LNG Unlimited

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Chinese emerge as buyers, lenders and investors for US LNG projects

Alaska and Delfin LNG benefit from Trump's China visit by signing deals

Our Asia-Pacific editor

US liquefied natural gas project developers benefited from going on the trade mission to China with President Donald Trump. The the Alaska LNG venture and the Delfin floating liquefaction project in Louisiana came back with agreements.

The most impressive performance was by Alaska LNG. The project signed a joint development agreement with three Chinese companies in a ceremony in the Great Hall of the People in Beijing host by President Xi Jinping.

The signatories were Alaska Gas Line Development Corp., the US state's LNG project company and China Petroleum & Chemical Corp., also known as Sinopec, as well as the financial institutions, the Bank of China and China Investment Corp.

Volumes

Delfin signed its agreement with China Gas Holding in the form of a memorandum of understanding for the purchase of 3 million tonnes per annum of LNG for the proposed project to be located 40 miles offshore Louisiana in the Gulf of Mexico.

The two companies said that a legally binding agreement for the sale and purchase of LNG is subject to further negotiations.

Delfin is owned by Fairwood Peninsula Energy Corp and is the first permitted FLNG export project in the US.

However, the Alaskan agreement is more far-reaching as it covers finance and volume sales with world-class counter-parties.

"This historic signing is the most significant step toward finally monetizing Alaska's vast resources of natural gas," said Alaska Governor Bill Walker, who signed the accord.

Alaska LNG project is an integrated gas infrastructure development. Its major components include a gas treatment plant located at Prudhoe Bay, an 800-mile pipeline to Southcentral Alaska with up to five offtake points to supply domestic customers and the liquefaction and export plant.

The proposed liquefaction plant proposed for near Nikiski on the Kenai Peninsula would have initial capacity of around 20 million tonnes per annum.

"Because Alaskans need well-paying jobs and affordable energy to power our homes, schools and businesses, this Alaska LNG project is critical," said Walker.

The state's AGDC reached a final agreement at the end of 2016 with the North Slope resource owners BP, ExxonMobil and ConocoPhillips to take over technical and regulatory responsibility for the Alaska project.

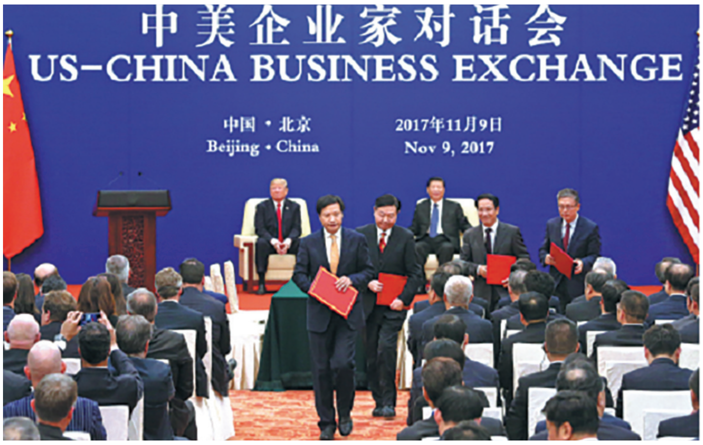
"The gasline is key to building a stronger Alaska. I thank President Trump for the full support he and his administration have shown for this project, as it brings the United States one step closer to energy dominance," stated the Alaska Governor.

"When President Xi visited Anchorage six months ago, he shared with me his desire for deepening the mutually beneficial ties between China and Alaska.

"I thank him for expediting that vision to reality. I especially thank Commerce Secretary Wilbur Ross and his team for their strong belief in the Alaska LNG project, and all of the hard work they put into making this day happen," added the Governor.

"I also thank the Alaska Legislature for staying the course in funding the AGDC so the state could reach this historic milestone.

"This agreement has all five necessary signatories, the buyer, the lender, the investor, the developer and the state," said Walker. ■



President Donald Trump and Chinese President Xi Jinping at the event in Beijing where LNG and other projects were announced for US corporations

French major Total acquires Engie global LNG volumes and assets for over $2Bln

Our Europe editor

French energy company Total has agreed to acquire the liquefied natural gas assets of one of the nation's biggest utilities Engie for up to $2.04 billion, including a stake in the US Cameron LNG project in Louisiana and taking its annual portfolio to around 40 million tonnes per annum.

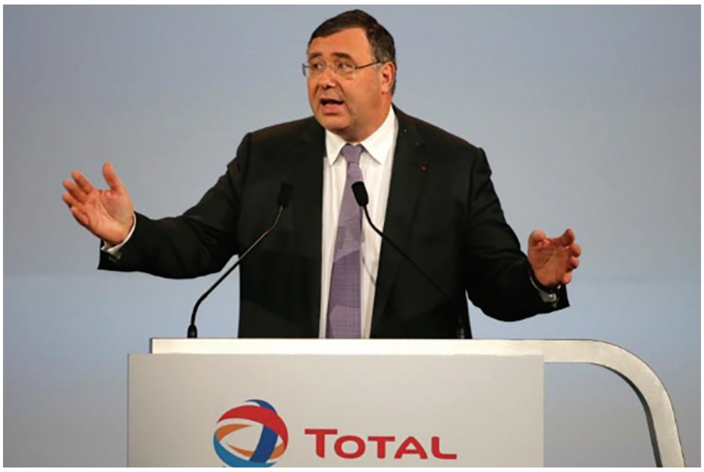
The transaction has an initial value of $1.49Bln and also gives Total long-term LNG sales and purchase agreements, an LNG tanker fleet as well as access to regasification terminals in Europe previously controlled by France's Engie, formerly known as GDF-Suez.

Additions

Under the agreement, additional payments of up to $550 million could be payable by Total depending on an improvement in the oil markets and LNG prices.

"The acquisition of Engie's upstream LNG business enables Total to accelerate the implementation of its strategy to integrate along the full gas value chain, in an LNG market growing strongly at 5 percent to 6 percent per year.

"The combination of these two complementary portfolios will allow the Group to manage an overall volume of around 40 million tonnes of LNG per year by 2020, making Total the second-largest global player among the majors with a worldwide market share of 10 percent," said Total Chairman and Chief Executive Patrick Pouyanne.



Total CEO Patrick Pouyanne orchestrates expansion

"With the equity stake in the Cameron LNG project, Total will also become an integrated player in the US LNG market, where the Group is already a gas producer," added Pouyanne.

Total gains 2.5 MTPA of liquefaction capacity to reinforce its existing portfolio with Engie's 16.6 percent equity stake in Sempra Energy's Cameron project in Louisiana where a three-Train facility is currently under construction.

The French major also acquires a long-standing Engie shareholding in one Train at the mothballed Egyptian liquefaction plant at Idku on the Mediterranean coast that may come back on stream because of huge natural gas discoveries in the area.

Engie Chief Executive Isabelle Kocher has decided to end most of the company's LNG activities and increase investment in renewable energy and emerging markets while cutting future spending on coal and nuclear power generation.

However, the utility company plans to keep its downstream activities of which the French regasification terminals and LNG retail sales are part.

"Engie will remain committed to its downstream activities which are core to its strategy, notably its retail sales, its GTT subsidiary and the Group's regasification terminals in France, the US and Chile," it said.

By combining the existing Total portfolio and Engie's assets, Total increases its immediate overall portfolio to 28 MTPA with a diversified supply from Algeria, Nigeria, Norway, Russia, Qatar and the US and other outlets balanced between Europe and Asia.

Access to regasification capacities of 14 MTPA in Europe, combined with the existing 4 MTPA held by Total, allows the Group to balance its consolidated purchase and sales portfolio.

Total is already a shareholder in the newest and the fourth French LNG terminal at the Channel port of Dunkirk and has access to the UK South Hook terminal in Milford Haven.

On the transportation side, Total also acquires Engie's fleet of 10 LNG carriers which will be added to the three carriers currently owned by Total.

"Overall, combining its interests in liquefaction plants and its portfolio of third-party supply contracts, the Group will manage a global volume of nearly 40 MTPA," stated Total.

France's GTT wins Chinese shipyard order for tanks for nine LNG-fueled container ships

Gaztransport and Technigas (GTT), the French maritime storage tanks technology company, has been chosen by China's Hudong-Zhonghua Shipbuilding to design cryogenic fuel tanks for nine LNG-fuelled container ships.

The shipowner that ordered the vessels is another French company, the container line CMA CGM.

GTT said that of the nine vessels, five will be built at the Hudong-Zhonghua yard and four others will be constructed at the Shanghai Waigaoqiao facility.

The deliveries of the nine vessels will take place between the end of 2019 and 2020.

Hudong-Zhonghua yards are affiliates of the government-owned China State Shipbuilding Corp.

"This contract is the result of over four years of development made by GTT in this market segment," said the company.

GTT said the LNG-fueled ships will be able to carry 22,000 containers each, instead of 21,000 containers for the biggest container ships currently in operation.

"GTT will design the LNG fuel tanks, which represent a capacity of 18,600 cubic metres capacity per ship," added GTT.

"The membrane insulation system Mark III developed by GTT has been chosen for its space optimization allowing a maximum usage of cargo capacity," the company said.

Philippe Berterottiere, GTT's Chairman and Chief Executive, stated that the order was a "game-changer" for the France-based technology firm.

"It marks the adoption of clean fuels by the container ship industry. GTT is proud to work side by side with CMA CGM and Hudong-Zhonghua within this revolution," said Berterottiere.

GTT recently reported a fall in revenue from royalties for its technology as the order book stood at 86 units, including tanks for 11 floating storage and regasification units (FSRUs) used as import terminals.

Ichthys LNG export project owner focuses on expansion

Inpex Corp. of Japan, developer with France's Total of the Ichthys LNG export plant in the Northern Territory of Australia, said it would pursue exploration as operator and sole licence holder of an offshore block that may help with expansion plans for the liquefaction plant near Darwin.

Inpex said its Block WA-532-P covers an area of 26,300 square kilometres in water depths of between 60 metres to 50 metres.

The permit is close to the Ichthys gas-condensate field from where feed-gas is transported by an 890-kilometres pipeline to the liquefaction plant at Bladin point near Darwin.

"In the vicinity of the Block, promising gas fields have been discovered and are being developed at multiple blocks in which Inpex holds equity interests," said the company.

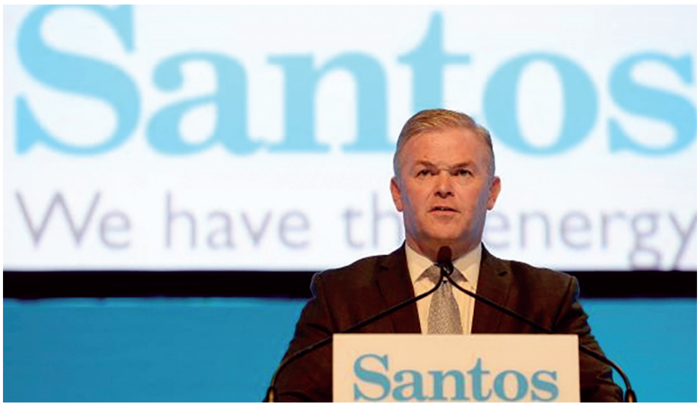
"It is expected that the Block is also located in a promising exploration area with a high potential for gas, condensate and oil accumulations," it added.

The Ichthys LNG project is costing around US$37Bln to complete with two processing Trains and 8.9 million tonnes per annum of capacity.

It is expected to ship its first cargo in March 2018, about 18 months behind scheduled.

Ichthys has been hit by several project delays, including the late completion at South Korean shipyards of the offshore processing facility and platform, labor issues and problems linked to a company takeover at related Darwin power plant.

Santos to invest up to US$875M and forecasts LNG earnings rise



Santos Chief Kevin Gallagher reported 'excellent progress'

Australian energy and LNG company Santos has outlined how its new strategy of concentrating on core natural gas activities will lead the company to larger profits, led by its Asia-Pacific liquefaction plant assets.

Speaking at the company's "Investor Day" in Sydney, Santos Chief Executive Kevin Gallagher said the strategy was making "excellent progress" since first being introduced in 2016 to reduce debt and focus on growth.

Assets

The key Santos LNG assets include operatorship of the Gladstone LNG plant in Queensland, a stake in the ConocoPhillips-operated Darwin LNG plant in the Northern Territory and a share of the existing Papua New Guinea production plant and its expansion project.

Gallagher said the transformational phase of his strategy had already delivered a forecast of a free cash flow breakeven point in 2017 of US$32 per barrel of oil, down from US$47 per barrel and a 22 percent reduction in upstream production costs.

This has included lower average well costs in the Cooper Basin and for coal-seam gas feeding the GLNG plant, as well as a 40 percent reduction in net debt to US$2.8 billion.

"We have simplified the business to focus on five core, long-life natural gas assets: Cooper Basin, Queensland (including GLNG), PNG, Northern Australia and Western Australia Gas," said Gallagher.

"This core portfolio is positioned to provide stable base production for the next decade and positive free cash flow.

"We have removed substantial cost, arrested the production decline in the Cooper, GLNG is ramping up and PNG LNG is operating at record rates," stated the CEO.

In 2018, Santos will increase drilling activity in both the Cooper Basin and in the CSG Basins of Queensland to increase production and gas supply for the domestic market.

Gallagher said the company also planned to invest in PNG with spending on the Angore surface facilities and tie-in to the Hides field and on the Muruk field appraisal.

It will additionally start the front-end engineering and design phase of the Barossa project in Northern Australia.

Santos stated that capital expenditure in 2018 is expected to be in the range of US$825-US$875 million.

Australia starts study on West-East gas pipeline as alternative to LNG

The Australian government-led feasibility study has now started to examine the potential of a West-East natural gas pipeline to supply eastern and southern markets with Western Australia's abundant supplies as an alternative to domestic LNG shipments.

A gas pipeline from Western Australia's Pilbara region to the Eastern states has won the backing of many because of gas shortages and higher prices in East Coast states such as Queensland.

The study has been ordered by the Minister for the Environment and Energy, Josh Frydenberg, who has said building the West-East pipeline would be "potentially a significant nation-building project" for Australia.

"The Government is powering forward with a plan that will deliver an affordable, reliable and responsible energy system which will also help meet our international obligations," said a statement.

"Improving the transparency, competitiveness and long-term security of Australia's East Coast gas market is a priority for the Government as gas is a crucial component of the current and future energy mix to ensure we keep the lights on," it stated.

One outline plan is for a pipeline to be laid from the northwest of Western Australia along a 1,500 kilometres route to link with existing processing and storage facilities at the town of Moomba in the north-east region of the state of South Australia and 770 kilometres north of the state capital of Adelaide.

Supporters say that a pipeline from Western Australia to Queensland with inter-connections to South Australia and New South Wales would be cost-competitive compared with plans already put forward by some energy companies for new LNG regasification terminals for cargoes to be shipped from the West.

NEWS NUDGES

Atlas Copco LNG order

Atlas Copco Gas and Process Division, based in the German city of Cologne, secured a compressor order for the LNG carrier shipbuilding market in Asia. The order was placed by Samsung Heavy Industries of South Korea for a total of four centrifugal gas compressors, four gas screws compressors and with heaters and vaporizers to be used on two Korean-built vessels. "Specifically, the vapor return compressors will provide tank pressure control during loading and the fuel-gas compressors will feed excess boil-off gas to the gas engine during operations," said Atlas Copco. "This order is a very important step for Atlas Copco in the Asian LNG market," said Robert Radimeczky, President of the Gas and Process Division.

Anthony Veder LNG conversion

Royal Dutch Shell and Dutch shipping company Anthony Veder have signed a contract to modify the small-scale LNG carrier "Coral Methane" into an LNG bunker vessel. The modification marks the first of its kind and will entail integration of specific LNG bunker equipment into the vessel. The 7,500 cubic metres capacity ship currently operates as on a multipurpose basis.

Pipeline boost for Marcellus

Tennessee Zone 4 Marcellus shale-gas spot prices increased $1.71 from $0.52 per million British thermal unit to $2.23 per MMBtu in the week. "Marcellus prices likely increased this week as a result of a combination of cold weather in the Northeast and the commencement of service of the Access South and Adair Southwest pipelines," said the Energy Information Administration.

Indian Oil advances with one of two LNG projects for East Coast

Our Europe editor

Indian Oil Corp., the refining and fuel marketing company, has held a bond sale to help finance the Ennore LNG import project being developed near the port of Chennai and set to be one of the first ragasification facilities to come on line on the East Coast of India.

The bond offering amounted to 700 crore rupees ($108 million) in the form of compulsory convertible debentures (CCDs) for the project at Kamarajar Port in the southeast state of Tamil Nadu.

Southeast India venture to be sited at Kamarajar Port

Stakes

The terminal will be owned by IOC's subsidiary Indian Oil LNG Ltd on a 50-50 joint venture basis with a partner who has yet to be finalized.

IOC is one of the stakeholders in Petronet LNG, owner of two import terminals on the West Coast of India, the Dahej facility, north of Mumbai, and the Kochi terminal in the southwest state of Kerala.

India has two other terminals in operation, at Hazira and Dabhol, also near Mumbai. The Ennore project and several others will rebalance the nation's regasification infrastructure with the East Coast import capability. IOC also said it was in the process of sourcing more quantities of LNG directly to meet the increasing domestic requirements.

The company estimates that Ennore LNG will cost a total of 5,151 crore rupees, the equivalent of $795 million in total investment.

It will have an initial 5 million tonnes per annum of import capacity of LNG. The bond sale earmarked for spending on the terminal is expected to be followed by other financing transactions.

The Ennore terminal is scheduled for completion late in 2018 and IOC said in its latest earnings that project activities were progressing on schedule.

IOC is also a stakeholder in the development of a second East Coast terminal, the Dhamra LNG project in the state of Odisha.

IOC's partners in that venture are India's Adani Group and Gas Authority of India. The second terminal will also cost around $750M and is expected to start up in 2021.

In the recent earnings IOC posted a 27 percent fall in net profit for the half-year ended on September 30.

This amounted to 8,245 crore rupees ($1.27 billion) compared with 11,391 crore rupees ($1.75Bln) during the same period of 2016.

Philippines-based company to supply modular facility for Indian imports

Atlantic Gulf and Pacific Co., the Philippines-based maker of modules for liquefied natural gas and other energy projects, has signed an agreement with Karaikal Port on the southeast coast if India to develop an LNG import terminal.

AG&P said it had also signed an accord to source LNG supplies for an affiliated gas-fired power project.

Karaikal Port is a deep-water facility in the state of Tamil Nadu that started operations in 2009 for all commercial and multi-cargo vessels.

AG&P said that as part of the port's expansion beyond commercial cargos, it allocated an area within its existing breakwater to develop an LNG terminal to serve power, industrial and other customers in the region.

The port received its Environmental Approval (EA) for the LNG terminal venture in May 2017.

"Karaikal Port is a centre of trading for Southeast India and is crucial to the region," said AG&P.

"With the addition of AG&P's LNG import terminal, Karaikal Port will continue to be an engine of growth, offering an all-weather operation with a breakwater ensuring availability, night navigation and limited dredging requirements," said the Filipino company.

The LNG terminal when completed would be close to the existing Cauvery Basin gas pipeline network owned by Gas Authority of India.

AG&P said the development of the Karaikal LNG project would complement Indian Oil Corp.'s terminal at Ennore, 300 kilometers to the north and still in the state of Tamil Nadu.

"It will serve the heavily industrialized region of central Tamil Nadu which has major manufacturing clusters for the fertilizer, cement, steel, textile, leather, sugar and garment industries located within its 300km catchment area," said the Filipino company.

LNG-powered truck showcased at Iveco event for European logistics sector executives in Germany

Our Europe editor

CNH Industrial and its affiliate Fiat Chrysler Automobiles have presented their LNG-powered, long-haul truck to senior executives from 30 leading European road haulage and trucking companies at an event in the German city of Ulm.

Fiat Chrysler and CNH showcased the benefits of LNG trucking for the logistics sector and demonstrated the recently launched Iveco Stralis NP (Natural Power) 460 truck, "classed as the most sustainable heavy long-haul truck" coming into full production.

Venue

The event was near the Fiat Chrysler Services headquarters in Ulm and involved Europe's principle logistics and truck transport companies invited to its German "heavy trucks centre of excellence" owned by CNH Industrial's commercial vehicles brand Iveco.

The company said its Iveco truck anticipated the EU's "European Strategy for Low-Emission Mobility," a package of measures from the 27-nation body published in 2016, which identifies the use of LNG for heavy trucks as a strategic move for Europe.

CNH Industrial using its own LNG trucks for logistics

LNG is one of the growing markets for cleaner fuel in road and maritime transportation with abundant supplies available around the world.

"Sustainability and the efficient management of resources are the main considerations in the logistics sector as operators increasingly look to reduce their environmental footprint and comply with ever-more stringent European Union regulations," said CNH.

Presentations were given by Peter Weiss, a senior executive in Supply Chain Management at Fiat Chrysler, Dror Noach, Vice President Global Logistics at CNH and Pierre Lahutte, Iveco Brand President.

"Our own Supply Chain moves millions of automotive parts, materials and finished vehicles all over the world and this effort calls for implementing the most effective and efficient ways to achieve our targets," said Weiss as he illustrated how Fiat Chrysler is improving transport efficiencies with savings of over 5,000 tons of carbon-dioxide emissions per year in using LNG and non-diesel trucks.

"The company's own on-road inbound and outbound operations see 2,500 truck movements per day in Europe between 15 of FCA's plants to 28 destination countries," he explained.

Fiat Chrysler as the first company to use the IVECO Stralis NP 400 trucks in its logistics fleet.

"Together with our logistics partners, we adopted Sustainable Logistics Principles, applying all methodologies to reduce the impact of freight and vehicle movements as well as using low-emission transport vehicles," he said.

The company said it also used international car transport in Europe using non-diesel trucks. "We think that the extended application of this technology will ensure FCA's network competitiveness and our emission footprint reduction," said Weiss.

"As part of our logistics transportation strategy we are well on our way in converting our main inbound and outbound distribution lanes to LNG vehicles," explained Dror Noach while presenting CNH Industrial's shift from diesel to LNG throughout its logistics in Europe, consisting of a network of 34 production plants and 10 depots.

The company is demonstrating its own strategy to achieve an 18 percent reduction in CO2 kilograms per ton of goods transported by 2022.

The Fiat Chrysler logistics operations using non-diesel vehicles has already been implemented in Austria, France, Germany, Italy, Spain, and the UK and has seen savings of over 1,000 tons of CO2 per year.

Clean Energy Fuels cuts its network and seeks partner

Clean Energy Fuels Corp., the California-based LNG and gas provider for the vehicle market, is closing more than 40 of its almost 600 fuelling stations and is seeking a partner to supply compression equipment to the network.

Clean Energy is continuing with its LNG and compressed natural gas fuel growth while initiating strategic steps to streamline operations and reduce expenses at what is one of America's leading LNG and gas trucking fuel companies.

During the third quarter, Clean Energy delivered 91.5 million gallons, an 8.3 percent increase from 84.5M gallons delivered in the same period in 2016.

For the nine months, the Newport Beach-based company delivered 265.0M gallons, an 8.2 percent increase from 244.9M gallons in the same period in 2016.

The company's main station network covers routes along the West Coast of America from southern California to Oregon on the Canadian border.

Revenue for the third quarter was $81.8M, a 15.7 percent fall from the $97.0M of revenue logged in the year-ago quarter.

"This decrease was primarily due to a lower effective price per gallon, largely attributable to the effects of the company's sale of certain assets related to the upstream production portion of its RNG business to BP Products North America, which has resulted in decreased revenue from the sale of certain tradable credits from selling CNG, LNG and its Redeem renewable (waste product) natural gas RNG vehicle fuel," it said.

Papua New Guinea plan for gas hub and LNG exports pairs KBR-Wison

Our Asia-Pacific editor

'Kumul' LNG carrier lifting a cargo at PNG plant

Chinese shipbuilding company Wison Offshore & Marine said it signed an accord with US energy and LNG engineering company KBR to cooperate on an LNG project for a state-run company in Papua New Guinea involving the construction of a floating liquefaction hull.

The Wison-KBR agreement is for the FLNG project being pursued by PNG's Kumul Petroleum Holdings.

The Kumul LNG project is proposed for the Western and Gulf provinces of Oceania nation and is inclusive of the already proposed Midstream Western Province Pipeline that will facilitate the development of stranded gas and condensate resources.

The FLNG hull would have a capacity to produce 1.5 million tonnes per annum.

KBR had been awarded a contract in August 2017 by Kumul Petroleum for the conceptual development and a feasibility study for an energy hub in the Kikori region of the Gulf Province of PNG.

The Kumul LNG project involves a mid-scale LNG liquefaction and regional export facility in tandem with supplying a future gas-fired domestic electrification system for remote areas of PNG.

"As a global provider of differentiated professional services and technologies, KBR has demonstrated strong expertise across onshore LNG and FLNG solutions, existing LNG plants and receiving terminal expansions," said the US company, based in Houston, Texas.

Wison has a track record in the FLNG sector, having delivered the world's first barge-based production hull.

The shipbuilding and offshore platform company then successfully completed its performance tests at the Wison yard in the Chinese port of Nantong for the Caribbean FLNG vessel built for a project that was later cancelled.

"We're looking forward to a fruitful cooperation between Wison and KBR," said Ying Cui, Chief Executive Wison Offshore & Marine.

"We're confident that the combination of both parties' strengths will create the best value for our clients by providing them with more cost-effective and quality solutions to lower the overall investment in the FLNG project," added Ying.

Greg Conlon, KBR President for the Asia Pacific region said he was looking forward to working with the Chinese company.

Kosmos focus remains on fields in Atlantic Margins with LNG potential

Kosmos Energy, the developer with BP of floating liquefied natural gas projects offshore Senegal and Mauritania, posted a third-quarter net loss as it progressed with the LNG ventures, ramped up production in Ghana and acquired exploration rights in the waters of Equatorial Guinea.

Kosmos, based in Dallas, Texas and whose shares are listed on the New York Stock Exchange and in London, said it generated a net loss of $63.4m compared with a loss of $59.8M in the same three months of 2016.

Kosmos focuses on frontier and emerging areas along the Atlantic Margins and has also made previous oil and gas discoveries offshore Ghana.

"Over the first nine months of 2017, our strong free cash flow has allowed us to reduce debt and to grow the value of our company through both organic and inorganic opportunities," said Andrew G. Inglis, Chairman and Chief Executive.

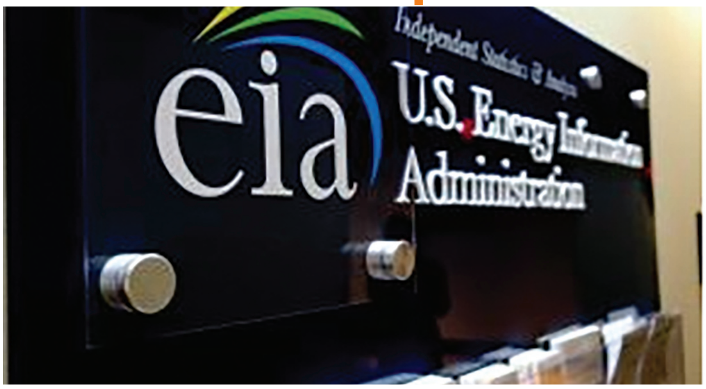
"We have ramped up production at the (Tweneboa, Enyenra, Ntomme) TEN fields, progressed the Tortue project offshore Mauritania and Senegal with our partner BP, and acquired a strategic exploration and production position in Equatorial Guinea which is immediately accretive.

The Kosmos-BP LNG plans are for the Greater Tortue Complex where resources are estimated at 25 trillion cubic feet of gas.

The first gas from the Kosmos-BP FLNG Train 1 is scheduled for 2021 and the start of FLNG Train 2 is set for 2023.

"Our exploration portfolio remains strong with four world-class prospects to be tested in Mauritania, Senegal, and Suriname over the next 12 months" stated Inglis.

Trump nominee to head US energy body worked for Equatorial Guinea LNG plant owner Marathon



EIA is provider of US and global data and analysis

Our North America editor in New York

US President Donald Trump nominated Linda A. Capuano, an academic and technology expert who previously served as an executive of Marathon Oil, operator of the Equatorial Guinea LNG plant in West Africa, as the next head of the US Energy Information Administration.

Capuano, who also favours the development of organic farms, has been a fellow at Rice University's Baker Institute for Public Policy and its Center for Energy Studies since 2014.

Administrator

As Administrator of the EIA, a division of the Department of Energy, Capuano would lead one of the most prominent global providers of data and analysis in the energy sector, tracking the activities of individual countries and regions as well as the US domestic energy industry and managing its oil, gas and power grid statistics.

She would be replacing former Deutsche Bank energy economist Adam Sieminski, who was appointed by President Barack Obama and resigned in January 2017.

Capuano's previous commercial work experience included the post of Vice President of Technology at Marathon in Houston from 2008 to 2013.

Marathon is a leading producer of crude oil and condensate, natural gas liquids and natural gas in North America, though it also has overseas operations, including one of the most successful global LNG export plants at Bioko Island in Equatorial Guinea that came on stream in 2007.

The Marathon LNG plant initially shipped LNG to the Lake Charles import terminal in Louisiana before the shale-gas boom meant America no longer relied on natural gas imports.

Capuano currently serves on the board of directors of Peak Reliability, based in Washington state, which provides a monitoring system for bulk electricity within the Western Electricity Coordinating Council.

She is also a technical advisor to Ecopia Farms, a small privately-held California-based organically certified urban farm company that produces fresh lettuce, microgreens and vegetables all year round using sustainable methods.

Capuano is additionally an associate member of the National Academies of Sciences, an elected lifetime position.

Her earlier career centred on commercializing technology innovation at companies outside the energy industry such as Honeywell and AlliedSignal Aerospace.

Capuano has previously been awarded the Technical Excellence Award by the Society of Women Engineers and the IBM Outstanding Achievement Award, recognizing contributions to computer memory storage.

She received her Ph.D. in materials science and engineering and M.S. in engineering management from Stanford University. ■

Canadian company Pembina sees bright future with US Jordan Cove LNG and other projects

Canadian company Pembina Pipeline Corp. reported a 10 percent rise in profits as it forecast a bright future in developing more natural gas infrastructure and the Jordan Cove LNG project in the US state of Oregon.

Pembina, which closed its takeover of original Jordan Cove project developer Veresen Inc of Canada on October 2, said it expected a decision on the LNG export plant from US regulators by the end of 2018.

The company posted third-quarter gross profits of C$270 million (US$210M), an increase on the C$246M in the same three months of 2016.

Pembina generated third-quarter and year-to-date earnings of C$107M and C$446M, an 11 percent fall and a 33 percent increase respectively over the same periods of 2016.

"This quarter marked an inflection point in Pembina's history," said Mick Dilger, Pembina's President and Chief Executive.

"Since the beginning of 2015, we have placed over $5 billion of new fee-for-service assets into service.

"The largest component of this growth program, being the Phase III Expansion, the third Redwater fractionator and the Canadian Diluent Hub, were placed into service at the end of the second quarter," explained Dilger.

"The third quarter of 2017 represented the first full quarter of cash flow contribution from these assets - which we continue to expect to ramp up over future quarters.

"Pembina's robust financial position provides a strong platform to pursue our next suite of growth projects," stated the CEO.

He listed among them the Jordan Cove LNG project as it enters a defining year on the regulatory front.

"On October 2, 2017, we closed the acquisition of Veresen, marking a transformational moment for our company," said Dilger.

"With increased size and scale, greater diversification and a broader service offering, the future is bright for Pembina," he added.

Pembina noted that Veresen filed applications with the US Federal Energy Regulatory Commission in September 2017 for the construction and operation of the liquefaction and export plant at Coos Bay in Oregon. The only LNG export facility on the US West Coast will produce 7.8 million tonnes per annum and will also include the related Pacific Connector Gas Pipeline that will transport natural gas from the Malin Hub in southern Oregon to the export terminal.

"The filing of the FERC application positions the project for a FERC decision in late 2018," said Pembina in its earnings.

"Looking ahead, we will stay focused on successfully completing the remaining growth portfolio, further progressing our large-scale potential project roster as well as working to integrate Veresen and to achieve the near-term expected synergies," said CEO Dilger. ■