LNG Unlimited

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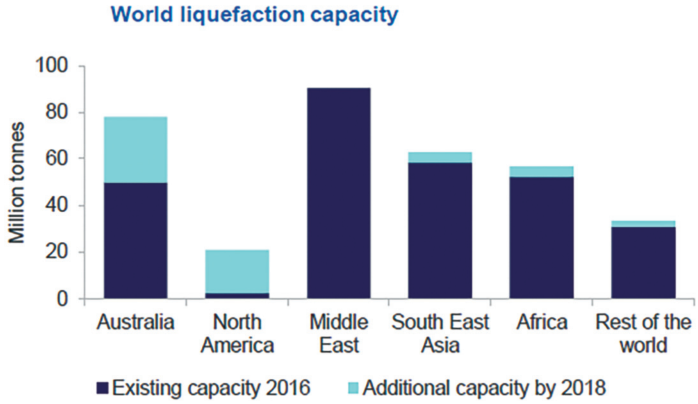
Ratings given for US LNG projects in forecasts covering investment

Several developers of US, Australian and Russian projects plan to add additional Trains

Our North America editor



LNG output will grow to 2018 and then through 2020

The latest expansion in Australian and US liquefied natural gas supply capacity, which is costing developers more than a quarter of a trillion dollars to build, was boosted by a spike in demand from Asia supported by abundant American shale gas supplies at low prices.

"As a result, supply capacity will grow to 455 million tonnes per annum by 2020 from 316 MTPA in 2015, a 44 percent increase," according to a report from Moody's Investors Service, the US rating agency.

Decisions

"Only two minor projects, totalling 5 MTPA, reached final investment decisions in 2016, a reflection of the oversupplied market environment expected for the remainder of the decade," Moody's noted.

"Buyers have limited interest in committing to more volumes and developers are unwilling to invest without such commitment.

"The lack of FIDs in 2016 and 2017 will result in limited new supply capacity coming online in the early 2020s, allowing demand to catch up," the report explained.

"Several developers of current US, Australian and Russian projects have plans to add additional Trains, which, because of their incremental nature, would have a shorter completion schedule following an FID," it said.

"The supply response to new demand is slow, which is typical of the energy sector. As a result, the LNG industry is inherently cyclical and prone to supply and demand imbalances," the report added.

"So, while investment returns for Australian projects and the economic rationale of US LNG offtakers will be weaker over the near term than those anticipated when FIDs were taken, we do not expect these conditions to persist," it said.

"Beyond 2020, we expect that global LNG demand growth will continue to be robust, boosted by low prices, environmental concerns and the build out of LNG import infrastructure in new markets.

"This demand growth, coupled with a pause in supply capacity development, will allow the market to balance in the early 2020s," it added.

"Longer term factors that will likely influence the health of the LNG industry include oil prices, technological advances, global and regional gas demand, environmental regulations and geopolitics," Moody's stated.

Construction and commissioning continues at five US and five Australian projects and Moody's gives them ratings.

Moody's said the US projects, Sabine Pass (Ba1 positive), Corpus Christi (Ba3 stable), Cameron LNG (A3stable), Freeport LNG (unrated) and Cove Point LNG (unrated) are advancing well, though with minor schedule overruns for some of them.

"On the other hand, several Australian projects have been blighted by large cost and schedule overruns, which have been compounded by falls in oil prices, negatively impacting investment returns for sponsors such as Chevron (Aa2 stable), Origin Energy (Baa3 negative), Royal Dutch Shell (Aa2 negative), Santos (unrated) and Woodside Petroleum (Baa1 negative)," added Moody's.

The report forecast strong demand growth from China and India, as well as from many smaller, emerging markets. However, this growth will be insufficient to absorb the new supply capacity.

As long as global supply capacity exceeds demand, US LNG offtakers will base their offtake volume and selling price decisions on their marginal cost of production.

US projects will earn fixed liquefaction fees, which are expected to cover their unavoidable costs, including debt service, regardless of the amount of LNG produced. ■

UNLIMITED AGENDA

Woodside's Coleman suggests Australian Browse floating LNG plan could be brought back to land

Our Asia-Pacific editor

Woodside Chief Executive Peter Coleman said the Browse LNG project originally planned as an onshore plant in Western Australia, then switched to be a floating LNG venture could be brought back onto land again if such a move is merited by economic circumstances.

Woodside formally put on hold the Browse FLNG venture in April 2016 because of the oil price slump and project economics.

Investors

The partners of Woodside in Browse FLNG are Royal Dutch Shell, BP of the UK, PetroChina and Japan's Mitsui & Co. and Mitsubishi Corp.

Woodside has since been working on possible future plans for Browse Basin natural gas resources.

"Browse and Scarborough at the moment have a floating LNG case as their preferred development," said Coleman at a briefing to discuss strategy after the annual results.

"What we're saying is, we want to knuckle down, pull all of this together and make the case that an onshore development should be a very competitive case that the joint venture partners in both those resources seriously consider, stated Coleman.

"So I'd say at the moment we're starting from behind, because FLNG is the preferred case at this point. I think it's up to the joint venture partners to put our best foot forward and make sure that we provide the most compelling cases.

"So that's what we're about. If we don't, then the option will be floating, and if so we need to work hard on it," the Woodside CEO said.

The Browse Basin is located about 425 kilometres north of the town of Broome in Western Australia.

Browse FLNG proposes developing the Brecknock, Calliance and Torosa gas fields, which are estimated to contain around 15.4 trillion cubic feet of dry gas. The LNG will be produced offshore using Royal Dutch Shell FLNG technology.

"It's not a given at this point, but equally our view is that it's a huge opportunity to be able to more efficiently utilise the infrastructure and that opportunity is presenting itself.

"Our preference is to get the best commercial outcome. That's what we're really about. And then of course you look at technology risk and execution risk and so forth.

"But I think the key is, let's get the best commercial outcome first before we say what our preference is. Because otherwise you start moving down a path that's not commercially driven.

"It needs to be commercially driven first and foremost, and the best commercial outcome," Coleman said.

Woodside is also planning a two-phase expansion of its Pluto LNG plant in Western Australia for up to 1.5 million tonnes of production added to the current 5 MTPA.

"The first phase is really looking at the existing Pluto gas. So the gas that currently exists within the Pluto permit areas is the first phase.

"The second phase then is an opportunity to both grow and expand Pluto, and there's a couple of opportunities there that we're pursuing," he added. ■

Perth-based Woodside looks to earnings returns from Wheatstone start-up and Senegal assets

Woodside recorded a full-year net profit of US$973 million compared with US$113M the previous year ahead of the start-up of the Wheatstone LNG plant in Western Australia scheduled to take place soon and as it acquired assets offshore Senegal in West Africa.

Woodside posted operating revenue of US$4.07 billion, down 19 percent from the $5.03Bln recorded in 2015.

The company's operations at the North West Shelf plant saw capacity increase from 16.7 million tonnes per annum to 16.9 MTPA, while Pluto LNG output rose 16 percent to 5.0 MTPA.

It said 88 percent of expected 2017 LNG production is sold under mid-term or long-term, oil-linked contracts.

Woodside also noted that during the last quarter they signed a preliminary agreement for the long-term supply of LNG to Indonesian state-run energy company Pertamina.

Revenue (US$ million)		Three months ended			Twelve months ended	
Sales Revenue		31 Dec 2016	30 Sept 2016	31 Dec 2015	31 Dec 2016	31 Dec 2015
North West Shelf	Pipeline Natural Gas	68.2	78.6	78.2	292.5	294.9
	LNG	232.7	203.8	254.0	800.7	1,027.6
	Condensate	84.0	77.3	67.9	278.4	291.5
	Oil	25.7	10.0	28.2	43.9	140.5
	LPG	9.3	8.9	7.9	34.1	33.7
Pluto	LNG	502.6	482.8	526.7	1,950.5	2,067.2
	Condensate	31.3	52.6	37.8	134.2	129.6
Laminaria-Corallina [1]	Oil	-	-	8.2	13.6	38.8
Enfield	Oil	8.7	15.2	19.5	44.0	71.2
Stybarrow	Oil	-	-	-	-	27.2
Vincent	Oil	43.8	55.2	56.2	180.1	283.8
Balnaves	Oil	-	-	19.8	20.3	88.7
Canada	Pipeline Natural Gas	2.2	3.1	0.9	10.8	1.4
	Total Sales Revenue	1,008.5	987.5	1,105.3	3,803.1	4,496.1
LNG Processing Revenue		50.5	51.8	49.5	201.7	179.6
Gross Trading Revenue		20.3	18.4	96.9	70.2	353.9
	Total Operating Revenue	1,079.3	1,057.7	1,251.7	4,075.0	5,029.6

Woodside share of sales and operating revenue for 2016

Additionally, the company expanded its LNG carrier fleet with two new vessels to provide more flexibility to manage a growing customer base.

As regards Wheatstone LNG, whose operator will be Chevron Corp. and in which Woodside has a stake, Train 1 construction is nearing completion and commissioning is well underway.

"All Train 1 and Train 2 modules are set on their foundations and permanent power to the LNG plant has been established," said Woodside. There is also an ongoing hook-up and commissioning of the offshore platform.

In relation to the Senegal assets, Woodside said it was planning to transition to operatorship prior to a final investment decision.

Woodside agreed in July 2016 to pay ConocoPhillips US$350 million for the US major's interests offshore Senegal.

The Australian company bought a 35 percent stake in a production sharing agreement with the Government of Senegal covering three offshore exploration blocks: Rufisque, Sangomar and Sangomar Deep.

The acquisition includes the option for Woodside to operate the future development of any resources. "There is further exploration upside and the opportunity to develop a regional hub," Woodside added.

Chief Executive Peter Coleman said the company has performed "exceptionally well" in the past 12 months by exceeding production targets, reducing operating costs and acquiring two "quality" growth assets.

"Our production results demonstrate we are a world-class operator. We achieved our second highest annual production, record LNG production and reduced gas unit production costs to $0.61 per million British thermal units (or $3.5/barrel of oil equivalent). All while improving safety and environmental performance," the CEO said. ■

Monadelphous and Jacobs win contract for Oil Search fields

Australian energy and LNG engineering company Monadelphous Group said it will partner with Jacobs Engineering Group Inc. of the US for a five-year upstream contract in Papua New Guinea for Oil Search Ltd, one of the partners in the PNG LNG plant and expansion project.

Monadelphous and Jacobs have a contract for engineering, procurement and construction services on Oil Search's oil and gas production facilities in the onshore Highlands region of PNG.

Monadelphous, based in Perth, Western Australia, is an experienced player in the Australian LNG industry build-out and has been most recently working on the Ichthys LNG project in the North Territory of Australia being developed by Japanese energy company Inpex and France's total

The Australian company and Pasadena, California-based Jacobs said the value of the PNG contract was $50 million.

The Monadelphous-Jacobs joint venture will provide a wide range of brownfield project services from the second quarter of 2017, including EPC work on pipelines, utilities, the main facilities and supporting infrastructure.

"The partnership, which combines Monadelphous's infield services expertise with the technical engineering capability Jacobs, will lead to productivity enhancements and cost savings for Oil Search," a statement said.

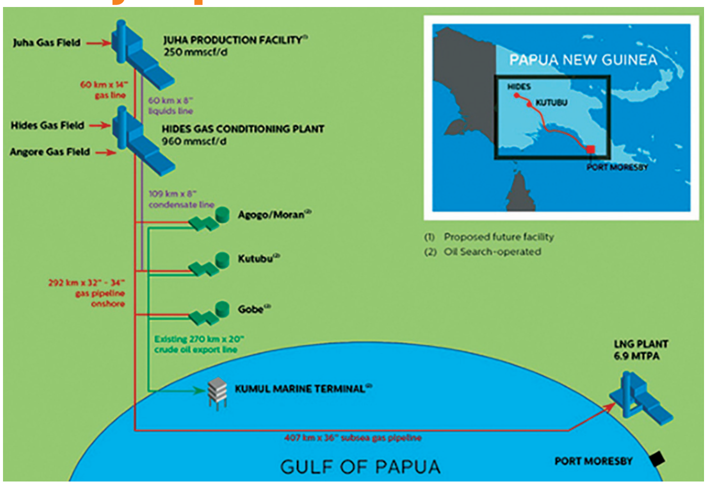
According to Monadelphous Managing Director Rob Velletri the contract builds on a decade-long relationship with Oil Search, having provided brownfield project and maintenance services since 2007.

Papua New Guinea prospects for LNG output boosted by uplift in reserves

Our Asia-Pacific editor

Oil Search, a stakeholder in the Papua New Guinea LNG plant and the joint venture planning its expansion, saw its annual revenues plunge because of oil prices, though its medium-term outlook was boosted by the "substantial uplift" in the natural gas resources for additional LNG production in the Oceania nation.

"An independent gas certification of the Elk-Antelope fields took place during 2016," said Oil Search, whose operations are concentrated in PNG while it is listed on the Australian Securities Exchange.



PNG LNG stakeholder Oil Search holds key energy assets

Trains

"Together with existing resources at the P'nyang fields and the upgrade in PNG LNG reserves, this certification supports Oil Search's view that there are sufficient gas resources available to support further expansion of PNG LNG production as well as two new PNG LNG-sized Trains in PNG," Oil Search stated.

"We expect formal discussions between key stakeholders, including ExxonMobil and Total, the operators of PNG LNG, as well as the PNG Government, to ensure the most capital efficient approach to developing the next phase of LNG expansion in PNG," the company added.

"In addition to this substantial uplift in PNG LNG reserves, there are approximately 10 trillion cubic feet of discovered undeveloped 2C gas resources in the Elk-Antelope and P'nyang fields, which we believe is sufficient to support two additional 4 MTPA LNG Trains," Oil Search explained. The company reported an annual net profit of US$89.8 million compared with a loss of US$39.4M in 2015 as operating cash flow dropped to US$555.1M from US$952.7M in 2015 because of the fall in crude prices.

"Total oil and gas production in 2016 reached an all-time record for Oil Search, of 30.24 million barrels of oil equivalent, 3 percent higher than in 2015," Oil Search said.

Australia firm Santos posts $1Bln loss even after 27 percent LNG sales rise

Australia LNG and energy company Santos, with stakes in three Asia-Pacific LNG plants, posted an annual net loss of net loss of US$1.04 billion, including a US$1.1Bln asset write-down on its Gladstone coal-seam-gas-to-LNG plant it operates in the eastern state of Queensland.

Adelaide-based Santos has the French company Total, Petronas of Malaysia and Korea Gas Corp. as its Gladstone LNG plant partners.

Santos also has stakes in the ConocoPhillips-operated Darwin plant in the Northern Territory and the ExxonMobil-run Papua New Guinea LNG facility.

The company said in its annual earnings statement that despite the losses "significant progress" was made on the Santos turnaround, including record production and sales volumes and a reduction in net debt to US$3.5Bln. Santos had lost US$1.95Bln in 2015.

Amid the gloom LNG sales revenue in 2016 rose 27 percent to US$887 compared with US$696M in 2015 on additional liquefaction Trains coming on stream.

Santos also reported an "excellent" PNG LNG operating performance with annual production logged in the fourth quarter at 8.3 million tonnes per annum compared with the nameplate capacity of 6.9 MTPA.

It stated that expansion of the PNG LNG plant was now likely and the project was currently evolving

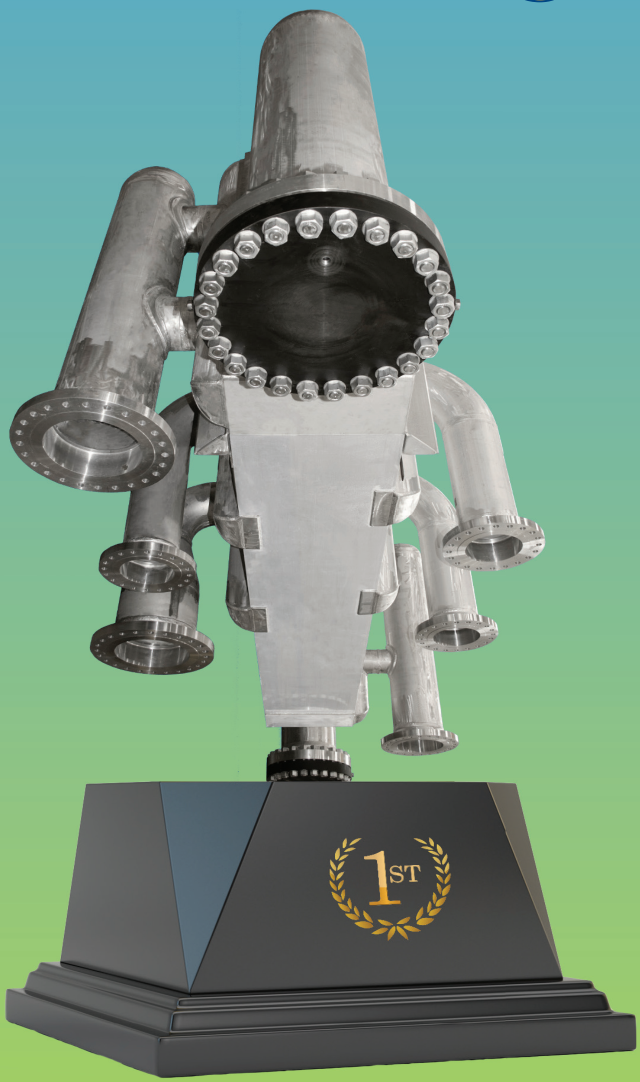
"In 2016, the Santos leadership team took tough and decisive action to stabilise the business and build the foundations for future growth," said Chief Executive Kevin Gallagher.

"We restructured the business, removed substantial costs, all while maintaining safety and delivering record production and sales volumes," added Gallagher.

Excluding impairments and other significant items, the company recorded an underlying profit of just US$63 million.

CEO Gallagher explained that the strategy remained one of transforming Santos into a low cost, reliable and high performance business.

Chart Brazed Aluminum Heat Exchangers



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NEWS NUDGES

Goyder to join Woodside

Woodside Petroleum, the operator of two LNG export plants in Western Australia, said Chairman Michael Chaney would step down after next year's annual general meeting to be replaced by Richard Goyder, Managing Director of Wesfarmers, Australia's biggest industrial group. Goyder will in the interim join Woodside's board as an independent, non-executive director. Woodside Chairman Michael Chaney, who joined the board in 2005 and became Chairman in 2007, said it was fitting that such a prominent Australian business leader should become the next Chairman. "Richard has demonstrated his focus on delivering value for shareholders and commitment to excellence throughout his extensive business career," said Chaney.

Italians issue FSRU tender

The floating LNG import facility offshore the west coast of Italy, "FSRU Toscana", has issued a tender for the regasification and storage bundled service for 2017-2018 amounting to natural gas capacity equivalent to 1.5 billion cubic metres. Bids must be submitted no later than March 6. The facility is moored about 22 kilometres off the coast between the cities of Livorno and Pisa. It is connected to the Italian national gas transmission network grid through a 36.5km pipeline from the shore to the mainland operated by Snam Rete Gas.

Cove Point plant 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 is being transformed into a liquefaction plant. ■

US LNG cargoes shipped in price range of $3.72 - $6.21 to six nations

Our North America editor

Sabine Pass has been shipping cargoes for a year now

The US Department of Energy has published its latest monthly report on liquefied natural gas imports and exports, showing that 15 cargoes were exported from the Sabine Pass liquefaction plant in Louisiana, operated by Cheniere Energy, to six different nations.

The report said that during December the shipments from Sabine Pass were delivered to a number of destinations in Asia, Latin America, Europe and North Africa.

Landed

Four cargoes were unloaded in South Korea, three cargoes each were shipped to Mexico, China and Japan and one cargo each to Egypt and Turkey.

Prices ranged from $3.72 per million British thermal units to $6.21 per MMBtu.

Sabine Pass has now exported a total of 60 cargoes from Louisiana since the facility came on stream in February 2016.

The largest recipients of the Sabine Pass cargoes has been the South American nation of Chile with 10 shipments, though it received none in December. Mexico is the next largest buyer with nine cargoes, following by China and Argentina, each with six shipments, and India is next largest with five cargoes.

The balance of the US shipments through December are shared between 12 other nations.

The Sabine Pass plant is now at or near the maximum capacity that currently can be produced from the two liquefaction Trains on stream, each with nameplate capacity of 4.5 million tonnes per annum.

A third processing Train is also set to produce commercial cargoes soon and three other Trains are under development.

During December, four cargoes of US LNG were also exported in ISO container tanks from the Hialeah facility near Medley in Florida, via the port of Miami, to the Caribbean island of Barbados.

Each of the ISO container shipments to Barbados were priced at $10 per MMBtu, according to the DoE data. The exporter was American LNG Marketing. ■

California yard begins trials for third US LNG-ready tanker for Seacor

The General Dynamic NASSCO shipyard in San Diego, California, has begun sea trials for the latest LNG-ready petroleum products carrier built for US shipping line Seacor Ocean Transport Inc.

NASSCO said the new ship named "Liberty", which will take part in US trading under the Jones Act, was designed with increased fuel efficiency and is among the most environmentally-friendly product tankers in the world.

The "Liberty" is the third and final ship to be constructed as part of the "Eco Class" tanker programme for US Shipping Line Seacor.

Seacor also has other subsidiaries, including Seacor Ocean Transport, an owner and operator of vessels engaged in oil transportation, bunkering, harbor towing and LNG terminal support.

NASSCO has completed three ships for Seacor, each of them a 50,000 deadweight ton LNG-conversion-ready product carrier with a 330,000-barrel cargo capacity.

The 610-foot-long tankers were designed by DSEC, a subsidiary of Daewoo Shipbuilding & Marine Engineering (DSME) of Busan, South Korea. "DSEC's 'Eco' design achieves improved fuel efficiency through several features, including a G-series MAN ME slow-speed main engine and an optimized hull form," NASSCO explained.

All three of the "Eco Class" tankers were constructed at the shipyard in San Diego.

Before the debut of the "Liberty", the "Independence" and the "Constitution" were delivered to Seacor during 2016.

The company is based in Fort Lauderdale in Florida and is listed on the New York Stock Exchange. ■

Canadian shipping line BC Ferries awaits arrival of second LNG-powered vessel from Polish yard

Our Europe editor

'Salish Eagle' will join 'Salish Orca' in LNG ferry fleet

BC Ferries, the Canadian shipping company serving towns and communities around Vancouver Island in British Columbia, says the second of three new dual-fuel vessels with LNG capability is on its way to Vancouver from the shipyard in Gdansk in Poland.

The "Salish Eagle" will join the "Salish Orca" as the second vessel in its fleet with gas propulsion as well being able to run on diesel.

Journey

BC Ferries said the "Salish Eagle" is 10 days into a 10,440 nautical mile journey across the Atlantic and then into the Pacific from Poland to BC, via the Panama Canal.

"The journey includes stops for refuelling in Santa Cruz, Canary Islands, and Panama City, Panama, and sailing up the west coast of North America to British Columbia," the company said.

BC Ferries is one of the largest ferry operators in the world, providing year-round vehicle and passenger services on 24 routes with a fleet of 34 vessels.

Its ships are mostly under contract with the provincial government to provide essential transportation links for coastal communities.

The French-speaking province of Quebec also uses LNG-fueled ferries for outlying islands, making Canada one of the world leaders in ferry transportation using LNG.

The "Salish Eagle", which is designed to travel at up to 15 knots, is scheduled to start service with the first of its two sister ships in the Southern Gulf Islands routes around Vancouver.

The fleet of three LNG-powered ferries each have three engines and can switch from natural gas to diesel if needed, though BC Ferries said the preferred fuel is LNG because of cost savings and its smaller environmental footprint.

"We are looking forward to introducing all three new Salish-Class vessels into service this year, which will serve British Columbians for decades to come." said Mike Corrigan, the President and Chief Executive of BC Ferries.

"We plan to operate these ships on natural gas, which will improve our environmental footprint and reduce our operating costs," he stated.

The artwork created to adorn the "Salish Eagle" is designed by John Marston, a member of the native North American Stz'uminus First Nation, and will be applied when the ship arrives in BC.

Indian imports decline for a second month on higher prices

Indian liquefied natural gas imports fell for a second month as global spot prices began to rise and fewer additional shipments were available at affordable prices for gas-fired power and industrial use.

Shipments to India for the month of January amounted to 1.21 million tonnes, down 14.7 percent compared with the same 2015 month when they had amounted to 1.42MT as global spot prices began to rise to $8.40 per million British thermal units or higher.

However, for the fiscal year to date shipments were still higher than in the previous year.

The energy import data from the Ministry of Petroleum and Natural Gas showed cumulative LNG imports for the fiscal year to date of 10 months from April 2016 to January 2017 were 16.1 percent higher at 15.08MT compared with the previous fiscal year when they were 12.92MT.

During the previous month of December, shipments of LNG to India for its regasification terminals on the West Coast near Mumbai amounted to 1.40MT compared with 1.45MT in the 2015 month, a decline of 2.9 percent.

Most Indian shipments currently come from Qatar but several cargoes have been received recently from the US and Australia.

The country's gross production of natural gas for the month of January was 2.73 billion cubic metres, a rise of 11.9 percent compared with January 2016 when output was 2.44 Bcm.

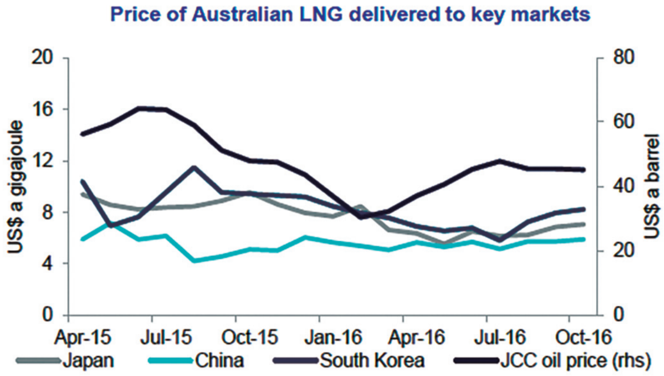
The production of natural gas from April to January was 26.62 Bcm versus 27.14 Bcm in the previous financial year, a fall of 1.9 percent.

Japanese LNG import costs begin to rise as latest monthly volumes jump

Our Asia-Pacific editor

Japanese LNG import costs have begun to rise as the volumes also jumped by 14.6 percent in January for both long-term contracted cargoes and spot shipments.

Japanese liquefied natural gas imports jumped by 14.6 percent last month to 8.30 million tonnes.



Price curve of cargoes shipped from Australia

Arrivals

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 ($3.28Bln), a rise of 6.7 percent compared with January 2016 when the shipments cost 349.84Bln yen.

The Finance Ministry provisional figures featured US imports for the first time at 211,000 tonnes.

Ministry's data also showed that Asian imports from nations such as Malaysia and Indonesia, Papua New Guinea and Brunei increased by 7.4 percent to 2.65MT.

Imports from the Middle East region soared 21.2 percent compared with January 2016. The shipments from countries like Qatar, the United Arab Emirates and Oman totalled 1.91MT.

Monthly Russian shipments, mostly from the Sakhalin Island plant in the Far East, dropped 2.6 percent to 670,000 tonnes.

The balance of LNG imports from other nations in the preliminary figures amounted to 2.86MT, covering shipments from countries such as Australia and Nigeria, as well as in the form of spot cargoes.

Japan's annual LNG imports had declined for a second year in 2016 as shipments from the Middle East fell and were offset by more cargoes from the Asia-Pacific region and the spot market.

The annual imports amounted to 83.34MT, a decline of 2 percent on the previous year. Those shipments cost the equivalent of $28.94Bln, a drop of 40.4 percent compared with 2015.

Positive FID taken on Leviathan to impact LNG and boost Israel

The Israeli Leviathan natural gas project in the East Mediterranean, which will impact the regional LNG market, has taken a positive final investment decision to proceed with phase one of the development plan to come on stream by the end of 2019.

Delek Group of Israel, whose two subsidiaries are developing the venture with Noble Energy of the US, said phase one of Leviathan will have an annual capacity of 12 billion cubic metres of natural gas.

"The final investment decision in Leviathan, following the Natural Gas Outline Plan, is not only a substantial step forward for Delek Group, but a major leap for the Israeli energy industry and economy," stated Asaf Bartfeld, President and Chief Executive of Delek.

"Developing Leviathan and pursuing more export agreements, coupled with supply to the domestic market, will ensure energy security for Israel and will add to Delek Group's stability," said Bartfeld.

Delek confirmed earlier that loan documents were signed for up to $2.5 billion for the development of the East Med project to supply pipeline natural gas to regional customers such as LNG importer Jordan.

The overall costs of phase one work for Leviathan is given by Delek as $3.75Bln.

Delek subsidiaries, Avner Oil Exploration and Delek Drilling, are the shareholders with Houston, Texas-based Noble.

Leviathan is the second-largest gas project in the region after Egypt's Zohr field and has estimated resources of 22 trillion cubic feet of natural gas.

Analysts said the development of both Leviathan and Zohr will likely reduce the dependence of Egypt and Jordan on LNG imports.

The financing documents were signed between the Leviathan companies and a consortium of local and overseas banks, headed by HSBC Bank Plc of the UK and JP Morgan of the US.

Two Louisiana LNG export projects on banks of Mississippi and Calcasieu Channel sign GE deal

Our North America editor in New York

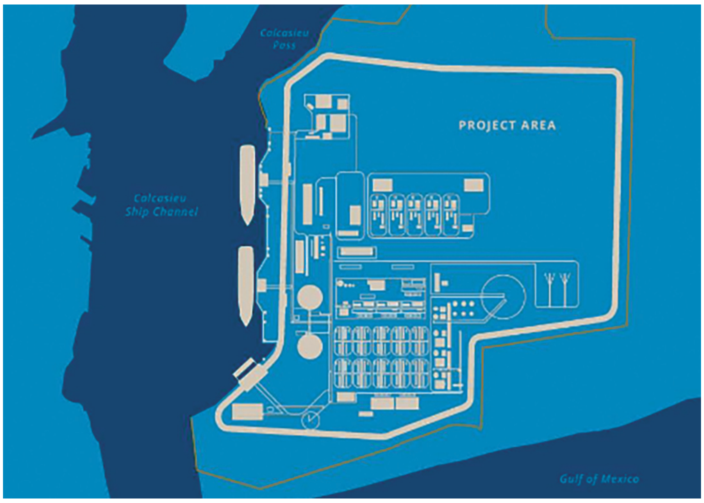
The US liquefied natural gas export projects being developed by Washington DC-based Venture Global LNG, involving two Louisiana plants, one on the banks of the Mississippi River and a second at Calcasieu Pass, has awarded a contract to the General Electric oil and gas unit to supply compressor power for liquefaction.

"This transaction is an LNG industry precedent-setting event. It will materially reduce project costs and risks and accelerate dramatically construction schedules," said VG LNG.

Committed

"GE Oil & Gas is committed to this market and their product suite. This, combined with their proven excellence in assembly, fabrication and service solutions, aligns with our low-cost strategy," the company said.

The VG LNG development business, comprising two ventures currently at various stages in the regulatory permit process, was founded by a banker and a lawyer.



Lay-out of project planned for Calcasieu Ship Channel

The two are Michael Sabel, an equity fund manager and venture capitalist, and Robert Pender, a former partner at Hogan Lovells, a global law firm.

Both are now joint chief executives and co-chairmen of the VG LNG company.

"GE Oil & Gas is a world-class company and an excellent partner who shares our vision for the future of baseload plants built with highly efficient, mid-scale liquefaction blocks," said Sabel and Pender in a joint statement.

The VG Plaquemines project will be located on 630 acres near river mile-marker 55 on the west side of the Mississippi, 30 miles south of New Orleans.

The Mississippi river project will produce 20 million tonnes per annum of LNG and will include 20 small-scale liquefaction Trains, four LNG storage tanks and three marine loading berths for ocean-going vessels.

The Federal Energy Regulatory Commission is conducting a review of the planned Plaquemines LNG project and the related Gator Express Pipeline venture.

VG is also planning to produce 10 MTPA of LNG at another Louisiana project being developed at Calcasieu Pass.

The company has acquired a 1,000-acre site for the Calcasieu Pass plant to be located at the intersection of the Calcasieu Ship Channel and the Gulf of Mexico.

Rod Christie, Chief Executive of GE Oil & Gas Turbomachinery, said the agreement with the two VG ventures was "an ideal fit" for VG LNG's low-cost strategy.

"As a recognized technology leader in the LNG industry, we share Venture Global LNG's desire to innovate technically and operationally to deliver the LNG facilities of the future," said Christie.

"Our track record in the LNG space positions us well as a partner that will deliver this comprehensive mid-scale solution, which incorporates a GE LNG process system, compression, electric motors, power generation, pre-treatment and electrical distribution," Christie explained. ■

Monaco-based GasLog swings to loss despite being key shipper of US LNG from Sabine Pass

GasLog, the Monaco-based LNG shipping company with a fleet of 22 vessels in operation, posted an annual loss even though it was the most active shipper of cargoes from the US Sabine Pass export plant in Louisiana.

GasLog's annual loss amounted to $21.48 million compared with a profit of $10.82M in 2015.

GasLog vessels called at Sabine Pass eight times after the February start-up to lift cargoes from the plant owned by Houston-based Cheniere Energy.

Overall deliveries to customers from the Cheniere facility numbered 60 to 17 different countries, demonstrating the widespread appetite for US LNG. On a quarterly basis, GasLog turned a profit of $31.32m in the fourth quarter compared with a $5.52M profit in the same three months of 2015 and said it was "well positioned" for the shipping market recovery.

The GasLog customers include its main contract charterer Royal Dutch Shell, which inherited charters first taken out by BG Group, now part of Shell.

GasLog revenues were $126.5M for the fourth quarter compared with 07.4M for the same period of 2015 and $466.1M for the year versus $415.1M for 2015.

"The increase in revenues was mainly driven by the new vessel deliveries and on-the-water vessel acquisitions during the previous periods and fewer off-hire days due to scheduled drydockings," the company said.

Vessel operating and supervision costs were $29.4M for the fourth quarter compared with $24.6M for the same quarter the previous year and $112.6M for 2016 versus 98.6M for 2015.

GasLog is controlled by Peter G. Livanos, the Greek shipping executive who is Chairman of the company.

It was noted in the earnings report that the LNG shipping spot market continued to evolve as more spot cargoes became available. There was a 53 percent increase in spot charters in 2016, with 273 vessel voyages completed compared with 173 spot fixtures in 2015.

There were also 40 different LNG shipping charterers active in the spot market in 2016, comprising oil and gas majors, traders and individual LNG plants.

GasLog's contracted charter revenues are estimated to increase from $444.5M in 2016 to $486.5M for the fiscal year 2019, based on contracts in effect as of December 31, 2016, without including any extension options. ■

US engineer Fluor wins contract on Canadian liquefaction project sited north of Vancouver

Our North America editor in New York

Woodfibre is mid-scale with capacity of 2.1 million tonnes

Fluor Corp., the US energy engineering and construction company, said it won a contract for the Canadian Woodfibre LNG export project being developed at Squamish, north of Vancouver.

Fluor said it signed the deal with the US affiliate of Japanese LNG engineer JGC Corp. to provide construction-related support to the front-end engineering and design for the venture.

Indonesian

Planned for the site of a former pulp mill on the shores of Howe Sound in Squamish, Woodfibre is a mid-scale LNG facility with initial capacity of around 2.1 million tonnes per annum.

The Woodfibre project is being developed by Indonesian billionaire Sukanto Tanoto and his Pacific Oil and Gas company.

The scope of the contract will see Fluor provide construction planning and design services to support the FEED package and the development of the engineering, procurement and construction proposal.

JGC and KBR of the US are taking part in a FEED package and pricing run-off to secure the full EPC contract.

"With our industry-leading modular design and construction approach, Fluor will work closely with JGC to develop a project execution strategy that delivers capital efficiency and schedule certainty to Woodfibre LNG," said Pierre Bechelany, senior vice president of pipelines and LNG for Fluor, whose headquarters are in Irving, Texas. "Leveraging JGC's extensive LNG experience and Fluor's project execution and construction expertise, we look forward to helping Woodfibre LNG advance this project for the community and British Columbia," added Bechelany.

The Woodfibre development in 2016 became the first LNG export project in Canada to receive its full environmental approval from the federal government in Ottawa under the new tougher legislation. It has now also taken a final investment decision to proceed.

The liquefaction plant and infrastructure is on the traditional lands of the Squamish First Nation and they have been given some in-put on environmental issues and the cleanest technology choices. ■

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