# Oil and Gas News Briefs
# Compiled by Larry Persily
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## Japanese buyer says new projects must keep LNG costs below $10

(Reuters; March 7) - Global liquefied natural gas projects must control their costs to be profitable at current prices in order to compete against coal and renewable power, the president of Japan's biggest buyer of LNG told Reuters. Projects should be profitable below $10 per million Btu, or the assumption that emerging-market demand for LNG will rise could be called into question, said Jera Co. President Yuji Kakimi in an interview drawing from remarks he will give March 8 at the CERAWeek conference in Houston.

"It is a must to have the industry that can sustain itself at current LNG prices," Kakimi said. Jera is joint venture of Chubu Electric and Tokyo Electric. "Last year's spot prices ranged from around $5 to $10, and we have to have projects that are economical even at the low end of those prices. … Otherwise the expected golden age of LNG in the mid-2020s may not come because it is questionable whether developing and emerging nations would significantly increase purchases if the price keeps rising," he said.

Companies have struggled with investment decisions on new LNG projects as lower prices combined with rising costs in addressing environmental concerns put a question mark on project viability. Producers have typically insisted on long-term contracts to convince banks to fund them, along with a pricing link to oil. Jera has led the way among buyers in pushing for changes in contracts, including the oil-price link. "We have achieved big success in significantly lowering Asian LNG prices," Kakimi said. "When oil prices rise, will LNG become more expensive? I don't think such an age will return."

## Claims pile up for cost overruns on Australia LNG projects

(Bloomberg; March 6) - After splurging $200 billion on liquefied natural gas export plants in Australia, gas producers are locked in legal battles with contractors over who should shoulder billions of dollars in liabilities from construction delays and cost overruns. Chevron, majority owner of the $54 billion Gorgon LNG facility, along with Japan's Inpex (Ichthys LNG) and Australia's Santos (Gladstone LNG) are among the developers trying to claw back funds. The number of disputes is growing weekly in a chain reaction of litigation, which extends to small businesses that supplied materials and services.

"There are billions and billions of dollars of claims out there in the market, and claims of hundreds of millions of dollars are not uncommon," said Matthew Croagh, who handles LNG matters in Melbourne for the law firm Norton Rose Fulbright. Costs of completing eight Australia projects exceeded initial forecasts by $55 billion amid competition for labor, equipment and resources that pushed up prices and led to delays. Now, a market slump means companies may have to wait years to get a return on their investments.

The scale of disputes is shown in a 138-page brief filed by Santos in the Supreme Court of Queensland in December. The producer is suing U.S. contractor Fluor for $1.5 billion (US$1.1 billion) in damages for work on its $18.5 billion Gladstone LNG project. Santos has alleged delays in delivering on the construction contract, and asserts that Texas-based Fluor wasn't entitled to retain its fees. The claims "are without merit," Fluor said.

Other high-profile disputes include a $2.4 billion claim by Spanish-controlled engineers Cimic Group against Chevron and project manager KBR over a jetty project at Gorgon. The success of legal claims will ultimately dictate the profitability of LNG plants, which have already stretched some of their owners into uncomfortable debt levels, said John Cooper, a Brisbane-based partner with U.S. law firm Jones Day.

## Exxon pays $2.8 billion for stake in Mozambique gas project

(Financial Times; London; March 9) - ExxonMobil has emerged as the buyer for a 25 percent indirect stake in Eni's Mozambique operations after weeks of speculation that the Texan oil giant was the frontrunner. Italian group Eni had been looking for a partner to help bring Mozambique's vast offshore natural gas resources to the global market, with ExxonMobil tipped as the most likely candidate due to its existing exploration licenses in the southeast African country.

The agreed terms between ExxonMobil and Eni include a cash price of about $2.8 billion. Eni currently holds a 50 percent indirect share in the Mozambique natural gas development through a 71.4 percent stake in Eni East Africa. The deal will leave Eni and ExxonMobil with equal stakes in Eni East Africa of 35.7 percent each, with China National Petroleum Corp. holding a 28.6 percent stake.

Eni will continue to lead the smaller-scale Coral floating liquefied natural gas project proposal and all upstream operations in gas-rich Area 4 offshore Mozambique, while ExxonMobil will lead construction and operation of the much larger LNG facilities proposed for onshore, Exxon said in a statement March 9. ExxonMobil CEO Darren Woods called it "a major addition" to the company's global development portfolio.

## U.S. LNG helps move global market toward short-term sales

(Bloomberg; March 7) - A cargo of liquefied natural gas hauled from Louisiana in late December has become a symbol of how global trade is changing for a fuel increasingly seen as a cheap, cleaner-burning option for countries from Latin America to China and India. The tanker Maran Gas Achilles passed through the Panama Canal and was headed toward Asia at a speed of 20 knots when, suddenly, it made a sharp U-turn in the Pacific to Mexico's Manzanillo terminal on the southwest coast, where it unloaded.

The abrupt route change shows how the U.S., which began shale gas exports as LNG just last year, is creating a new paradigm in an industry that once revolved almost entirely around long-term contracts with set destinations. As the new kid on the block, exporters of U.S. liquefied natural gas from Cheniere Energy's terminal in Sabine Pass, La., are seeking the best price at any given time. As U.S. exports grow, it's a strategy that could shift the economics of LNG toward an emerging spot market akin to oil.

"The U.S. puts gas into places on short notice at a good price," said Jason Feer, head of business intelligence at ship broker Poten & Partners. "The market's becoming more short-term and the U.S. has been very effective at meeting those needs." The U.S. stands to become the world's third-largest LNG exporter by 2020, when it's expected to ship about 8.3 billion cubic feet of gas a day, 14 percent of the world's share, according to London-based consultant Energy Aspects. It's "a new world order" that not only promises to establish the U.S. as the swing provider but also allows emerging countries to take advantage of low prices, said Ted Michael, an LNG analyst with Genscape.

## Gorgon LNG expects to start production this month from third train

(Platts; March 8) - The third train at the $US54 billion Gorgon LNG facility in Western Australia is now expected to begin production this month, beating previous expectation of a second-quarter 2017 start, Chevron's executive vice president Jay Johnson said March 7. "Train 3 construction and commissioning has gone smoothly and we're expecting first LNG [production] before the end of this month, ahead of our previously announced schedule," he said. The project's first train started production a year ago.

"We applied the experience gained during the construction, commissioning and early operations of Train 1 to both Trains 2 and 3," he said. As a result, Train 2, which started production in October 2016, achieved over 90 percent of nameplate capacity within a week of beginning production and has been performing "very well," Johnson said. LNG plants usually require six months to ramp up to full capacity, but each plant is different and some plants only take a few weeks, while others can take longer than six months.

At full capacity, the Gorgon facility will be able to produce 15.6 million metric tons a year of LNG, with a domestic gas plant to supply almost 300 million cubic feet of gas per day to Western Australia, Chevron said. The increased production at Gorgon will help in making Australia the world's largest LNG exporter, surpassing Qatar, which Platts Analytics expects to happen in 2019. The Gorgon project is a joint venture of Chevron, ExxonMobil, Shell, Osaka Gas, Tokyo Gas and Japan's largest LNG buyer Jera Co.

## Petronas declines to give timeline for LNG project in B.C.

(Financial Post; Canada; March 8) - The head of the consortium proposing to build the multibillion-dollar Pacific NorthWest LNG project at Prince Rupert, B.C., declined to provide a timeline on a possible final investment decision March 8, as the market for large-scale liquefaction facilities continues to weaken. “We’re doing a total review of the project, and taking into account all the cost-optimization options,” said Petronas CEO Datuk Wan Zulkiflee Wan Ariffin. “That is still ongoing.”

Malaysia-based Petronas is the largest stakeholder in the LNG project. An investment decision on the proposal has been delayed for years amid a weakened outlook for LNG markets and environmental opposition to the project. The Petronas CEO said the company still considers its Canadian LNG push a worthwhile effort, as the company has already invested heavily in its sprawling gas asset base in northern British Columbia.

“We’ve got huge resources there, and that’s something we’re determined to monetize,” Wan Zulkiflee told the Financial Post. Gas producers in the Montney formation, as it is known, have been squeezed in recent years as a flood of new gas production in the U.S. Midwest enters the market. That supply glut has been exacerbated by a pipeline shortage in northern B.C., as midstream companies scramble to expand capacity.

## Canada not giving up on LNG projects, just waiting

(Calgary Herald columnist; March 8) - Canada’s quest to become a liquefied natural gas powerhouse has often seemed like a frustrating game of whack-a-mole. Just as the country gets close to knocking one out of the park and fulfilling its dream of building a major LNG development, the opportunity vanishes. Despite weak prices, a glut of global supply and continuing challenges to get developments approved, there’s still hope that several projects will get built, providing an important outlet for Canadian gas producers.

Just don’t bet when it will happen. At a Canadian Energy Research Institute conference March 7, one of the developers of a planned LNG project in Kitimat, B.C., expressed optimism, even though the timeline is unclear. Robert Dakers, commercial director for LNG Canada — an estimated $40 billion venture led by Shell — said the consortium is fine-tuning the project and analyzing options. An investment decision was expected last year but went on hold amid low prices, and no new decision date has been announced.

“No doubt there are competitive challenges and we’re actively trying to address those,” Dakers said. “There are significant new [LNG] supplies coming on the market, but that supply gap is opening in 2020 and beyond — and that is where Canadian LNG has to compete,” he said. Mark Oberstoetter, with Wood Mackenzie’s Canada upstream team, expects a couple of smaller Canadian projects will proceed, along with one larger-scale LNG plant in the back half of the 2020s. “It’s going to take some time for Asian demand to catch up. We think that happens later on in (the) 2020s,” he said at the conference.

## Australia struggles with protecting local users from LNG export boom

(The Observer; Gladstone, Australia; March 7) – Australia's gas industry is warning that any effort to restrict exports by Curtis Island LNG plants would have a "negative impact." To feed their operations, the export plants are purchasing an increasing amount of third-party gas that would otherwise go to the domestic market. A Credit Suisse analysis found that the East Coast market — with its LNG plants the largest users — could be short between 75 billion and 235 billion cubic feet of gas a year, starting in 2018.

The analysis said a short-term fix could include a temporary restriction on third-party gas purchases and exports to Asia. "If an industrial user can't secure gas from even 2019 onward, they will have to make a decision on the life of their business," Credit Suisse analyst Mark Santer said. Rhys Turner, director of the Australian Petroleum Production and Exploration Association, said fewer limits on exploration, creating more supply, would be a better fix to tight supplies and rising domestic prices. "Restricting how and where gas can be sold will discourage development and deliver less supply."

Leading oil and gas consultancy group Wood Mackenzie has also warned against any export ban. Analyst Saul Kavonic said the three LNG projects in Gladstone should be looking at optimizing their gas supplies. "The best solution would be increased and lower-cost gas production, but this requires a supportive investment environment, and state drilling moratoriums and any retrospective imposition of adverse regulatory changes does put that at risk," he said.

## Interest wanes in floating LNG production vessels

(Reuters; March 5) - Once considered the future of gas production, floating liquefied natural gas projects have been firmly relegated to the backburner as global gas producers seek cheaper ways to compete with a surge in U.S. shale supplies and slumping prices. FLNG projects — mega vessels fitted with gas production, liquefaction and storage capabilities — allow producers to tap offshore gas wells and ship LNG without having to build costly pipelines to onshore plants. Owners can move the vessels to new fields when production at an old one ends, slashing asset end-of-life costs.

The projects were popular with producers in the early-2010s when gas demand and prices were rising, and before the shale revolution unlocked U.S. reserves that crushed global prices. But a combination of the huge costs of building a ship with the necessary equipment — fit into spaces a fraction of the size of land-based plants — and a collapse in LNG prices has halted interest in adding to the short list of floating investments: Shell's long-delayed $12.6 billion Prelude project off northwest Australia, due to start up in 2018, and Petronas' Satu project in Malaysia, which could ship its first gas this year.

Woodside Petroleum shelved plans to build the $30 billion Browse FLNG project off western Australia last March because of global oversupply of the fuel. GDF Suez and Australia's Santos also scrapped a proposed FLNG project for the Bonaparte gas field off northern Australia in June 2014. "With the market headed for oversupply until the early-2020s, it would be difficult to find a bankable new FLNG project in the near term," said Edmund Siau, a gas analyst at energy advisory FGE.

## Papua New Guinea wants to keep some of its gas at home

(Bloomberg; March 5) - Less than three years after it began sending one of its most precious resources overseas, Papua New Guinea's future may be determined by how much of it stays at home. The tiny Pacific island nation wants a portion of its natural gas to stay in the country, said Petroleum and Energy Minister Nixon Duban. The gas pumped from remote mountain ranges and forest-covered hills could spur industries and generate cheaper power for an electricity-starved population.

"The challenge our government faces is finding the right balance," keeping some gas but not driving away new exploration, Duban said. The developing country of less than 8 million people is one of the poorest in Asia, with rising crime rates, high unemployment, and almost half the population living in squatter settlements. It's counting on its energy resources to boost finances and attracted needed foreign investment. But is also needs to keep some of the gas for itself, for sustained development.

When the government signed deals almost nine years ago that led ExxonMobil to build a $19 billion liquefied natural gas terminal, it allowed the energy giant and its partners to export all of the gas it found. The concession was made because the country was an unproven gas exporter, Prime Minister Peter O'Neill said. That's changed. "Now we want to secure some to go to the petrochemical industry." The government is in talks with two companies to build petrochemical plants to convert gas into methanol.

## U.K. takes first LNG cargo from controversial Peruvian gas project

(BBC; March 4) - A Shell tanker docking in the U.K. is transporting a controversial cargo of natural gas from the Peruvian Amazon. It is thought to be the first shipment to the U.K. of liquefied natural gas from the Camisea project in the rainforest 60 miles from Machu Picchu. Supporters of fracking say the U.K. should frack its own gas, rather than importing gas from sensitive regions like the Amazon. But opponents of hydraulic fracturing of U.K. wells say it can pollute water sources and exacerbate climate change.

The gas project at the Camisea field has been hugely contentious. A report by the human rights organization Survival International blamed developers for bringing diseases that killed people from previously uninfected tribes. But they were later praised for minimizing environmental damage and for boosting the economy of Peru. The same report also said indigenous people had not shared the gains. The single-train Peru LNG plant started up in 2010. The partners are U.S-based Hunt Oil, Shell, Marubeni and a South Korea firm.

Man environmentalists in the U.K. oppose fracking, and only a small number of wells have been approved despite industry interest.

## LNG developers, liquefaction equipment makers work to reduce costs

(Platts; March 6) - Developers of LNG export projects are working more closely with liquefaction equipment manufacturers than they have in the past to trim their production costs before making a final investment decision, a GE executive said March 6. The manufacturers, unwilling or unable to lower their profit margins, face the challenge of coming up with more efficient technology that can drive down their own costs so they can help developers find the right price point for their projects, said Rod Christie, president and CEO of turbomachinery solutions at GE's Oil & Gas unit.

"There is a lot of due diligence being done right now," Christie said on the sidelines of the annual IHS CERAWeek conference in Houston. While 2016 was the year for the first U.S. exports of LNG produced from shale, 2017 is bringing even more new entrants and increased competition to the global market.

The industry has been closely watching to see at what point the market becomes too saturated to support further development. Some final investment decisions that were expected this year have been pushed off to 2018 and beyond. A number of developers with proposals in the permitting queue have announced preliminary offtake agreements with buyers, but firm final agreements have so far been fleeting.

## Legislation would require U.S.-flagged LNG tankers

(MarineLink; March 3) - New legislation proposed this week would require up to 30 percent of U.S. liquefied natural gas exports travel on U.S.-flagged vessels. The U.S. is expected to continue ramping up its LNG exports in the coming years and become a net exporter by 2020, yet there are currently no U.S.-flag carriers to carry the cargo. No U.S. shipyard has constructed an LNG carrier since the 1970s.

The legislation was sponsored by Rep. John Garamendi, D-CA., ranking Democrat on the Subcommittee on the Coast Guard and Maritime Transportation. Co-sponsors include Reps. John Duncan, R-TN., and Duncan Hunter, R-CA. The sponsors called their bill (HR1240) the Energizing American Maritime Act.

South Korean and Japanese shipyards lead the world in LNG tanker construction, with China and India looking to break into the trade. A 2015 U.S. Government Accountability Office report on the potential for U.S.-built LNG tankers cited cost as a big factor: The ships built in the U.S. could cost two to three times the $200 million to $225 million price charged in Asian shipyards. Higher shipping costs on U.S. carriers would decrease the competitiveness of U.S. LNG, the report said.

## U.S. continues adding gas pipeline capacity

(U.S. Energy Information Administration; March 7) - Several large natural gas interstate pipeline projects have come online in recent years to support the shifting geography of U.S. gas production. The Marcellus and Utica shales in the Northeast, where production has grown and resources are abundant, are major drivers for pipeline development, the U.S. Energy Information Administration reports. The Federal Energy Regulatory Commission last year certificated 17.6 billion cubic feet a day of new gas line capacity.

So far in 2017, FERC certificated more than 7 bcf a day of additional new pipeline capacity before losing its quorum following the departure of one commissioner in February, which left just two sitting commissioners and three vacant seats. The seven projects certificated during the first few weeks of 2017 include more than 1,500 miles of gas pipeline construction and expansions and are concentrated in the eastern half of the U.S., with projected 2017 and 2018 in-service dates.

Two large-capacity projects, the Rover Pipeline and the Atlantic Sunrise Pipeline, were among those approved in early 2017. Rover will move gas out of the Utica shale play that spans parts of New York, Pennsylvania, West Virginia, and Ohio. The $4.2 billion project will deliver gas in Ohio, West Virginia, Michigan and Ontario, with full capacity at 3.3 bcf a day. Construction will begin in the first quarter of 2017. Atlantic Sunrise will move gas out of the Marcellus shale to the mid-Atlantic and southeastern states. The $2.6 billion project will add 1.7 bcf a day of capacity; construction will start mid-2017.

## Exxon plans to spend big on Gulf Coast petrochemical capacity

(Wall Street Journal; March 7) - ExxonMobil said it plans to spend about $20 billion over 10 years, counting back to 2013, on refineries, petrochemical plants and other projects in and around the Gulf of Mexico, CEO Darren Woods said March 6, underscoring how the giants of the global energy industry are turning to America. Woods outlined the spending plan, largely aimed at creating new outlets for U.S. natural gas, in a speech at the annual CERAWeek conference in Houston.

Exxon's Gulf Coast spending will continue through at least 2022, the company said. "Hydraulic fracturing has opened up a whole new energy future for the U.S., and potentially for many other countries," Woods said. "We have managed, in the U.S., to accomplish what was practically unthinkable only a decade ago." Exxon said it plans 10 expansions at facilities around Beaumont and Baytown, Texas, and Baton Rouge, La., and wants to build a new chemical plant at a location to be determined along the Gulf.

Companies such as Exxon are making immense investments in their refining, chemicals and export operations. From 2010 to 2020, such investments are expected to reach almost $180 billion, according to the American Chemistry Council, about 70 percent of which will go to the Gulf Coast. In addition to Exxon's plans to build plants or expand facilities to turn gas into the building blocks of plastics, companies including Shell, Chevron Phillips Chemical and others plan similar investments or will expand production of fertilizer, polymers used to make lubricants, and even tennis racket strings.

## Competition ahead for gas sales to U.S. power plants

(Longview News-Journal; Texas; March 5) - The seemingly insatiable appetite for natural gas at the nation's power plants could be on the verge of an abrupt hiatus. Analysts from around the energy sector are forecasting gas demand from the U.S. power sector will at best flat-line and possibly fall off significantly over the next five years as federal energy policies and rapidly changing market dynamics collide.

A loss of business from the gas industry's largest domestic customer would come as gas-fired plants come under increasing competition from wind and solar farms — and to a lesser extent coal, which President Donald Trump promises to support. "You have wind turbines getting more efficient. And a lot of solar is coming online," said Prajit Ghosh, head of research for North America power and renewables at analysts Wood Mackenzie. "The only way gas markets can increase is by displacing coal and nuclear."

For gas producers, these trends mean they'll need to focus on new markets including liquefied natural gas sales overseas and petrochemical plants in the U.S. The possibility of a nose dive in demand from the power sector is enough to get the attention of the gas-producing industry, which relies on power plants for roughly one-third of its business. Whether LNG and petrochemicals will, in the short term, be enough to cover losses in the power sector remains to be seen.

## Export sales by U.S. refineries more than double a decade ago

(Bloomberg; March 6) - When PBF Energy scooped up a refinery from ExxonMobil on the Mississippi River in 2015, it wasted no time sprucing up the plant with an eye toward quickly resuming lucrative fuel exports. Within three months, PBF was ready to load its first tanker for shipment abroad. By late last year, the New Jersey-based company was exporting 22,000 barrels a day of fuel, or 16 percent of the refinery's output. Now, it wants to boost that to almost 25 percent.

PBF isn't alone in this push. From major producers such as Chevron to specialized refiners including Valero Energy, the U.S. refining industry has shifted its game over the past five years, taking advantage of gaps left by struggling refiners in Latin America, Africa and Asia. Along the way, it's transforming what had long been a largely domestic business into a global venture. "U.S. refiners are now the refiners for the world," said Ivan Sandrea, head of Sierra Oil & Gas, which wants to bring U.S. fuels into Mexico.

U.S. firms last year exported a record 3 million barrels a day of refined products, more than double the 1.3 million shipped a decade ago. Gasoline led the surge, with exports hitting an all-time high of almost 1 million barrels a day in December, up 10-fold from a decade ago. U.S. refiners are enjoying new supplies of relatively cheap and high-quality crude from the Permian, Bakken and other shale basins. The combination is spurring companies to invest in new refining capacity, particularly along the Gulf of Mexico coast.

## IEA warns investment cutbacks could lead to tight oil supply

(Reuters; March 6) - Global oil supply may struggle to match demand after 2020, when the pinch of a two-year investment decline in new production could leave spare capacity at a 14-year low and send prices sharply higher, the International Energy Agency said March 6. Investors generally are not betting on a sharp rise in the price of oil any time soon, but the contraction in global spending in 2015 and 2016 and growing global demand means the world could well face a "supply crunch" if new projects are not soon given the go-ahead, the IEA said in its five-year market analysis and forecast report.

Most supply growth is expected to come from the United States, where the IEA said shale, or light-tight output, will grow by 1.4 million barrels per day by 2022 even if prices remain close to current levels. The response from the production side could be even stronger if prices rise. "The United States responds more rapidly to price signals than other producers. If prices climb to $80 a barrel, U.S. light-tight oil production could grow by 3 million barrels per day in five years," the IEA said.

"We are witnessing the start of a second wave of U.S. supply growth, and its size will depend on where prices go," said Fatih Birol, IEA executive director. "But this is no time for complacency. We don't see a peak in oil demand any time soon. Unless investments globally rebound sharply, a new period of price volatility looms on the horizon." U.S. shale investments are picking up, and there is evidence of supply growth from Canada and Brazil, but the IEA said early indications of global spending were "not encouraging."