

## LNG Daily

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### LNG indexes gaining favor in hedging: Citigroup

London—Financial swaps using Asian spot LNG price assessments have totaled about 25 trillion Btu since they started in 2010 and are picking up pace as more players start to use them to hedge deals, Richard Bowler, director of commodities at Citigroup, said last week at the Gastech conference in London.

Citigroup has been the only “market maker” of Asian spot LNG swaps by providing forward curve price projections of Asian spot LNG prices and being willing to take financial positions on those curves against counterparties, Bowler said, adding that he expects other financial institutions to start offering such swaps.

The estimated volume of completed swaps would be equivalent to about eight or nine standard-sized LNG cargoes, but most of the swaps have been for smaller volumes, he said.

Although there are four major Asian LNG price assessments, Platts JKM is “the index of choice” because it was the first to be published on a daily basis, in February 2009, he told Platts on the sidelines of the conference. He did not

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### Japanese group eyes Alaska plant ownership

Anchorage—A group of Japanese companies has opened an office in Alaska in hope of working with the state, North Slope producers and TransCanada on a large natural gas liquefaction project, an official for the group said Monday.

The consortium, Resources Energy, is proposing to build and own an LNG plant at a south Alaska tidewater port, but also could invest in the pipeline needed to bring North Slope gas south to the proposed plant, the company’s Alaska manager, Mary Ann Pease, said.

North Slope producers BP, ConocoPhillips and ExxonMobil, as well as pipeline company TransCanada, are working on a potential \$45-billion to \$65-billion Alaska LNG export project, but have yet to commit funding for preliminary engineering or make decisions on commercial aspects, such as who would own components of the project.

Members of the Japanese consortium include Japan Petroleum Exploration, Idemitsu Kosan, JX Nippon Oil and Energy, Mitsubishi Gas Chemical and Nippon Telephone & Telegraph.

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### JKM stable on muted demand

#### THE MARKET

Singapore—The Platts November LNG Japan Korea Marker was unchanged Monday from Friday at \$12.875/MMBtu on muted trading, as most North Asian buyers have already completed November procurements.

Trade was thin, with no fresh bids or offers heard Monday for November. First-half and second-half December were assessed 10 cents higher at \$13.25/MMBtu and \$13.50/MMBtu, respectively, as the bid-offer spread narrowed Monday. The best December bid was in the low \$13s/MMBtu, against the lowest offer of more than the mid-\$13s/MMBtu. The best bid was up from \$13/MMBtu heard Friday, while offers were unchanged from Friday.

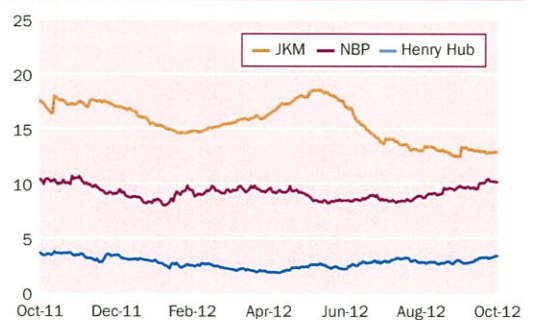
“I am not sure how many deals have been done into North Asia for December, but I heard that Kyushu Electric, Chubu Electric, and Tokyo Electric have already bought cargoes for December delivery,” a source with a North Asian utility said, adding he heard the deal prices for the cargoes were between the low \$13/MMBtu and the mid-\$13/MMBtu.

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#### Platts daily LNG markers (\$/MMBtu)

Oct 15		Change	
<b>DES Japan/Korea Marker (JKM)</b>			
JKM (Nov)	12.875	0.000	—
H1 Nov	12.750	0.000	—
H2 Nov	13.000	0.000	—
H1 Dec	13.250	0.100	▲
H2 Dec	13.500	0.100	▲
<b>DES Japan/Korea (JKM) Swaps</b>			
Dec	13.550	0.000	—
Jan	13.800	0.000	—
Feb	13.950	0.000	—
<b>DES Southwest Europe Marker (SWE)</b>			
SWE (Nov)	10.650	-0.050	▼
H1 Nov	10.600	-0.050	▼
H2 Nov	10.700	-0.050	▼
H1 Dec	10.800	-0.050	▼
<b>DES Northwest Europe Marker (NWE)</b>			
NWE (Nov)	9.650	-0.050	▼
H1 Nov	9.600	-0.050	▼
H2 Nov	9.700	-0.050	▼
H1 Dec	9.800	-0.050	▼
<b>FOB Middle East</b>			
FOB Middle East (Nov)	9.950	0.100	▲
<b>DES West India</b>			
DES West India (Nov)	10.450	0.000	—
<b>FOB Australia (netback)</b>			
FOB Australia (Nov)	11.520	0.000	—

#### Global price comparisons (\$/MMBtu)



Source: Platts

The Peru LNG consortium sells its entire output to Spain's Repsol, which in turn can decide where to market cargoes. Peru receives royalties based on the prevailing prices where cargoes are delivered.

A Repsol spokesman did not respond to Platts questions on the matter.

In June 2011, the first brokered Asian spot LNG deal was done with Tullet Prebon and this year Tullet Prebon started trading Asian LNG swaps electronically, Bowler said in his presentation.

In September, Asian LNG swaps, including the JKM swap, went on over-the-counter markets and started to be cleared by the IntercontinentalExchange and CME, he said.

"Clearing takes out counterparty risk and adds transparency, as clearing houses are required to publish prices and volumes traded," he said.

### Hedging mechanism

Asian utilities buy the most of their LNG supply under long-term, take-or-pay contracts indexed to oil prices. Historically, when Asian utilities needed additional cargoes in times of high demand, or producers offered spot cargoes to the market, deals were typically done at a fixed price, and many market participants did not have good information on spot pricing.

Bowler said the JKM has given market players a good idea of where spot prices are, and has shown it is a better hedging instrument than oil prices or Western spot gas prices, such as the UK's National Balancing Point.

That is because spot LNG demand is often not correlated to fundamentals in the oil or Western spot gas markets. For example, in the last four to five months, Asian spot prices have declined substantially because of reduced demand for spot LNG, but earlier this year Asian LNG prices were briefly higher than Asian term LNG prices, a situation that typically would not be sustainable, Bowler said.

Bowler described an example of how an LNG buyer would use a JKM swap. If the buyer knows some months in advance that it would have to go to the market in December for a spot cargo, and is concerned that the spot price would rise significantly at that time, he could try to secure a swap to lock in a physical price.

Bowler said Citigroup is able to enter such transactions because it has developed a forward curve of spot LNG prices going out two years, as it has LNG positions that far out. The bank would not disclose the full two-year curve to a potential swap customer, but would provide a six-month curve to the potential buyer, giving that buyer an idea of what swap prices Citigroup would agree to.

To settle swaps, typically the JKM price for the month is determined using the average of the daily prices for that month, but other arrangements could be made, Bowler said.

Volumes for swaps are flexible, ranging from full cargoes, half cargoes and "also 50,000 MMBtu is frequently traded," he said.

About 50% of Asian spot LNG swaps are conducted through brokers, and there are currently about 15 counterparties engaging in such swaps, Bowler said.

"Last week, [at least one JKM financial swap] trade was done through brokers every day, which was more than what was [physically] traded in North Asia." — *Ron Nissimov*

### Japanese group eyes Alaska plant ownership

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Nippon Steel Corp. and two Japanese trading companies, Itochu and Sojitz as well as the Japan Bank for International Cooperation, are involved in discussions with the consortium members, Pease said.

She said the group responded to TransCanada's non-binding request for statements of interest by saying it hopes to ship 2.7 Bcf/d through a potential large-diameter pipeline from the North Slope to south Alaska.

TransCanada said it received "strong interest" in response to its solicitation, but did not identify potential shippers.

Resources Energy is the second group of Asian companies that have acknowledged submitting letters of interest to TransCanada. A group of mostly South Korean companies in mid-September submitted a letter of interest through the Alaska Gasline Port Authority, an Alaska municipal group hoping to facilitate a pipeline and LNG project.

Pease said the Japanese group wants to build and own the liquefaction plant and associated LNG tankers, and has in mind a plant capable of shipping as much as 20 million mt/yr of LNG (equivalent to 2.6 Bcf/d of gas), a project of about the same scale as that being considered by the producer group.

"We need a deepwater and ice-free port for the LNG plant so our reference is now Valdez on Prince William Sound, but studies are still underway and several locations in south-central Alaska are being considered," Pease said.

The group wants to move ahead now with a detailed feasibility study and sees a faster timeline for the project than that contemplated by the producer group and TransCanada.

"We believe we can have this project in operation in 2017 or 2018," Pease said.

In an October 1 letter to Alaska Governor Sean Parnell, the producer group proposed a work plan that would run 10 years, so the first LNG would not be shipped until 2023 or 2024.

The producers' work on a large gas project is linked to commitments made in a settlement of litigation with the state over lease disputes at Point Thomson, east of Prudhoe Bay.

Parnell said he was satisfied with the progress report from the producers, but state Natural Resources Commissioner Dan Sullivan said the administration is pushing the group to make firm commitments by spring.

Pease said the Japanese group is ready to commit to a detailed feasibility study, but wants to do it under the auspices of a memorandum of understanding with the state.

"Japanese companies are used to doing business on a government-to-government basis, where there is some official involvement of the state," Pease said.

The state is being cautious in its response so far.

The Japanese group met with Sullivan on the matter in July and was referred to state-owned Alaska Gasline Development Corp., which is working on an in-state gas pipeline system.

Pease said AGDC is not open to working with the Japanese group at this time, however, because the state corporation said it is in the final stages of securing a federal environmental impact statement for its 24-inch-diameter, in-state pipeline. Bringing in new parties could complicate and delay an EIS, the Japanese group was told, according to Pease.

ADGC also said it is limited to transporting 500,000 Mcf/d under terms of a state agreement with TransCanada. That amount would not meet the export needs of Resources Energy's owners, Pease said.

Other Asian firms that filed expressions of interest with TransCanada in September through the Alaska Gasline Port Authority include South Korean firms Korea East West Power, Korea Gas and GS Energy; Thailand's PTT International; and PT PNG LNG Indonesia, according to Bill Walker, general manager of the port authority. — *Tim Bradner*