February 2016.

Souki departed from Cheniere amid disagreements over remuneration and strategy with the new major investor in Cheniere, US billionaire and active investor Carl Icahn.

The former Cheniere CEO Souki aims to replicate Sabine Pass with the Driftwood venture, currently in the engineering design and pre-filing phase of the permitting process.

Following the completion of the reverse takeover, Souki and Houston were confirmed as members of the board of the new Nasdaq-listed Tellurian Inc. along with CEO Gentle, Dillon J. Ferguson, Diana Derycz-Kessler, Brooke A. Peterson and Jean Jaylet. ■

Argentina seen as having hurdles to overcome if shale gas production is to replace LNG imports by 2022

Argentina believes it is still on track to cease liquefied natural gas imports by 2022 as shale-gas supplies from its estimated 802 trillion cubic feet of technically recoverable resources begin to flow.

"Argentina's dry natural gas production declined each year from 2006 to 2014, and the country has shifted from a net exporter of natural gas to a net importer," according to a new report from the US Energy Information Administration.

In 2015, natural gas production increased for the first time since 2006, as ongoing efforts to increase production from key shale-gas areas in Argentina aimed to reduce its imports of natural gas by pipeline and in the form of LNG.

Once one of the largest natural gas exporters in South America, Argentina was a net importer of natural gas by 2008.

Imports, which accounted for 23 percent of Argentina's natural gas consumption in 2015, came by pipeline from countries such as Bolivia and, to a lesser extent, as LNG from sources such as Trinidad and Tobago in the Caribbean.

"The Argentinian government hopes to stop importing LNG by 2022," the EIA report said, while pointing out various obstacles that have to be removed if this were to happen. Argentina is the third country in the world, after the US and Canada, to commercially develop tight oil and shale gas.

Argentina's Vaca Muerta (Dead Cow) formation within the Neuquen Basin has an estimated 308 Tcf of technically recoverable shale-gas resources.

"Vaca Muerta's geologic properties have been compared with the Eagle Ford play near the Gulf of Mexico in Texas in terms of its depth, thickness, pressure, and mineral composition," the EIA noted.

The report said more than 588 vertical and horizontal shale wells have been drilled and completed in the Vaca Muerta shale play since 2010.

According to the Argentine Ministry of Energy and Mines, shale-gas production reached 64.6 billion cubic feet (Bcf) at the end of 2015.

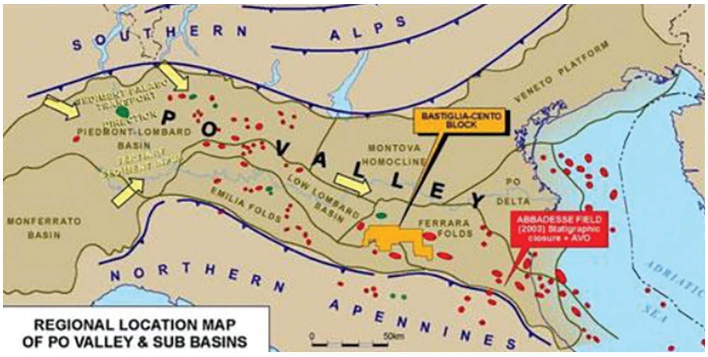
Argentina's national oil company, Yacimientos Petroleiferos Fiscales (YPF), the most active operator in the Vaca Muerta shale play, has initiated joint venture pilot project agreements with partners such as US companies Chevron Corp. and Dow Chemical, as well as Petronas of Malaysia to further develop the play. ■

Australians plan London IPO on February 24 for spin-off with Italian natural gas fields near Milan

Our Europe editor

Australian oil and gas exploration and production company Po Valley Energy is moving ahead with plans to compete with LNG in Italy by setting its initial public offering date in London for around February 24 when it will sell shares in a spin-off developing onshore Italian natural gas.

Po Valley Energy, already listed on the Australian Securities Exchange in Sydney, will list shares in a new affiliate called Saffron Energy on the Alternative Investment Market of the London Stock Exchange.



Map of natural gas holdings in northern Italy

Strategy

The company is making its strategic move as its gas fields in Italy are being ramped up. The shares are in three fields, Sillaro, Bezzecca, and Sant'Alberto, located onshore and near the cities of Bologna and Milan.

Sant'Alberto is located north of Bologna. In March 2008, Po Valley reached an agreement with Italian utility company Edison, previously a partner and operator, to assume 100 percent ownership and control of the licence.

The Sillaro field is located in the province of Bologna and was originally explored by Italy's Eni between 1955 and 1982 with seven wells drilled in and around the structure.

The Bezzecca field was awarded a production concession in July 2014 through the enlargement of the existing Cascina-Castello concession east of Milan.

The funds raised from the IPO are intended to meet development expenses and general working capital.

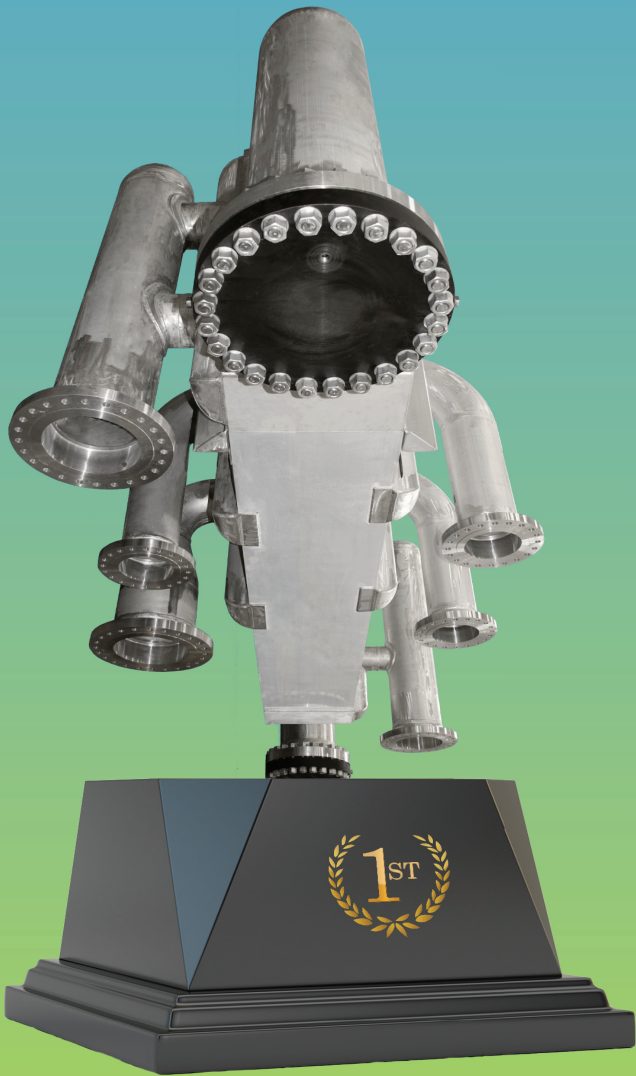
Po Valley said it expected proceeds of A$4 million (US$3.08 million) from the capital-raising for 35 percent of Saffron Energy, which will primarily fund accelerated development of all three gas fields.

"Gas inventory within Saffron Energy's assets amounts to 8.2 billion cubic feet of gas," the Australian company said.

"The London equity markets are a much more natural market for listing Italian natural gas production assets," said Michael Masterman, Chief Executive of Po Valley and of Saffron Energy.

"Saffron Energy's profile of production oriented gas generation assets is attractive to UK and European investors and there is strong primary and secondary demand for the business," added Masterman.

Chart Brazed Aluminum Heat Exchangers



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