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Japanese LNG buyers joining forces to win better deals

(Bloomberg; Jan. 17) - In the increasingly competitive world of Japan's energy market, there may be safety in numbers. Natural gas sellers, including smaller utilities, are considering clubbing together to get cheaper fuel from their suppliers and help undercut competitors in the 2.4 trillion yen (\$21 billion) retail gas market, which the country is opening to new players in April. Tokyo Gas, the country's largest gas utility by market capitalization, said it sees more than a dozen Japanese LNG importers possibly joining into three large partnerships to secure cheaper fuel through greater bargaining power.

"We are considering various alliances," said Tsutomu Sugimori, president of JX Nippon Oil & Energy, an oil refiner that aims to expand its power and gas business. "Everyone who buys natural gas feels the same way. We want to get together as much as possible and buy cheap fuel." The opening of the retail gas market of more than 26 million customers follows a similar move in the electricity market last April as part of Prime Minister Shinzo Abe's drive to spur competition and drive down prices.

The liberalization is forcing entrenched monopolies to face new competition. As the world's biggest buyer of LNG, Japan locks up shipments from across the world, including Australia, the U.S., Nigeria and Qatar. In an increasingly competitive market for customers at home, cooperation on fuel procurement to buy cheaper supplies will be necessary, said Mikiko Tate, a senior analyst at Sumitomo Corp. Global Research.

Japan's biggest power producers are already ahead of the game. Tokyo Electric and Chubu Electric integrated their fuel-procurement operations last year as a joint venture, Jera Co., forming the world's biggest LNG buyer. Smaller players are taking initial steps at following the lead. Tokyo Gas is considering joining with Kansai Electric, Japan's second-biggest power utility, in fuel procurement and development of power plants.

LNG suppliers package the fuel with new power plants to grow market

(Bloomberg; Jan. 18) - Seeking new ways to market their product, producers of liquefied natural gas are turning to an age-old technique: packaging. As demand for electricity booms in developing nations from South Africa to Chile, LNG producers are offering to supply both the fuel and a power plant in partnership agreements that can lock in consumption of their product for years. For their customers, primarily governments, it means dealing with a single entity responsible for every link in the chain.

As many as five projects planned globally may be developed as integrated LNG-to-power, according to the Houston-based law firm Baker Botts. U.S. LNG producer Cheniere Energy and France's Total have package deals either in the works or discussed. "That will be the major growth driver for LNG demand going forward," said Anatol Feygin, chief commercial officer at Cheniere, which is involved in an LNG-to-power project in Chile. "It's a model we are looking to replicate globally."

Global LNG production is expected to generate a record surplus of 46 million metric tons a year by 2019, or about 13 percent more than the market needs, according to analysts Sanford C. Bernstein & Co. That's spurring the industry to seek new marketing tools. "What's going on here is the convergence of drivers in the power sector on one hand and the LNG sector on the other," said Robin Mizrahi, a London-based partner at Baker Botts. "The key driver on the LNG side is LNG suppliers looking for new markets."

A combined solution of a power plant and LNG import terminal could cost \$1 billion or more, depending on the plant's capacity, said Anne-Sophie Corbeau, a research fellow at the King Abdullah Petroleum Studies & Research Center in Saudi Arabia.

LNG demand could outpace production in 2020s, Bloomberg says

(Bloomberg; Jan. 15) - Liquefied natural gas prices falling to the lowest in a decade last year spurred fresh demand while suppressing investment in new production, potentially leading to shortages and price spikes next decade, according to a Bloomberg New Energy Finance report. Global annual LNG consumption is seen rising to 422 million tons by 2030, almost two-thirds higher than last year and almost 13 percent above Bloomberg Energy's previous forecast in June.

China, India and several smaller countries sped up buying after prices fell and as they sought to shift to cleaner LNG amid air pollution from burning coal, Bloomberg analysts including Maggie Kuang said in the report published Jan. 16. Buyers are poised to take advantage of multiple LNG export projects expected to come online over the next few years, which will keep prices low. But that poses a long-term danger as producers may continue an investment drought that could eventually result in supply deficits, she said.

"Healthy long-term demand growth prospects and very few final investment decisions expected before 2020 are posing a supply shortage risk that can drive up LNG prices massively post-2025," Kuang said. Small buyers are key to the new demand growth. Countries that imported less than 5 million tons a year accounted for 19 percent of total consumption last year, up from 15 percent in 2014. Those nations will account for 31 percent of global use by 2030, larger than the combined volume of China and India.

Conversely, demand from the world's two largest users, Japan and South Korea, is expected to decline or remain flat through next decade. Japan in particular will emerge as an important LNG merchant as it redirects unneeded cargoes elsewhere.

Ichthys LNG project offshore Australia moves toward 2017 start-up

(Asian Oil and Gas; Jan. 16) – Japan's Inpex has completed installation of a complex network of subsea infrastructure to support production of gas and condensate for the \$37 billion Ichthys liquefied natural gas project offshore Australia. The final laying of umbilicals and connector lines are the last placement of an intricate subsea network, spread across a 155-square-mile area about 140 miles offshore Western Australia.

"Carrying out this work ... in water depths of 250 meters [820 feet] involves substantial planning and logistical challenges," said Louis Bon, Ichthys project managing director. Included in the subsea system is a 360-foot-tall riser support structure, five manifolds, more than 110 miles of flowlines, umbilicals and connectors, and a subsea distribution hub. Ichthys, set to start production later this year, will be capable of producing 8.9 million tonnes of LNG per year and 100,000 barrels of condensate a day at peak output.

The project is ready for arrival of the central processing facility and floating production, storage and offloading facilities, currently under commissioning in South Korea. Once commissioning activities in the South Korea shipyards are finished, the offshore facilities will be towed to the Ichthys field and moored for their 40-year operational life by 40,000 tonnes of chain secured to more than 25,000 tonnes of foundation piles. Gas from Ichthys will be piped 550 miles to an onshore liquefaction plant near Darwin.

Bangladesh moves to sign LNG import deal with Qatar

(Gulf Times; Qatar; Jan. 15) - A high-level Bangladesh government team is set to leave for Qatar this month to initiate a deal with Qatar's RasGas to import liquefied natural gas, six years after the two countries signed a preliminary agreement, said a senior Bangladesh official. The team will discuss the quantity of LNG to be imported and its pricing, said Mohamed Quamruzzaman, LNG chief of state-run Petrobangla.

Petrobangla signed a memorandum of understanding with Qatar in January 2011 to import about 4 million tonnes of LNG annually, but extended the deadline to start imports due to delays in building an LNG terminal. Petrobangla, also known as Bangladesh Oil, Gas and Mineral Corp., in July 2016 signed a deal with U.S.-based Excelerate Energy for construction of the South Asian country's first LNG import terminal — a floating receiving, storage and regasification unit.

Since then, Petrobangla has signed preliminary agreements with other developers, including India's Petronet, to build additional LNG import facilities. Bangladesh is reeling under a natural gas shortage with daily average domestic production of about 2.7 billion cubic feet against a demand of more than 3.3 bcf. The country started to face shortages

in 2009 with rapid industrialization, forcing Petrobangla to ration supplies to gas-hungry industries, power plants, compressed natural gas filling stations and households.

Platts will publish LNG pricing for Middle East, Pakistan markets

(Reuters; Jan. 16) - Commodity pricing agency S&P Global Platts will begin assessing prices for liquefied natural gas delivered to the Middle East and Pakistan, reflecting growing imports into the region, the company said Jan. 16. Annual demand for LNG in Dubai, Egypt, Jordan, Kuwait and Pakistan has grown close to tenfold since 2010 to 20.8 million tonnes in 2016, with Egypt taking about one-third of those imports, according to Platts, a unit of S&P Global.

"The Platts Middle East Marker price assessment is designed to reflect the growing importance of the Middle East as an LNG import destination rather than just an exporter of cargoes," said Shelley Kerr, Platts' global director of LNG. Egypt and Pakistan have recently launched or awarded huge tenders for short-term and medium-term supplies, looking to take advantage of a gas glut fed by new output from Australia and the U.S. The new price assessment will be published daily.

"Our analysis indicates a greater tendency for new entrants in the region to use short-term purchasing strategies, which is creating additional liquidity," Kerr said. Egypt bought 60 cargoes of the fuel for 2017 through a tender last November and is expected to need a further 40 cargoes this year. Pakistan tendered to buy 240 shipments of LNG last November, under five-year and 15-year deals that are yet to be awarded. Platts has published the Japan-Korea Marker assessment for LNG delivered into Asia since 2009.

U.S. LNG exports will challenge Australian suppliers

(Sydney Morning Herald; Jan. 18) - A surge in shipments of U.S. liquefied natural gas into northern Asia highlights the challenge confronting Australia's gas exporters as more LNG projects come on stream over the next few years. That threat of cheap U.S. gas cutting across the ambitions of Australian gas exporters was evident during December, when three-quarters of the gas exported from the new U.S. export project at Sabine Pass, La., was sold into northern Asia, according to industry analyst Graeme Bethune.

"Until a month ago, it wasn't sending much to Asia, but it is sending a lot now, although there is no sign of it harming Australian exporters," he said. Close to \$200 billion has been invested in LNG export projects in Australia. Bethune's EnergyQuest estimates that in 2017, Australia will export \$36 billion of LNG if the price of oil averages \$55 U.S. a barrel. Oil averaging \$55 a barrel will ensure Australia's LNG projects are profitable in terms of paying down borrowings and generating returns for shareholders, he said.

U.S. exporters are able to source gas for close to the spot-market price of about \$3.50 per million Btu, significantly less than the price of gas in Australia, though liquefaction and shipping expenses are added to the cost of gas supply. As many as five new LNG export projects are planned to come on stream in the U.S. over the next few years. At the same time, the export market will be absorbing output from the Wheatstone project off Western Australia which is to begin shipments mid-year.

LNG filling stations in China shut down amid profit squeeze

(Natural Gas Daily; Jan. 18) - The number of mothballed LNG filling stations in China nearly doubled in the first 10 months of 2016 as intensifying competition and soft demand from transport — once hailed as a major growth driver of LNG demand — buffeted the sector. Some 700 of China's existing 3,120 stations, 22 percent of the total, had been shut down by the end of October, up from 452 stations offline at the end of 2015, according to data from consultancy SCI International.

The build-out of China's LNG refilling network has slowed since mid-2014, when tumbling oil prices reduced the appeal of liquefied natural gas as a transport fuel. With oil prices climbing above \$50 per barrel last year, gas has recovered its price advantage somewhat, but demand continues to be dragged down by domestic industrial weakness. Station network growth is expected to slow to single digits this year for the first time, but LNG sales could recover as city governments procure more LNG-powered buses to curb vehicular emissions – a major source of urban air pollution in China.

Filling stations sold almost 80 billion cubic feet of natural gas as LNG in 2013, and the figure nearly doubled to almost 150 bcf in 2014. Sales climbed above 200 bcf in 2016, and could hit 225 bcf this year, SCI analyst Liu Guangbin said. But LNG sales per station declined last year, and spiraling labor expenses increased the average cost of running a station while prices at the LNG pump fell. That combination has squeezed the margins of station operators, with some forced to mothball facilities, Liu said.

First LNG-powered ferry arrives in British Columbia

(Next-Gen Transportation; Jan. 17) - BC Ferries has received the first of three new liquefied natural gas-or-diesel powered Salish Class vessels that will be added to its fleet — the company's first such dual-fuel vessels. The Salish Orca arrived in British Columbia Jan. 11. The ferry reached B.C. waters after a 50-day, 12,000-mile voyage from the shipbuilder in Gdansk, Poland. The three ships will cost \$165 million.

After Salish Orca clears Canadian customs and final inspections are complete, the vessel will be officially handed over to BC Ferries. Over the next couple of months,

crews will be trained and familiarized in the operation of the new ship. The Salish Orca will start service this spring.

Using LNG as the primary fuel source is expected to reduce greenhouse-gas emissions by approximately 15 percent to 25 percent, reduce sulfur oxides by over 85 percent, reduce nitrogen oxides by over 50 percent, and nearly eliminate particulate matter. The 351-foot-long Salish Class ships will carry 145 vehicles and up to 600 passengers and crew. The vessels feature two car decks and have a service speed of 15.5 knots. The other two ferries are expected to arrive in B.C. this spring, to start service later this year.

Gas led coal 34% to 30% for U.S. power generation in 2016

(Houston Chronicle; Jan. 17) - Natural gas use surpassed coal as a main source of electricity in the U.S. in 2016, the first time a fuel other than coal has supplied the bulk of the nation's power, according to an analysis by the Department of Energy. Natural gas generated 34 percent of the country's electricity, while coal generated 30 percent.

That balance is expected to shift in 2017 as natural gas prices recover and head higher. Coal and gas are each expected to generate about 32 percent of the nation's electricity this year, the Energy Department said. Forecasts for 2018 show a slight increase again in gas-fueled generation of electricity. Nuclear power accounted for the third largest share of electricity generation in 2016, at 20 percent. Renewables, like wind and solar power, accounted for 8 percent, although they were the fastest growing energy sources.

Oil pipeline deal with British Columbia worries policy expert

(The Canadian Press; Jan. 17) - A revenue-sharing agreement that helped convince British Columbia to support the \$6.8 billion Trans Mountain oil pipeline expansion threatens to tear the fabric of the country, says a resource policy expert. The agreement with Kinder Morgan gives the province as much as \$1 billion in payments spread over 20 years. The financial benefit was the last of five conditions needed for B.C. Premier Christy Clark to approve expansion of the pipeline from Alberta to the B.C. coast.

Clark called the agreement unprecedented because it recognized the environmental risks of the pipeline in British Columbia. She said it was her job to protect the province and ensure it benefits from the project to move an additional 890,000 barrels of oil per day. But Trevor McLeod at Calgary's Canada West Foundation said the agreement could make Canada less competitive and set off feuds between provinces. "My concern is with the long-term viability of the country," McLeod said.

He said Western provinces joined the Canadian Confederation in 1867 on the promise of a railway for free movement of goods across Canada, but the pipeline deal stretches

that long-held pledge. "I think it goes against the principles upon which the country was built," McLeod said. "I think it would probably be an exaggeration to say \$25 million or \$50 million a year for 20 years is going to kill the country. But if this becomes the way of the future ... and we get into tit-for-tat situations, then that would definitely do that."

It is not unique to see developers provide financial support for local projects, but the B.C.-Kinder Morgan deal is new ground because it's a deal between a province and a company, said Jennifer Winter, at the University of Calgary's School of Public Policy.

Oil states dealing with revenue shortfalls

(EnergyWire; Jan. 17) - Oil states are bracing for another lean year as they wait to see whether the drop in prices has stabilized. In North Dakota, the Legislature is projecting \$3.6 billion in taxes over the next two years, down almost \$1 billion from an estimate in December, and more than one-third lower than the state's prediction at the start of the 2015-2017 biennium. The oil bust not only cut into the taxes that the states collect on oil and gas production, it also cut into sales and other taxes that came from drilling activity. In Texas, sales taxes from the mining and energy sector are at their lowest since 2010.

At the same time, the states also may be suffering from other factors, said Kenneth Kriz, an economist at Wichita State University who studies government finance. Prices for wheat and other agricultural commodities fell at the same time as oil. Texas diverted some of its sales taxes and oil and gas taxes to road construction over the past three years, and Oklahoma cut oil taxes and income taxes at the top of the boom. "Those are all good policy choices. Unfortunately somebody's got to pay for all of those," Kriz said.

Each state is coping with the shortfall in different ways. In North Dakota, newly elected Gov. Doug Burgu has discussed restructuring state government, which grew rapidly during the oil boom. North Dakota has run through its normal reserve funds but still expects to have more than \$5 billion in other set-aside funds at the end of the current spending period. In Texas, the Republicans who control state government are debating whether to tap into the state's \$10.2 billion "rainy day" reserve fund.

China forecasts drop in oil production, gain in natural gas output

(Reuters; Jan. 17) - China's oil production is expected to fall 7 percent by 2020 compared with the previous five-year plan as output declines at some of the nation's largest, but oldest, wells. Under a plan covering 2016-2020 published by the National Development and Reform Commission on Jan. 17, crude output will be about 4 million barrels per day by 2020. The drop reflects falling output at aging, high-cost fields as producers scale back production in a lower oil price environment.

Consultancy Wood Mackenzie, however, forecasts a steeper decline in China's oil production. The energy consultant forecasts a drop of nearly 500,000 barrels per day in China's oil production over the next four years to 3.5 million to 3.6 million barrels per day. "We don't see any large greenfield oil developments coming stream by 2020. As such, given the maturity and age of the main oil fields ... we forecast an ongoing decline in output," said Angus Rodger, Wood Mackenzie's upstream research director.

Meanwhile, China's development commission said the country's natural gas production would climb to almost 7.8 trillion cubic feet by 2020 (more than 21 billion cubic feet per day), compared with 4.7 tcf under the 2012-2015 five-year plan as Beijing prioritizes the sector's growth. Even with growth in domestic production, China will still need to boost gas imports. The government has said it will prioritize the expansion of liquefied natural gas import terminals and will "appropriately" add new capacity.

Spending cuts lead to less new oil and gas discoveries in 2016

(Reuters; Jan. 18) - Oil and gas discoveries around the world dropped last year to their lowest since the 1940s after companies sharply cut back their search for new resources amid falling prices. The decline in discoveries means companies will struggle to offset the depletion of existing fields, reinforcing forecasts of a supply shortage by the end of the decade.

Total oil and gas resources found in 2016 reached just more than 6 billion barrels of oil equivalent, said Sona Mlada, senior analyst at Oslo-based consultancy Rystad Energy. The numbers do not include North American shale resources, which have been a key driver in supply growth in recent years. Offshore discoveries, where most major new fields have been found in recent decades, reached 2.3 billion barrels of oil equivalent last year, 90 percent below 2010 levels. As a result, companies replaced only 10 percent of their oil and gas reserves last year, compared with 30 percent in 2013.

"The lack of discovered volumes in 2016 will not have an immediate impact on the global oil supply in the short-term, given the lead time it takes from the discovery to start-up of a field's production," Mlada said. "However, these 'missing' discovered volumes in the current years could have an impact on the global supply some 10 years down the line — depending on the investment decisions of the exploration companies."

Saudi minister says oil market could rebalance this year

(Bloomberg; Jan. 16) - OPEC probably won't need to extend a deal it reached with other crude producers to cut output, given compliance with the reductions and the outlook for an increase in global demand, Saudi Energy Minister Khalid Al-Falih said. Rebalancing of the oil market should occur by the end of the first half of the year, he told reporters at

an energy event in the United Arab Emirates capital of Abu Dhabi. Demand will pick up in the summer, and OPEC wants to make sure markets are well-supplied, he said.

"We don't think it's necessary, given the level of compliance we have seen and given the expectations of demand," Al-Falih said Jan. 16. "The rebalancing which started slowly in 2016 will have its full impact by the first half. Of course, there are many variables that can come into play between now and June, and at that time we will be able to reassess."

Saudi Arabia is due to meet fellow members of the Organization of Petroleum Exporting Countries in May at their bi-annual meeting in Vienna to assess the market and the group's production policy. OPEC states will also gather with major producers outside the group later this month in the Austrian capital to monitor their compliance with the production cuts, which aim to reduce inventories and shore up prices. OPEC's decision on Nov. 30 to cut output reversed a two-year policy that let members pump all they wanted to try to maximize sales — a strategy that had contributed to a worldwide glut.