

# Oil and Gas News Briefs

## Compiled by Larry Persily

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#### **Qatar will use its LNG riches to expand abroad**

(Bloomberg; Feb. 9) - Qatar Petroleum is the hidden giant of the global energy industry. The country's colossal natural gas resources allow the state-run company to pump more oil and gas than Rosneft or ExxonMobil. After almost two decades of breakneck growth, however, the company needs to change tack. QP plans to expand abroad as its crude output declines and the government bars new drilling in the offshore North Field, home to the gas that made Qatar the world's leading supplier of liquefied natural gas.

QP will have no problem paying for overseas expansion. Qatar's energy minister, Mohammed Al Sada, said this week that almost all the country's LNG terminals have been paid for. And despite a near-term glut, he said LNG will be in short supply by 2021. Qatar's energy story, however, began with oil. The nation of 2.6 million residents started drilling wells in 1939 and exported its first oil 10 years later. In 1971, Shell discovered the offshore North Field, which, together with the connected South Pars deposit in Iran, is the world's biggest reservoir of non-associated gas.

It took more than 20 years for Qatar Petroleum to partner with ExxonMobil, Shell, Total and ConocoPhillips — as well as with Japanese customers Mitsui & Co. and Marubeni Corp. — to start building 14 liquefaction plants that chill gas for tanker shipment overseas. By 2006, Qatar was the biggest exporter of liquefied natural gas; it shipped 78 million tons in 2015, or 32 percent of global supply. Qatar Petroleum, through its LNG-producing divisions Qatargas and RasGas and other investments, holds stakes in an integrated supply chain helps make its LNG the cheapest in the world to produce.

#### **Korea Gas interested in U.S. shale gas 'as tool against trade pressure'**

(Reuters; Feb. 9) - Korea Gas, the world's No. 2 buyer of liquefied natural gas, would be "interested" in participating in U.S. shale gas projects, with such investment curbing any potential trade pressure on South Korea from the U.S. government. President Donald Trump, who has dropped out of the 12-nation Trans-Pacific Partnership pushed by his predecessor, Barack Obama, has repeatedly criticized the trade policies of South Korea's neighbors, Japan and China.

"U.S. trade pressure is likely to increase, but U.S. gas investments can work as a tool against trade pressure," Lee Seung-hoon, CEO of state-run KOGAS, said at a forum in Seoul. "Securing U.S. shale gas is crucial because it's an important resource," said Lee, adding that such imports would help keep Korea's supplies stable. KOGAS in 2012

signed a deal with Cheniere Energy to bring in 2.8 million tonnes of LNG annually for 20 years starting this year from Cheniere's terminal in Sabine Pass, La. Lee said the first cargoes from the deal are expected to arrive in South Korea this summer.

But Lee said South Korean demand for LNG would keep falling in the short-term due to increased electricity output from nuclear and coal-fired power plants. The country is the world's second-biggest LNG importer after Japan. "This year South Korea's LNG demand is expected to remain flat at around 30 million tonnes," Lee told Reuters.

### **Asian LNG market: New buyers, new supply and lower prices**

(Asian Oil and Gas; Feb. 10) - Last year, Asia's emerging liquefied natural gas buyers contracted for three times as much new supply as the region's traditional buyers. "Across Asia, new entrants are on the rise," said Kerry-Anne Shanks, head of Asia-Pacific gas and LNG research at Wood Mackenzie. Regardless, a 10 percent increase in global supply and a 31 percent increase in uncontracted supply are set to drive down prices, with buyers in Asia the main beneficiaries, the global energy consultancy said.

It's all part of a changing market. Supported by emerging players and the ramp-up of new supply contracts, China is set to overtake South Korea as the world's second largest LNG buyer. "Emerging LNG buyers are being attracted by more generous LNG deals than have previously been on offer. This means LNG buyers can potentially secure LNG more cheaply than buying gas second-hand from market incumbents," Wood Mackenzie said.

With emerging buyers eager, and with more LNG supply available, 2017 will test the resolve of Asian policymakers to really open their markets, Shanks said. Infrastructure access remains a key challenge for new entrants. "We'll be watching whether China's new third-party access regulations actually translate into improved regasification and pipeline access for emerging LNG importers," Shanks said.

### **IEA says 'footloose' U.S. LNG will shake up global market**

(Nikkei Asian Review; Feb. 10) - Australia's ascendancy to global leadership in liquefied natural gas exports by 2019 could be short-lived, with rivals in the U.S. on track to lift their own exports substantially in the 2020s on the back of an expected energy boom driven by the new administration of President Donald Trump. Over the next decade, U.S. LNG, which the International Energy Agency calls "footloose," will dramatically shake up global trade, putting pressure on prices and forcing changes in supply deals.

In its latest World Energy Outlook, the IEA said it expects more flexible prices and terms in the LNG market — a "marked change" from the previous system of strong fixed-term

relationships between suppliers and customers. U.S. competition is likely to have an impact on key suppliers such as Australia, which sells all its LNG exports on long-term contracts to power utilities in Japan, South Korea, China and Taiwan. Other new LNG supplies from Southeast Asia, Africa and Russia could give buyers even more flexibility.

Australia may hold the top LNG export spot for about five years before the U.S. takes the lead as new LNG export terminals on the Gulf of Mexico and Atlantic coasts come fully online. Pricing will be crucial, particularly for buyers in India and China. LNG prices soared above \$20 per million Btu in 2014, then collapsed to about \$4 in the first half of 2016 before coming back recently, driven by a cold Asian winter that pushed prices to \$8 in early February. The benchmark U.S. gas price is now about \$3.60. Liquefaction, shipping and regasification adds \$3 to \$5 — that makes for wafer-thin margins at best.

### **Japanese owner sees no delay in start-up at Australia LNG project**

(Reuters; Feb. 10) - Japan's biggest oil and gas explorer Inpex Corp. is sticking to its plans to start up its huge Australian Ichthys liquefied natural gas export plant in July-September this year, despite trouble over the completion of a power station. The project was dealt a blow last month as Australian engineering firm CIMIC — involved in building the facility's power station — announced it was pulling the plug. That led to many to expect production delays.

"The contractor is saying the construction will be finished as scheduled," Masahiro Murayama, a senior Inpex officer, said Feb. 10. "I'm not worried that this would cause a big change in the overall schedule." Ichthys will have a capacity of 8.9 million metric tons a year. Gas from an offshore field will be piped to an onshore liquefaction plant and marine terminal. The partners are Inpex, 62.245 percent; Total, 30 percent; Taiwan's CPC, 2.625 percent; Tokyo Gas, 1.575 percent; Osaka Gas, 1.2 percent; Kansai Electric, 1.2 percent; Chubu Electric, 0.735 percent; and Toho Gas, 0.42 percent.

### **Argentina wants to develop shale gas so it can end LNG imports**

(U.S. Energy Information Administration; Feb. 10) - Despite its estimated 802 trillion cubic feet of unproved, technically recoverable shale gas resources, Argentina's dry natural gas production declined each year from 2006 to 2014, and the country has shifted from a net exporter of gas to a net importer. In 2015, gas production increased for the first time since 2006, as reported by the U.S. Energy Information Administration, as Argentina worked to boost production from key shale gas areas to reduce its imports.

Imports, which accounted for 23 percent of Argentina's gas consumption in 2015, came by pipeline and, to a lesser extent, as liquefied natural gas. The government hopes to stop importing LNG by 2022. Argentina is the third country in the world, after the U.S.

and Canada, to commercially develop tight oil and shale gas. Argentina's Vaca Muerta formation has an estimated 308 tcf of technically recoverable shale gas.

More than 588 vertical and horizontal shale wells have been drilled and completed in the Vaca Muerta shale play since 2010, with production averaging about 175 million cubic feet of gas per day in 2015 — about 5 percent of the nation's gas production in 2015 of 3.5 billion cubic feet per day (vs. consumption of 4.5 bcf a day). Argentina's national oil and gas company YPF has initiated joint-venture pilot projects with partners such as Chevron, Dow Chemical and Malaysia's Petronas to further develop the play. But while drilling costs have declined, they are still higher than YPF's target costs.

### **LNG import terminal in Mississippi sits idle**

(Sun Herald; Gulfport, MS; Feb. 5) - Where is Gulf LNG with its plans for an \$8 billion revamp of its facility in Pascagoula, MS? The plant was built for \$1.1 billion six years ago to import liquefied natural gas, store it, warm it back to a gaseous state and feed it into the pipeline grid. However, it has taken in no LNG since the two christening shipments in 2011 as U.S. shale gas production killed any need for imported gas.

Gulf LNG, which is 50 percent owned by Kinder Morgan of Texas, sought federal permission four years ago to expand the facility and export gas to Asia. But adding a liquefaction plant is costly, and Kinder Morgan is not too far along in the review process at the Federal Energy Regulatory Commission. The company has filed with regulatory agencies and said it is "engaged in commercial discussions with potential customers."

Though the import terminal is idle, it is generating revenue for Kinder Morgan. Two customers that signed up to reserve capacity for importing LNG through the terminal have to pay fixed charges — regardless if they ever bring a ship to the dock. The Port of Pascagoula receives \$1 million a year in rent. And while the facility received a 10-year tax exemption, it still pays county, city and school taxes — \$6.76 million in 2016.

### **Texas company picks Korean shipyard to build LNG import terminals**

(The Korea Times; Feb. 9) – Daewoo Shipbuilding & Marine Engineering is expected to clinch the South Korean company's first order of the year, worth up to 1.8 trillion won (\$1.6 billion), which would greatly help the ailing business. According to a company official, the debt-ridden shipyard signed a letter of intent with Texas-based Excelerate Energy to build seven large liquefied natural gas storage and regasification ships.

Under the agreement, Excelerate Energy will order one vessel in the second quarter of this year, and could order six more depending on global demand for the ships that can receive imported LNG, store in, regasify it and then feed it into an onshore pipeline

distribution system. Considering that such ships have a market price of \$230 million, the deal could reach \$1.6 billion if Excelerate orders all seven vessels.

Excelerate operates nine floating storage and regasification ships in Brazil, Argentina, Puerto Rico, Pakistan and elsewhere. In 2011, the company ordered the world's largest such vessel from Daewoo, and has since continued its relationship with the shipbuilder. Excelerate CEO Rob Bryngelson said he expects the agreement with Daewoo will provide the ability to respond to the world's increasing demand for gas. The ships are popular for their lower cost and faster construction than larger onshore LNG terminals.

### **Conversion costs will slow down maritime industry switch to LNG**

(Platts; Feb. 6) - The use of LNG for bunkering in the U.S. maritime industry will take some time as ship owners and suppliers consider the costs of building infrastructure and assess the risks, according to industry sources. "Most companies won't even look at that type of project unless the return on investment is at least 10 percent, and depending on the capital leverage the return on investment may need to be closer to 18 to 20 percent," a shipping expert with more than 50 years of industry experience said.

The International Maritime Organization decided last fall to reduce emissions by nearly 87 percent for oceangoing ships in international waters. Starting in January 2020, ships will be required to burn fuel with a maximum sulfur content of 0.5 percent, except when traveling in designated Emission Control Areas where the limit is 0.1 percent. Although in Asia and Europe, shipowners and ports are working on the transition to LNG fueling ahead of the new regulations, in the Americas the industry is still assessing the option.

"The availability of fuel where we need it" is an issue, said Mikkel Borresen, of a Danish shipping company that operates about 240 ships and supplies marine fuel in major ports such as Rotterdam, Singapore and Houston. "So unless we see massive investment in LNG installations around the world, I am afraid the availability of fuel will be a major concern." In addition to fuel depots, the tankage and other onboard systems needed to store and burn LNG are more complex and larger than traditional bunker fuel engines. Ships would lose space that is used to hold cargo, which would cut into revenues.

### **Advocates say Australia should adopt flat royalty on gas projects**

(Crookwell Gazette; Crookwell, New South Wales; Feb. 10) - Australia could reap an additional \$6 billion in tax revenue over the four-year budget horizon if natural gas projects in federal waters are brought under a simple royalty scheme that already applies to other gas projects. A flat 10 percent commonwealth royalty would force multinational-owned mega-projects like Chevron's Gorgon liquefied natural gas project to pay more for the publicly owned resource it extracts, tax advocates say.

The Tax Justice Network proposed the revenue fix in its submission to Treasurer Scott Morrison's review into Australia's petroleum resource rent tax. Morrison announced the review in December, after news media reports raised concerns that the profits-based tax would not deliver significant revenue for years. Companies are allowed to recover their entire investment — exploration and development — before paying the tax. Tax Justice has called for a 10 percent royalty base, in addition to the profits tax.

The Australian Petroleum Production and Exploration Association said any changes would discourage investment. The association said the tax regime, with its capital recovery, was successfully transforming Australia into the world's biggest exporter of LNG. It said the current level of tax receipts — just \$800 million a year — was a result of a "period of very low prices ... [and] high project expenditures." Tax Justice sees it differently: "This royalty regime would support the important but basic principle that the Australian people should be paid a floor or minimum price."

### **Alberta researchers say fracking may be the cause of quakes**

(Edmonton Journal; Feb. 8) - Houses were shaken in Fox Creek, Alberta, last winter by one of a growing number of earthquakes in Western Canada that might be caused by fracking, a University of Alberta study said. The seismic event 160 miles northwest of Edmonton in January 2016, which registered 4.93 on the Richter scale, was Alberta's largest earthquake in a decade and was followed by hundreds of smaller aftershocks.

The Alberta Energy Regulator said the quake was triggered by fracking operations that changed stresses in faults in the deep Duvernay formation. Calgary-based Repsol Oil Gas Canada had to stop work on a well for almost three months until the regulator approved modified fracking operations at the site. Ruijia Wang, a PhD student in the university's physics department, said Feb. 8 there were six earthquakes just under magnitude 4.0 near Fox Creek in 2016, a number that has risen the past couple years.

"I can't say they're all due to hydraulic fracturing, because we're doing research on that. ... I would say they might have the potential," she said. "Our group and other communities of researchers ... are all working together to understand why and how these earthquakes are taking place." None of the quakes has caused damage or injuries. The energy regulator requires companies in the Fox Creek area to report seismic activity near their operations with magnitudes greater than 2.0 on the Richter scale, and shut down work at magnitudes greater than 4.0.

### **Debate ensues over coal gasification plants in China**

(New York Times; Feb. 7) - When scientists and environmental scholars scan the grim industrial landscape of China, a certain coal plant near the rugged Kazakhstan border stands out. On the outside, it looks like any other modern energy plant — shiny metal towers loom over the grassy grounds, and workers in hard hats stroll the campus. But in those towers, a rare and contentious process is underway, spewing an alarming amount of carbon dioxide, the main greenhouse gas accelerating climate change.

The plant, in the country's far west, converts coal to synthetic natural gas. The process, called coal-to-gas or coal gasification, has been criticized by Chinese and foreign scholars and policy makers. For one thing, it is relatively expensive. It also requires enormous amounts of water, which exacerbates the chronic water crisis in northern China. And worst of all, critics say, it emits more carbon dioxide than traditional methods of energy production, even other coal-based ways.

Despite denunciations and a continuing policy debate, at least four such plants have begun operating in China in the past four years, pushed by local governments and state-owned enterprises in coal-rich regions. Dozens more are under consideration. No other country is considering building coal-to-gas plants on this scale. The technology's emerging use reveals the challenges China faces in reducing coal's central role in the economy, particularly in the north, which has some of the world's largest coal deposits.

### **Skeptics downplay ability of resource states to diversify**

(Casper Star-Tribune, WY; Feb. 5) - Before World War II, planes flying coast to coast needed a stopover, and Cheyenne, Wyo., was the safest route across the Continental Divide. Then came new technologies and better planes, and the stopover was left behind like an old railroad hub miles from a new interstate highway. In the '70s, some said Wyoming could be home to the manufacturer of Barbie dolls. From alfalfa to cattle to tourism, the desire to diversify has a long history in Wyoming, but the winner has long been energy. For all the effort to diversify the economy, some say it just can't be done.

Colorado School of Mines professor Graham Davis said that if Wyoming was going to become a hub for non-extractive industries, it already would have happened. "I can tell you there have been many, many regions and nations that have tried to diversify away from natural resources through planning exercises," Davis said. "None have succeeded." He said Colorado, a state that moved from mining, oil, coal and precious metals to boasting a variety of major industries including high-tech, did not take concerted steps to diversify its economy. "It's just market forces," Davis said.

Alaska, another state that depends primarily on energy, has likewise struggled to diversify. Clive Thomas, a longtime economist in Alaska who now teaches at Washington State University, said Wyoming and Alaska have much in common and will both likely continue to flounder in efforts to attract other high-paying industries. "Alaskan politicians, especially those who have never taken a politics class, think that somehow if

they have the right policies — and get rid of this government or that government — that Alaska can diversify its economy,” Thomas said. “It can never do that.”

### **Canada’s farthest north oil producing wells set to close down**

(Bloomberg; Feb. 9) - When oil topped \$100 a barrel, the remote community of Norman Wells was gearing up to be the “Dubai of the Mackenzie River,” with oil revenue bringing prosperity to all. Now, with oil at half that price and one of Canada’s oldest wells set to close, the future is less certain for the 750 residents in the Northwest Territories town. Imperial Oil will probably shut in the wells this month, ending almost a century of production in the area 100 miles south of the Arctic Circle. Production is being halted after the lone pipeline that moves the oil was brought down late last year.

The town that grew up along the Mackenzie River back in 1920, when oil was first pumped, has lived off the operations ever since. Gas produced from the site is used to generate electric power for the homes. Diesel-powered generators are the backup. Repairing the pipeline and resuming production will, at best, only buy the town time, said Mayor Nathan Watson. Oil output dropped to just under 9,000 barrels a day last year, down 73 percent from its 1991 peak of 33,000 barrels. Last September, Imperial said it was looking to sell Canada’s farthest north oil-producing site — and still is.

But that will be almost impossible unless the oil line is repaired, the mayor said. The pipeline owner, Enbridge, said in November that concern about erosion and soil stability in an area of the Mackenzie River’s south slope prompted them to shut the line. Back in the days of \$100-plus oil, producers were showing interest in the region. Calgary-based MGM Energy was exploring alongside ConocoPhillips, Imperial Oil, Shell and Husky Energy in the Canol Shale of the territory’s central Mackenzie Valley. Producers had committed more than \$625 million in exploration spending at land auctions since 2011. But companies have since suspended work amid the biggest oil-price rout in decades.

### **Global oil stockpile eases as producers cut back production**

(Reuters; Feb. 10) - Global oil output plunged in January as OPEC and non-OPEC producers curbed supply to accelerate a market rebalancing following one of the largest oil gluts in a generation, the International Energy Agency said Feb. 10. Oil supplies fell by about 1.5 million barrels per day last month, including 1 million barrels from OPEC members, leading to record initial compliance of 90 percent with the deal to cut output for six months reached in December by big producers to boost prices.

"Some producers, notably Saudi Arabia, (are) appearing to cut by more than required. This first cut is certainly one of the deepest in the history of OPEC output cut initiatives," the IEA said. The agency said if the January level of compliance is maintained, the



output reductions combined with demand growth should help ease the record stockpile overhang. "It should be remembered ... that this stock draw is from a great height. At the end of the year they were still 286 million barrels above the five-year average level."

Complicating the picture and slowing the market rebalancing is the expected rising output of producers outside of OPEC. After falling by 800,000 barrels per day this year, non-OPEC output will grow by 400,000 in 2017. "Higher prices are fueling increased investments in U.S. light tight oil activity and long lead-time projects are coming on stream in Brazil and Canada," the IEA said.