

Philippines firm joins Air Liquide to develop small-scale Asian LNG

AG&P and French company plan to plug scale gaps in LNG value chain

Our Asia-Pacific editor

Atlantic Gulf and Pacific Co., the LNG module maker and fabrication yard operator based in the Philippines, has signed an accord to cooperate with the engineering unit of French industrial gases company Air Liquide to develop small-scale LNG infrastructure and distribution across Asia.

AG&P and Air Liquide said they planned to offer fully integrated and cost-optimized solutions for LNG entrants with a focus on liquefaction, transportation and downstream infrastructure to deliver LNG for power, shipping, ground transport and other industrial applications.

Technologies

Both companies have signed a memorandum of understanding to integrate the technologies offered by Air Liquide with its expertise in planning, design engineering and financing to build “technologically-advanced blocks that can plug into any part of the LNG supply chain.”

AG&P Chairman Jose P. Leviste Jr. said the agreement with Air Liquide will enable the integration of downstream LNG infrastructure, including small-scale regasification terminals, distribution hubs, truck-loading stations and boil-off gas handling systems.

“Our aim is to streamline Air Liquide’s know-how in gas processing technology and patents with AG&P’s experience in design, engineering and construction to bring the most competitive solutions to customers across Asia,” said Leviste.



AG&P supplied modules for large GLNG plant in Queensland

“We offer unique products for both onshore and offshore applications,” he added.

The accord will see the Air Liquide Engineering and Construction subsidiary and AG&P begin to develop standardized downstream LNG modules (some as skids) that optimize costs and shorten delivery time.

“The MOU as well covers innovative boil-off gas (BOG) management systems eliminating the need for investment in BOG compressors, while ensuring that no gas is vented or flared, bringing environmental and economic benefits to the customer,” the companies said.

AG&P has been building its module expertise in supplying liquefaction project modules to countries such as Australia, while Air Liquide has little specific experience in the LNG business even though it is a global player in the industrial gas market.

AG&P’s successes included the completion of the modularization of two liquefaction Trains comprising 111 process modules, pipe racks and associated structures for the Gladstone LNG (GLNG) Project in Queensland.

The Philippines company has

signed other cooperation agreements over the past 12 months, including a technical and licensing agreement for membrane tank design with another French company GTT.

In addition, AG&P owns a stake in Gas Entec, a leading south Korean-based engineering firm. It was also recently chosen by Indian project company Hindustan LNG to help develop an import facility on India’s East Coast.

Domenico D’Elia, Vice President and Chairman of Air Liquide Engineering and Construction, said: “We chose AG&P to be our partner because of their reputation for innovation, safety record and fast delivery.

“Through this agreement, we will be able to meet the dynamic requirements of customers in the vast region of Asia where small quantities of LNG need to be delivered efficiently to end-users scattered across vast distances.”

The demand for LNG continues to grow worldwide as countries seek to replace oil and heavy fuel oil with LNG as a cleaner and cheaper fuel for power generation, shipping, ground transport and industrial use.

UNLIMITED AGENDA

JOINT VENTURES

ExxonMobil pays \$2.8Bln to acquire stake in Mozambique LNG ventures of Eni

2

AGREEMENTS

Malaysia signs agreement linked to expanding Hokkaido facility

3

TRADING

Japanese spot cargo prices soar to two-year high at \$8.80 per MMBtu

5

CORPORATE

WorleyParsons explains takeover offer from Dar Group of Dubai

6

INVESTMENT

ExxonMobil says LNG will be part of \$20Bln US Gulf Coast spending

7

EXECUTIVES



Former Chevron senior executive in demand in India for ventures

8

ExxonMobil acquires stake in Mozambique LNG ventures from Eni of Italy for \$2.8 billion in cash

Our Europe editor

US major ExxonMobil and Italian energy company Eni signed an agreement to enable ExxonMobil to acquire from Eni a 25 percent interest in the Area 4 block of the Rovuma Basin where LNG projects are planned for a cash price of around \$2.8 billion.

Eni currently holds a 50 percent indirect share in the block through a 71.4 percent stake in Eni East Africa, which owns 70 percent of the Area 4 concession.

Huge resources

The deepwater Area 4 block contains an estimated 85 trillion cubic feet of natural gas, which will provide resources for world-class LNG projects in which the partners expect

to invest tens of billions of dollars.

The acquisition will be completed following satisfaction of a number of conditions, including clearance from Mozambican and other regulatory authorities.

"This deal represents material evidence of our exploration strategy based on the early monetization of our exploration discoveries, as a part of our 'dual-exploration' model," said Eni Chief Executive Claudio Descalzi.

"Through this strategy, Eni has been able to cash in more than \$9 billion in the last four years. Moreover, the agreement confirms the world class quality, production potential, technical and financial robustness of the entire project," Descalzi added.

Darren W. Woods, Chairman and Chief Executive of ExxonMobil, said the asset is a major addition to the company's global development portfolio.

"This strategic investment will enable ExxonMobil's LNG leadership and experience to support development of Mozambique's abundant natural gas resources," said Woods.

"Our industry-leading project execution, advanced technologies, financial strength and marketing capabilities will help deliver reliable, affordable energy to customers and create long-term economic value for the people of Mozambique, project partners and ExxonMobil shareholders," he stated.

Eni will continue to lead the Coral floating LNG project and all upstream operations in Area 4,

while ExxonMobil will lead the construction and operation of natural gas liquefaction facilities onshore.

This operating model will enable the use of best practices and skills within Eni and ExxonMobil with each company focusing on distinct and clearly defined scopes while preserving the benefits of a fully integrated project.

Following completion of the transaction, Eni East Africa will be co-owned by Eni (35.7 percent), ExxonMobil (35.7 percent) and CNPC of China (2.6 percent).

The remaining interests in Area 4 are held by the state energy company of Mozambique (10 percent), Korea Gas Corp (10 percent) and Galp Energia of Portugal (10 percent).

Fortuna LNG project offshore Equatorial Guinea in West Africa set for final investment decision

The Fortuna floating liquefied natural gas project offshore Equatorial Guinea in West Africa remains firmly on schedule for a final investment decision in the next few months.

That's according to the project's developer, the UK company Ophir Energy, which has just issued its latest update on the venture and its other activities in its full-year earnings report.

'Green light'

"A green light for Fortuna, expected in mid-2017, will unlock 345 million barrels of oil equivalent for monetisation," said Ophir Chief Executive Nick Cooper.

"Subject to the volume of gas we choose to term up, this could treble our Group 2P reserves in the process.

"Plans to sweat our Asian assets have the potential to monetise up to a further 80 MMboe over the next three years," added Cooper.

"All activities are now focused on finding or developing hydrocarbons at the lowest cost and monetising promptly and swiftly;



CEO gives Equatorial Guinea-Tanzania LNG guidelines

thereby maximising the margin realised for shareholders," the CEO explained.

The company has a joint venture agreement to develop the Fortuna FLNG project with Norwegian shipping and project company Golar and oil services firm Schlumberger to produce free-on-board cargoes priced at around \$6 per million British thermal units.

Ophir signed an accord in November 2016 with a joint subsidiary of Golar and Schlumberger called OneLNG.

The shareholders agreement established a joint operating company to develop the Fortuna FLNG

project from feed-gas resources in Block R offshore Equatorial Guinea using Golar's production hull technology.

OneLNG and Ophir have 66.2 percent and 33.8 percent ownership respectively of the joint venture entity.

The Fortuna FLNG company is now working on facilitating the financing, construction, development and operation of the project, which will own Ophir's share of the Block R licence and the "Gandria" FLNG vessel.

"In Equatorial Guinea, we have made material progress toward completing and financing an LNG

value chain in the context of a challenging market," said Cooper.

"After frustrations in the first half of 2016, an innovative approach to value chain partnering and risk sharing unlocked the problem," added the CEO.

"A constructive dialogue with our midstream partner Golar LNG enabled us to find a solution that satisfies the trends emerging in LNG pricing, contracting, financing and risk-sharing," he said.

Ophir's strategy is to monetise "smartly" and it is also moving forward on a possible LNG project in Tanzania, East Africa.

"In Tanzania, we have to date monetised the majority of our interests and have delivered a material return on our historic investment.

"In 2016, we saw a renewed push from the Tanzanian Government to deliver the LNG project and the introduction of a new operator in Shell. Both factors should accelerate the project towards an FID later this decade.

GAIL signs cargo deal with firm based on US and spot volumes

Gas Authority of India (GAIL), the state-run natural gas and transmission network operator and LNG importer, has signed a procurement agreement with global commodities trading company Gunvor based on a swap transaction linked to US and spot volumes.

Under the accord, Gunvor will supply around 15 cargoes to import terminals on India's west coast, mostly the Dabhol facility where GAIL has most capacity.

Executives said the cargoes would be delivered between April and December 2017 at oil-linked prices and on a delivered basis by Gunvor, whose corporate headquarters are in Geneva, Switzerland.

In return for the April-December shipments GAIL will provide 10 cargoes, or about 600,000 tonnes, it has booked from the Cheniere Energy Sabine Pass facility in Louisiana from 2018 at a premium to its pricing formula on a free-on-board (FOB) basis.

GAIL has just imported a cargo to the Dabhol terminal near Mumbai which it purchased on the spot market from the Bonny Island terminal in Nigeria.

However, imports of LNG to India have been falling over the past couple of months as prices have climbed to around \$8.50 per million British thermal units on a delivered basis.

Analysts said the agreement with Gunvor, whose main LNG and commodities trading base is Singapore, could mean cargoes changing hands at between \$6.50 per MMBtu and \$7.00 per MMBtu, lower than the current oil-linked delivered price.

GAIL was one of the first companies to buy US LNG from Sabine Pass and to sign a tolling agreement with another US export plant being constructed at Cove Point in Maryland.

Malaysia signs agreement to deliver LNG to expanding Hokkaido terminal

Our Asia-Pacific editor

Malaysian energy company Petronas has signed an LNG supply agreement with Japanese utility Hokkaido Electric Power for a period of 10 years that will see shipments delivered to one of Japan's newest and expanding import terminals.

Under the terms of the agreement, the Malaysian LNG subsidiary of Petronas will deliver up to 130,000 tonnes of LNG per annum to the Ishikari import terminal where two utilities, Hokkaido Electric and Hokkaido Gas Co, share capacity.

Long term

Malaysian LNG Chairman Mohd Anuar Taib said the 10-year accord to supply Hokkaido Electric demonstrated the country's commitment to providing long-term LNG solutions to its customers.

"We would like to thank HKE for the trust placed in Petronas for a secure and reliable supply of this cleaner energy source and we look forward to building this relationship into the future," said Taib.

The contract signing ceremony



Executives from Hokkaido Electric and MLNG after signing

was held in the Malaysian capital Kuala Lumpur, with Hokkaido Electric represented by Executive Vice President Yutaka Fujii.

MLNG operates the Petronas LNG complex in Bintulu, Sarawak, one of the world's largest and where a new Train 9 recently began exporting shipments.

The nine-Train facility now has combined annual production capacity of about 30 million tonnes.

The Malaysian cargoes will be delivered to the Ishikari import terminal in Hokkaido, Japan's main northern island.

The Ishikari terminal completed the commissioning of a second storage tank of 200,000 cubic metres capacity in 2016 and has begun

construction of another tank with 230,000 cubic metres of capacity.

Ishikari, which takes its name from the Ishikari River on which it stands, is one of Japan's newest and began commercial operations in 2012.

Two of the storage tanks belong to Hokkaido Gas Co., including the first one put into operation of 180,000 cubic metres capacity, while two others still to be completed will be owned by Hokkaido Electric.

It is the only large-scale LNG import base in Hokkaido, whose capital is Sapporo, and mainly imports cargoes from Sakhalin Island in the Russian Far East and from Australia.

Australian revenues surge as more LNG production comes on stream

Australian liquefied natural gas exports and income have surged with the second of three LNG Trains at the Gorgon plant on Barrow Island in Western Australia being ramped up and shipments rising from coal-seam-gas-to-LNG plans in eastern Australia.

The nation's Bureau of Statistics has reported record monthly LNG export revenues of A\$1.90 billion (US\$1.5Bln) compared with the \$1.39Bln logged back in July 2016, despite sluggish oil prices continuing to pressure the LNG market.

The increase in exports from the Australian plants on the west and east coasts will be helped by a new north coast plant, Incthus LNG near Darwin, also coming on

stream before the end of 2017.

Following almost \$200Bln of investment in liquefaction and export plants, Australia is expected to become the world's largest exporter with 80 million tonnes per annum by 2020, overtaking Qatar.

The Gorgon plant, operated by Chevron Corp. and built at a cost of \$US54Bln, has now overcome technical problems that have plagued the facility since it came on stream in early 2016.

Two Trains are now operating and a third will soon be started up to give nameplate capacity of 15.6 MTPA.

Chevron Chief Executive John Watson has said the second Train was performing extremely well and production was rising.

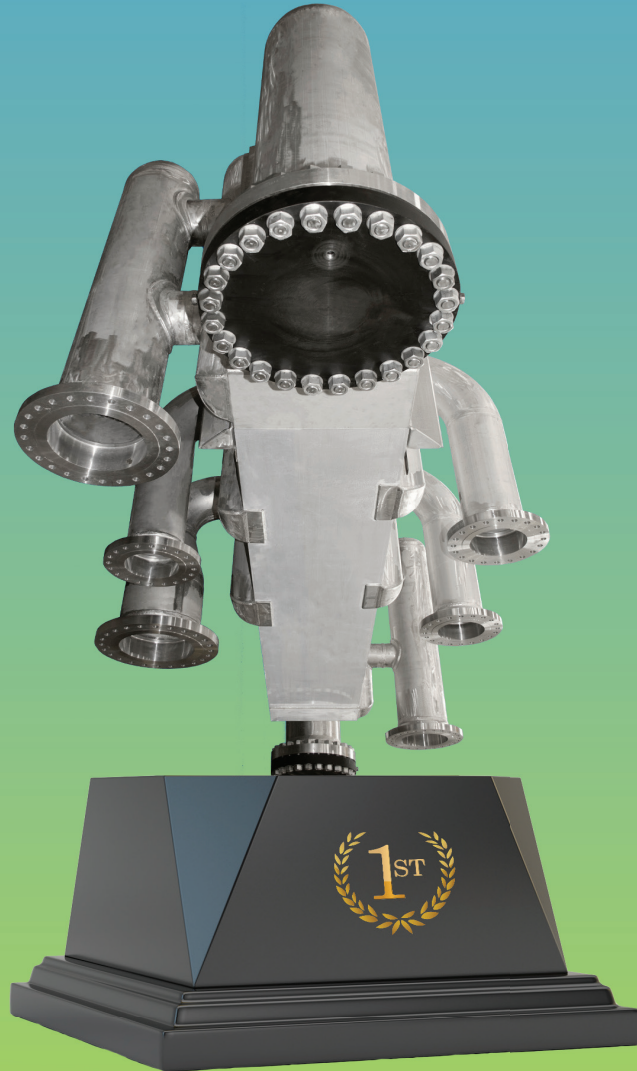
"Lessons from Train 1 were applied to Train 2 and, consequently, Train 2 ramped up over 90 percent of capacity within a week and continues to exceed expectations," said Watson.

"Train 3 is also expected to benefit. Construction is complete and we're well into start-up and commissioning and we expect first LNG early in the second quarter," added the CEO.

The Chevron CEO said he was optimistic about the LNG market going forward in the Asia-Pacific region.

"If you look at some of the environmental objectives, particularly throughout Asia, it's actually an encouraging sign," he said.

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NEWS NUDGES

Engie \$435M

Indian sale

French energy and utility company Engie plans to sell its 10 percent stake in the largest Indian LNG import company Petronet. The Engie stake is currently valued at \$435 million. The Petronet LNG shares were purchased by the Engie predecessor company Gaz de France. The French company has informed the four Indian shareholders in Petronet that it was offering its stake for sale. The other shareholders are Gas Authority of India, Oil and Natural Gas Corp., Indian Oil Corp. and refining company Bharat Petroleum.

ClassNK

picks Shigemi

Japanese maritime classification society Nippon Kaiji Kyokai, known as ClassNK, named Toshiyuki Shigemi as Executive Director. The previous Executive Director, Yasushi Nakamura, has stepped down and has been appointed as an advisor to the society. Shigemi joined ClassNK in 1981. "After a career including roles in plan approval, he took up the position of General Manager of the Development Department in 2008, where he was responsible for overseeing ClassNK's rule development activities for over a decade - at the time when class rules were undergoing major changes," said ClassNK.

OMV Russian gas acquisition

Austrian energy company OMV has paid German utility and energy player Uniper \$1.85 billion to acquire its near 25 percent stake in the Russian Yuzhno-Russkoye natural gas field in Western Siberia. The Yuzhno-Russkoye gas field can produce up to 25 billion cubic metres per annum and is the key supplier to the Nord Stream pipeline which supplies Germany directly with Russian gas.

Japanese LNG spot cargo prices soar to two-year high at \$8.80 per MMBtu

Our Asia-Pacific editor

Japan said the average price of delivered spot liquefied natural gas cargoes in February 2017 jumped to their highest level in two years to reach \$8.80 per million British thermal units, \$1.90 per MMBtu higher than the \$6.90 per MMBtu price logged in the same month a year ago.

Japanese spot cargo prices were last at a higher price than now in February 2015 when they were recorded at \$10.70 per MMBtu on a delivered basis.

Contracted

The Japanese government added the average price of spot shipments contracted in February 2017 was \$8.50 per MMBtu compared with \$6.50 per MMBtu in the same month of 2016.

The spot cargo numbers come from the commerce division of the Japanese Ministry of Economy, Trade and Industry and are only issued if a minimum number of two



'Cygnus Passage' has taken Russian cargo to Japan

trades are recorded. The ministry emphasizes that "spot LNG" refers to fuel traded on a cargo-to-cargo basis and does not mean shipments under contracts on a short-term, medium-term or long-term basis. The statistical accounting of the spot prices started in March 2014.

"Subjects of these statistics are companies which are end-consumers of spot LNG. In order to avoid double counting, companies that mediate transactions (for example trading companies) are excluded from subjects of these statistics," the Ministry noted.

Overall Japanese LNG import costs began to rise in January

2017 as the volumes also jumped by 14.6 percent to 8.30 million tonnes for the month.

The nation's LNG shipments had amounted to 7.24MT in January 2016 and had fallen 6.5 percent in the December peak season to 7.54MT after rising in the previous two months.

Thermal coal imports were also up by just over 10 percent in January 2017 to 10.69MT.

The latest cost of the imports amounted to 373.18 billion yen (\$3.28Bn), a rise of 6.7 percent compared with January 2016 when the shipments cost 349.84Bn yen.

Japanese LNG leaders move closer to plant merger as Fukushima remembered

Tokyo Electric Power Co. and Chubu Electric Power, the two largest users and importers of LNG in Japan, are discussing the full integration of their thermal power operations as part of Japanese energy and power deregulation and as the nation this week marks the sixth anniversary of the Fukushima disaster on 11 March 2011 that changed the nation's energy outlook.

The gas-fired, coal and fuel power operations, which account for half of Japan's total thermal capacity, are expected to be brought under the control of Jera Co. Inc., a joint venture company founded by Tepco and Chubu initially for LNG procurement in 2015.

The two sides are expected to reach broad agreement on the integration in line with an outline of Tepco's new business rehabilita-

tion programme due to be published during March.

Tepco hopes the integration will help improve the profitability of the thermal power operations, including gas-fired power from LNG shipments, to facilitate efforts to secure funds to complete the clean-up of Tepco's Fukushima No. 1 power plant and pay compensation to those affected.

The two sides are already well on the road to integrating LNG and other overseas fuel procurement operations under the Jera banner. Their joint annual LNG requirement is around 45 million tonnes.

The Tepco-Chubu LNG alliance under Jera has been signing LNG cooperation agreements with other global players in Europe and elsewhere.

In December 2016, Jera made

its first LNG cargo purchase from the US Lower 48 states in the form of a shipment from Cheniere Energy's Sabine Pass facility on the Gulf Coast.

The cargo was bought under a sale and purchase agreement with Cheniere.

Tepco had previously purchased LNG shipments from the small-scale Kenai export plant in the US state of Alaska, which stopped deliveries to Japan in 2015.

The first Jera US LNG cargo was delivered by the 173,000 cubic metres capacity vessel "Oak Spirit" to Chubu's Joetsu LNG import terminal in early January.

The merger of their thermal power businesses will only involve those which use fossil fuels such as regasified LNG, coal and fuel oil.

WorleyParsons explains Middle East takeover offer from Dar Group and may attract more bids

Our Asia Pacific editor

WorleyParsons, the Australian energy and engineering and construction company noted for working on the Singapore LNG import terminal and liquefaction plants in Western Australia, is the subject of takeover speculation after a Middle East group based in the United Arab Emirates acquired a substantial stake and said it could buy more shares.

WorleyParsons has confirmed to the Australia Securities Exchange in Sydney that it had spoken with the Dubai-based Dar Group about a full offer before its acquisition this week of a 13.45 percent stake.

Valuation

The Australian company is currently valued at A\$2.55 Billion (US\$1.92Bln) and could attract



Chief Executive Andrew Wood has tackled cost base

other suitors in an industry ripe for consolidation after widespread restructuring and rising costs for large-scale projects of between US\$20Bln and US\$35Bln.

WorleyParsons clarified its position in an ASX statement and noted the group based in the UAE was considering enhancing its share position.

The Australian company confirmed that it had previously in-

vited the Dar Group to have talks in November 2016 when an initial takeover approach was made.

WorleyParsons has been a leading designer and builder of global and Asia-Pacific facilities and has worked on ventures such as the Northwest Shelf, Pluto LNG and Wheatstone LNG export plants in Western Australia in addition to Singapore's sole regasification terminal.

Dar Group operates a multi-branded portfolio consisting of a global network of architecture and engineering consultancy firms.

The UAE-based company said in acquiring its stake that it viewed WorleyParsons as the "pre-eminent energy and design consultancy globally" and respected the current management.

Dar paid A\$350 million (US\$265M) for its 13.45 percent stake between February 27 and February 28, though also confirmed that it had made an informal bid worth A\$2.9 billion back in November that was rejected by WorleyParsons.

In its latest statement on March 3, WorleyParsons said it had spoken with Dar again this week to gain further clarity.

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Jordan Cove is seen as long-term project in US state of Oregon

The Jordan Cove liquefied natural gas export venture and its affiliated 230-mile Pacific Connector transmission pipeline in the northwest state of Oregon are viewed as long-term projects for Calgary-based Veresen Inc., with first LNG cargoes unlikely before 2024.

"The venture planned for Coos Bay would only move forward if it was fully contracted with customers," according to Don Althoff, President and Chief Executive of Veresen.

According to the latest plans, Jordan Cove will have a capacity to liquefy about 7.8 million tonnes per annum of LNG exports for Asia.

"Following the Federal Energy Regulatory Commission decision to deny the request for rehearing on December 9, 2016, the board has undertaken a thorough review of the Jordan Cove LNG project, including engagement with the FERC to gain greater visibility into a re-filing process," the CEO said during a post-earnings conference call.

"Discussions have taken place with existing and potential buyers as well as an evaluation of alternatives for the project to create the most value on a risk-adjusted basis," Althoff added.

"Veresen will continue to pursue the Jordan Cove LNG project on the basis of the constructive nature of discussions with both existing and potential buyers.

"The project development budget for 2017 will remain at US\$30 million, with the expectation that the Jordan Cove project will finalize agreements with existing buyers and secure additional off-takers.

"This would position the project for a potential final investment decision in 2019 with an in-service date in 2024," said the CEO.

ExxonMobil CEO says LNG will be part of \$20Bln US Gulf Coast spend

Our North America editor in New York

Exxon Mobil Corp. Chief Executive Darren Woods is expanding the energy major's capacity along the US Gulf Coast through planned investments of \$20 billion over a 10-year period to take advantage of the American energy revolution, including the LNG export build-out.

Woods, whose predecessor Rex Tillerson joined the administrations of US President Donald Trump as Secretary of State, said the projects at 11 proposed and existing sites are expected to generate thousands of new high-paying jobs and increased economic activity in Texas and Louisiana.

Woods explained his plan at a US energy conference in Houston.

Golden Pass

The projects include the Golden Pass LNG export joint venture in Texas being developed by ExxonMobil, Qatar Petroleum and ConocoPhillips and already authorized by the US Federal Energy Regulatory Commission.

Golden Pass LNG already exists as an import terminal and will add



Woods explained plan at conference in Houston

three liquefaction Trains with a total production capacity sufficient to produce 15.6 million tonnes per annum of LNG.

The FERC has also approved permits for the associated 2.6 miles of the proposed Golden Pass Pipeline linking the terminal to the major pipelines bringing shale-gas resources to the US Gulf Coast.

"The United States is a leading producer of oil and natural gas, which is incentivizing U.S. manufacturing to invest and grow," said Woods.

"We are using new, abundant domestic energy supplies to provide products to the world at a competitive advantage resulting

from lower costs and abundant raw materials. In this way, an upstream technology breakthrough has led to a downstream manufacturing renaissance," stated the ExxonMobil CEO.

"ExxonMobil is strategically investing in new refining and chemical-manufacturing projects in the US Gulf Coast region to expand its manufacturing and export capacity.

"The company's growing Gulf expansion program consists of 11 major chemical, refining, lubricant and liquefied natural gas projects at proposed new and existing facilities along the Texas and Louisiana coasts.

US company Clean Energy posts revenue of \$400M for LNG and gas

Clean Energy Fuels Corp., one of the main LNG fuel distributors in the US, said its sales of gas fuel during 2016 amounted to 329.0 million gallons, a rise of 6.6 percent compared with the previous year.

The company, based in Newport Beach, California, said it delivered 84.1M gallons in the fourth quarter of 2016, a 7.4 percent increase from the 78.3M gallons in the fourth quarter of 2015.

The earnings were issued a week after UK major BP agreed to acquire the upstream bio-methane portion of the fueling business.

The US company supplies LNG, compressed natural gas and bio-

methane as trucking and transport fuel. The forerunner company of Clean Energy was Pickens Fuel Corp., founded by US oil tycoon and LNG fuel pioneer T. Boone Pickens.

Under the terms of the agreement, BP will pay \$155 million for Clean Energy's existing bio-methane production facilities, its share of two new facilities and its existing third-party supply contracts for bio-methane made from waste.

In the earnings, Clean Energy said revenue for 2016 was \$402.7 million, a 4.8 percent increase from \$384.3M in 2015.

However, the company posted an overall net loss for 2016

amounting to \$12.2 million as it continued its LNG and CNG station network build-out.

The latest annual loss was lower than the \$134.2M registered in 2015. The fourth-quarter net loss was \$3.9M, lower than the loss of \$50M logged in the same three months of the previous year.

Volume-related revenue and revenue from station construction sales increased in 2016 compared with 2015.

"The positive momentum continued in 2016 for Clean Energy," said Andrew J. Littlefair, Clean Energy's President and Chief Executive.

Former Chevron LNG executive Melody Meyer is in demand in India for Asia-Pacific operational expertise

Our Asia-Pacific editor

One of the most influential liquefied natural gas industry executives in recent years, Melody Meyer, the former head of Chevron Corp.'s operations in the Asia-Pacific region, has been appointed by privately held energy company Cairn India as a senior advisor.

Meyer retired from Chevron in June 2016 after 37 years of service and during the latter part of her career with the US major she oversaw the development of the Gorgon LNG plant and Wheatstone LNG project in Western Australia, as well as a major natural gas venture in China.

Meyer, an American citizen, was appointed as an advisor to Cairn, India's largest private independent oil and gas exploration and production company with over 1 billion barrels of oil equivalent of gross proved and probable reserves and resources.

Cairn is a subsidiary of the Vedanta resources and metals group. Cairn has operational offices in Andhra Pradesh, Gujarat, Rajasthan and Tamil Nadu.

The company's resource base



Meyer retired from Chevron in 2016 after 37 years of service

includes an interest in seven blocks in India and one in South Africa, though as yet it has no LNG plans. Its major Indian discovery was an oilfield in Rajasthan in the northwest.

Before Meyer left Chevron, Chief Executive John Watson praised her work in helping to bring on stream the US\$54-billion Gorgon LNG on Barrow Island offshore Western Australia, one of the world's most environmentally-friendly energy ventures as well as the most expensive ever LNG project.

Watson also mentioned Meyer's role in the Chuandongbei project, one of China's largest natural gas

joint ventures that came on stream in January 2016.

The Chinese project overseen by Meyer covers over 800 square kilometres in Sichuan with Chevron as operator and with China National Petroleum Corp. as its partner.

"In her last role as President, Asia-Pacific, she was responsible for driving Chevron's E&P activities across nine countries in the region," said Cairn in announcing the appointment.

"In her earlier roles at Chevron, Melody has held leadership responsibilities as President of Energy Technology and Vice President of the Gulf of Mexico,"

the Indian company added.

Meyer said she was "very excited" by the prospect of being an executive advisor to Cairn India.

"This will be my first experience in India, one of the world's most rapidly developing energy markets.

"I am looking forward to add value to the company's integrated E&P plans and capabilities and to contribute to selecting the right partners for smooth project execution that will be key to the company's future growth," she explained.

Speaking on the appointment of Meyer as an advisor as well as Indian executive Atul Gupta, former Chairman and Chief Executive of BSG Resources and Burren Energy Plc, the CEO of Cairn India, Sudhir Mathur, said: "It gives us immense pride to have Ms. Melody Meyer and Mr. Atul Gupta with us.

"With their unique blend of extensive oil and gas experience, leadership and business acumen, we are confident that they will together play a stellar role in further increasing the operational efficiency and growth of our business."

Amec Foster Wheeler named owner engineer for latest expansion of Chile regasification and import terminal

Amec Foster Wheeler, the UK-based energy and engineering company, said it won an owner's engineer contract from the Chile LNG terminal company GNL Quintero for services related to an expansion.

Amec FW said it would participate in the engineering, procurement and construction bid evaluation, as well as providing engineering services.

The expansion involves the construction of an additional storage tank and equipment to increase the regasification capacity.

Thomas Grell, President of oil, gas and chemicals and downstream capital projects for the Americas and Asia Pacific said that the com-

pany was named the owner's engineer during a first expansion of the plant and the installation of an LNG truck loading facility.

Capacity for regasification of imported LNG at the South American terminal was initially expanded from 10 million cubic metres per day to 15 million cubic metres per day in 2015.

This latest expansion will increase the terminal's capacity to 20 million cubic metres per day.

"I am delighted that Amec Foster Wheeler will continue to work with GNL Quintero," said Grell.

"As part of a contract we will use our wide-ranging technical expertise and capabilities to deliver

this LNG project," he added.

"We're looking forward to continuing our close partnership with GNL Quintero to maximize the value of its Chilean assets," he said.

Shareholders in the GNL Quintero company include Spanish LNG terminal owner and transmission company Enagas with a 40 percent stake.

Another stakeholder is Terminal de Valparaíso, a joint venture between Enagas Chile (51 percent), and Oman Oil Co. (49 percent) with a 40 percent stake and the Chilean company Enap holding with a 20 percent stake.

Amec FW was also awarded a five-year global enterprise frame-

work agreement from Shell Global Solutions International to provide engineering, procurement and construction management services for its downstream ventures worldwide.

The company said the award from the projects unit of Royal Dutch Shell marked significant progress in its global engineering consultancy's strategy to build the business and deploy its capability.

Amec FW was most also recently awarded a consultancy contract by Inpex Corp. for the Ichthys LNG export project in Australia that has entered the final year of first-phase construction at a cost of \$US37.5 billion.

UK takes LNG cargoes from new Caribbean and South American sources amid expansion plans

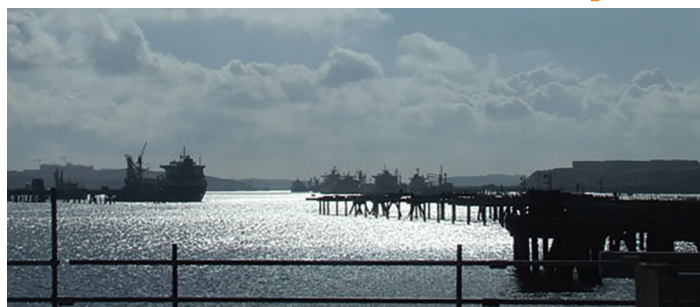
Our Europe editor

The UK Isle of Grain LNG import terminal, located on the Medway River 45 miles southeast of London and owned by National Grid, has welcomed its first cargoes from both the South American nation of Peru and the Dominican Republic in the Caribbean.

Grain LNG is the largest UK LNG terminal and the eighth largest in the world in terms of storage capacity.

Diverse

"The arrivals we have seen at Grain this week reinforce our belief that we're the leading LNG import terminal in terms of attracting a diverse mix of gas supplies from all over the world," said Simon Culkin, terminal manager at Grain LNG.



Peru cargo and Dominican Rep. re-load arrived at Grain LNG

"Grain has the most extensive gas blending facility in Europe, which enables the terminal to process LNG which would normally be outside of the UK's gas specification," added Culkin.

"LNG imports are becoming more and more vital to the UK energy mix, particularly as we see a decline in North Sea production," he said.

"Secure and affordable gas supplies from multiple sources will be

increasingly important, particularly in the gas-to-power sector, following the government's announcement to withdraw from coal-fired generation by 2025 and the phase out of all current nuclear power stations by 2030," he explained.

While the Dominican Republic shipment was re-loaded at an import facility there, Grain LNG has also been an importer of Caribbean cargoes produced at the Port Fortin liquefaction plant

in Trinidad. "The UK currently imports gas from continental Europe and via LNG primarily from Qatar. A more diverse supply of LNG, for example from North and South America, will support the development of a more secure and competitive gas market," stated Culkin.

National Grid currently oversees a network of 7,600 kilometres of pipelines throughout the UK as well as storage and import facilities.

The company, which also has operations in the United States, manages the day-to-day operation of the UK gas network, including balancing supply and demand and maintaining system pressure.

There are also moves for the UK to increase its current operating LNG terminal network from three to five.

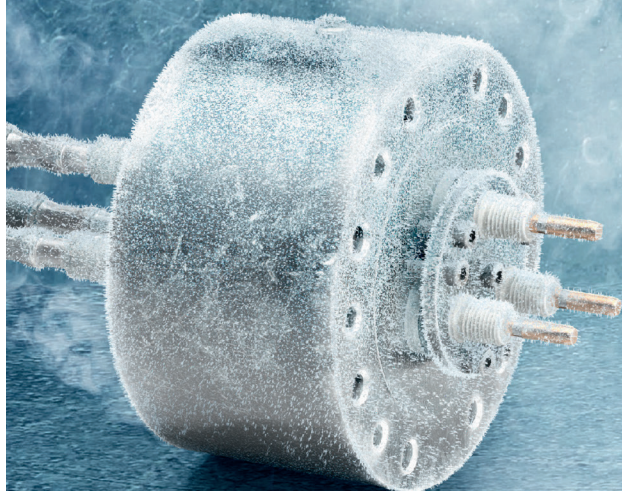
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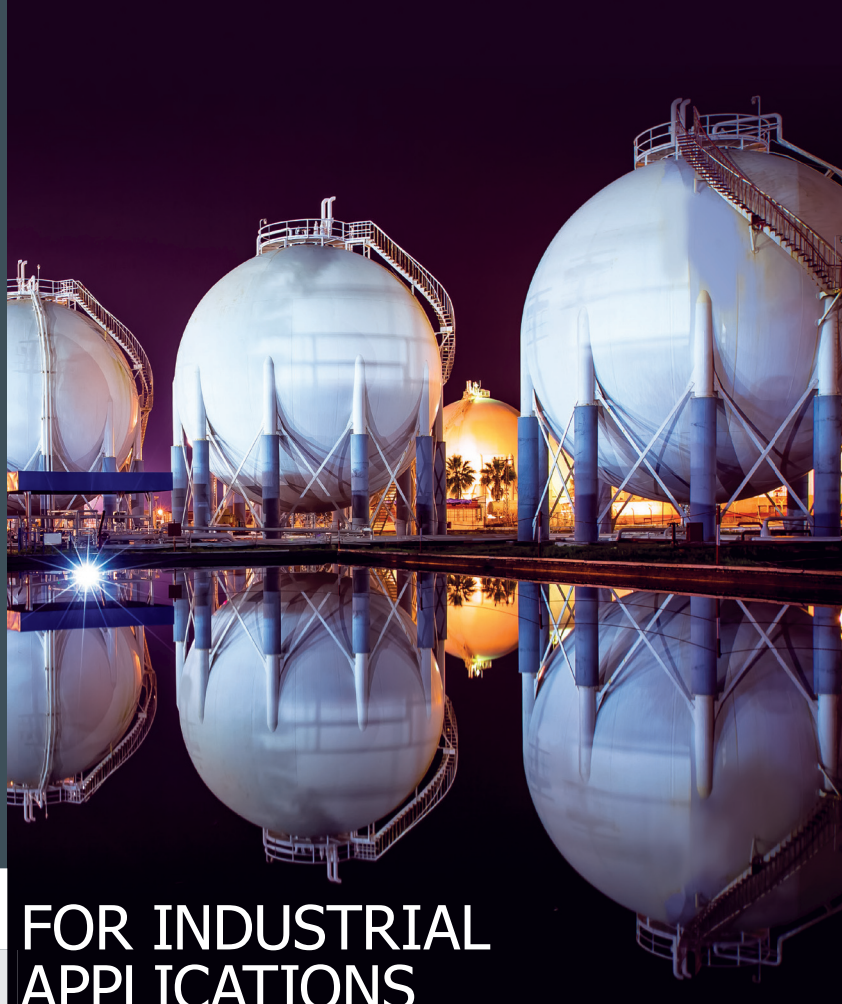
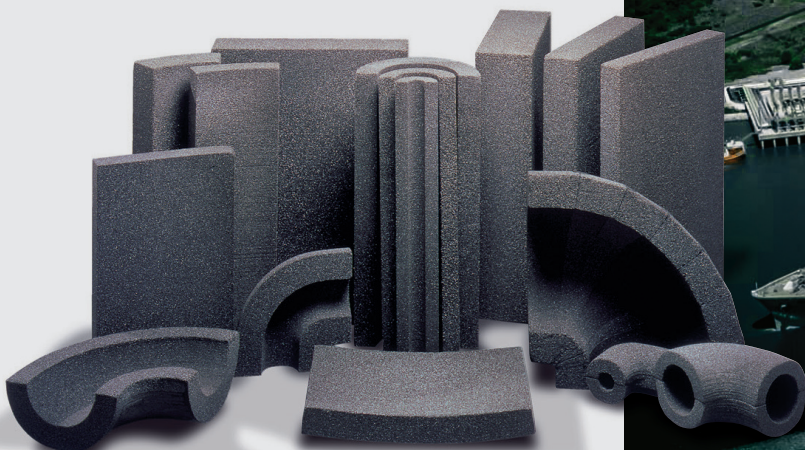
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