

# Asian LNG buyers push back on high prices

Asian buyers have gone public with their distress over the high prices they're paying for liquefied natural gas. The premium they pay over natural gas prices in Europe and North America no longer is rational, fair or reflective of supply-and-demand fundamentals for LNG, they say.

The markets heard a vetting of their frustration Sept. 19 in Tokyo at that nation's first LNG Producer-Consumer Conference, an event organized by Japan's Ministry of Economy, Trade and Industry.

Japan's status as the world's No. 1 LNG consumer — taking one-third of the LNG produced last year — gave the country's call for conversation extra heft, sort of like Wal-Mart summoning toy makers to a meeting.

The hall and discussion panels were packed with high-level officials and executives from oil and gas companies, exporting nations, importing nations and others involved with or aspiring to be in the LNG trade.

As LNG buyers made a case for price reform, LNG sellers urged caution in tinkering with a supply chain that provides tens of billions of dollars a year of natural gas to resource-poor nations like Japan, South Korea and Taiwan, or resource-hungry nations like China and India.

They noted the high cost of developing LNG projects — from gas fields to liquefaction plants, special tankers and, in the receiving countries, regasification terminals. That cost will not be undertaken without assurances

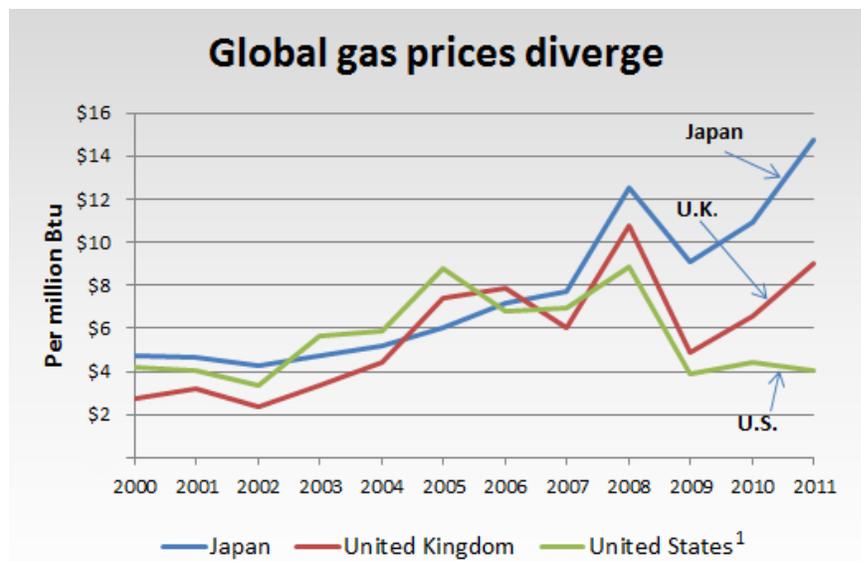
the investment will pay off, they said.

The dialogue was pragmatism on one side vs. frustration on the other.

"There is no longer a rationale to support the crude oil-linked price," said Yukio Edano, Japan's trade minister, in a talk that kicked off the conference.

Tsuyoshi Okamoto, president of Tokyo Gas, said the price gap cannot be justified by the extra cost — avoided for pipeline gas — of liquefying vaporous natural gas and shipping it across oceans to market.

"Japan's LNG prices have deviated significantly from international norms," he said. "If this discrepancy continues, it will result in curbed natural gas consumption and conversion to other energy sources."



<sup>1</sup> Henry Hub price

Source: BP Statistical Review of World Energy 2012

At least one oil executive acknowledged the frustration buyers aired.

"I do think we're hearing those messages," said Thomas Walters, ExxonMobil president of gas and power.

Conference panelists broached a variety of new pricing schemes without settling on any of them. But the conversation is under way.

### OIL-LINKED ASIA PRICES SOAR

The natural gas price schism between Asia, Europe and North America has been stark for the past few years, and became acute last year.

The average price was about \$15 per million Btu of energy in Japan in 2011, compared to about \$10 in

Europe and \$4 in the United States, according to the BP Statistical Review of World Energy. This month, trade publications were pegging the Japan price at about \$13.50, compared with \$10 in Europe and \$3 in the U.S.

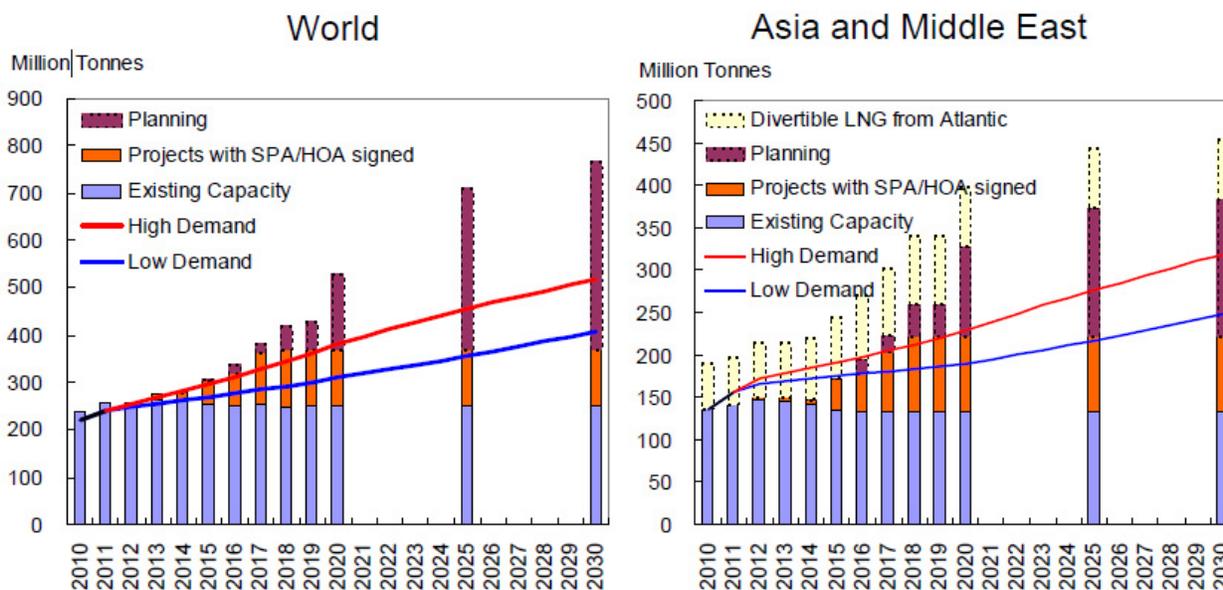
Each destination uses its own formula to set prices. For 40 years Asia has linked its LNG deals to the price of crude oil. The logic was that LNG replaced oil as a power-generation fuel. Buyers signed contracts spanning as long as 20 years, allowing LNG suppliers to obtain financing to build liquefaction plants. Some contracts allow small adjustments to the price periodically. Some price formulas protect sellers from rock-bottom oil prices and buyers from stratospheric prices.

This system worked more or less to everyone's

LNG Producer - Consumer Conference 2012



## LNG Outlook



Source: IEEJ

- Ample supply potential, but timely investment is the key
- Divertible LNG from Atlantic to balance the Asian demand for short-term

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Source: Institute of Energy Economics Japan

satisfaction for years. From 2000 through 2007, LNG prices averaged \$5.56 per million Btu in Japan, according to the BP Statistical Review. Prices in the U.S. averaged \$5.70 during that period, and European prices were a little lower.

But sky-high oil prices since then also lifted Asia LNG prices, enriching the region's suppliers by automatically raising their prices. This occurred even as LNG supply and demand generally were in balance — in fact, supply was more than sufficient to fill Japan's need for extra gas in 2011 after it shut down nuclear power production nationwide due to earthquake and tsunami damage to the Fukushima nuclear plant. Meanwhile, a shale-gas production boom in the United States deflated U.S. prices.

Japan's LNG imports cost \$60 billion last year, up 50 percent, contributing to the nation's first trade deficit since the early 1980s. In the first half of 2012, Japan imported \$40 billion in LNG, said Hirobumi Kawano, president of Japan Oil, Gas and Metals National Corp., a government agency charged with securing a stable supply of resources. Spot-market prices for sales to Asia peaked around \$18 per million Btu last spring.

LNG supply security and reliability has long been the mantra of Japan, South Korea and Taiwan. They are resource-poor industrial nations that needed to know promised supplies will get delivered.

But, as the conference made clear, "reasonable price" is now part of the mantra.

## PITCHING AN ALASKA SOLUTION

Although price was the takeaway theme, others used the conference to show their flags.

Oil and gas companies BP, Chevron, Shell, ExxonMobil, Total and Anadarko discussed LNG projects they're pursuing or considering.

BP's William Lin, the company's Asia Pacific president, noted that Alaska is among his company's prospects. He said Prudhoe Bay and other North Slope gas deposits are among BP's largest undeveloped resources. BP, ExxonMobil and ConocoPhillips have begun a commercial feasibility study of Alaska LNG exports. Early results suggest

Alaska LNG could be world-scale and an option for buyers seeking supply diversity, Lin said.

Locations that are or could be significant LNG exporters also touted themselves. These included Australia, Canada, Indonesia, Nigeria and Alaska.

Dan Sullivan, Alaska commissioner of natural resources, noted the state's 40-year history of glitch-free LNG exports to Asia from a small plant at Nikiski while he listed Alaska's advantages:

- Limited environmental impact from adding gas development to the oil fields.
- Geographic proximity, lack of dangerous choke points on shipping routes and political stability.
- Involvement of world-class companies already in the LNG business elsewhere.
- Alaska's stranded gas is outside of the U.S. debate over whether LNG exports would help or hurt the country.

## FRUSTRATED BUYERS

The Tokyo conference was far from a showdown of buyers vs. suppliers. It was more of a candid conversation to launch a more public dialogue on LNG prices.

Yes, secure supply is important to Japan, said Edano, the trade minister. But so is low price, he said.

"With the paradigm shift due to full-fledged production of shale gas, oil-linked indexing is starting to be less reasonable. If new suppliers from North America, Russia and Africa enter Asian markets in a few years, it will no longer be reasonable," Edano said.

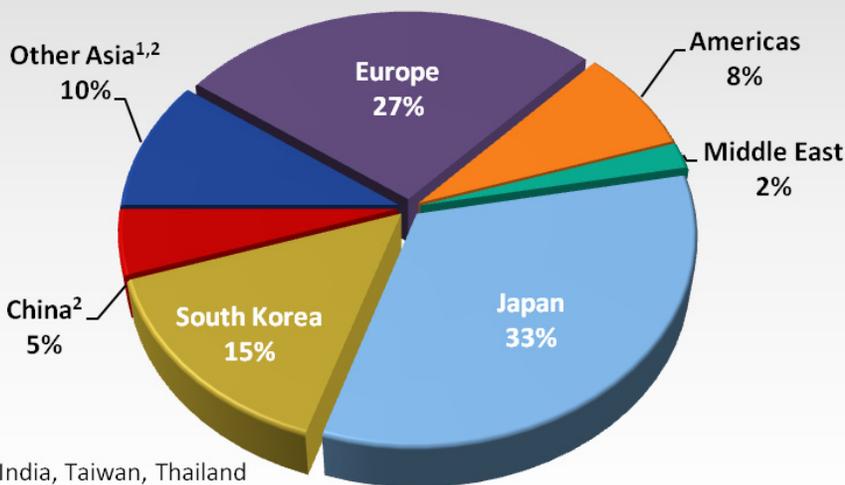
"At current price levels, the use of coal and nuclear power has to rise, which would hurt LNG demand for a long time. To come up with a new method to replace oil-linked indexing is an agenda that both producers and consumers have to tackle to stabilize global LNG demand/supply."

Okamoto of Tokyo Gas said supply must be stable and priced affordably. "We do have a major problem with economic viability" of the price, he said.

If high prices linked to oil remain, Japan's

## LNG buyers

25 nations imported LNG in 2011, led by Japan



<sup>1</sup> India, Taiwan, Thailand

<sup>2</sup> Demand in India grew 37% and demand in China was up 36% last year

Source: International Gas Union

international competitiveness will be hurt and buyers could shift away from LNG purchases, Okamoto said. "Therefore, we aim to bring East Asia LNG prices into convergence with international standards by introducing the link to U.S. Henry Hub and European gas prices."

Buyers and sellers share the goal of LNG-industry growth, but they must resolve the East Asian price issues, Okamoto said.

Sukwoo Hong, South Korea minister of knowledge economy, made a similar point. Oil-linked prices, if they continue, will constrain economic growth in his and other buying nations.

Lower-priced shale gas from North America, exported as LNG, can be a game changer for Asia LNG pricing, he said. One such project is under construction in Louisiana and over a dozen others are proposed, waiting for U.S. government approval of exports. "We are about to enter the door of a new era," Hong said.

Sheng-Chung Lin, chairman of CPC Corp., Taiwan's LNG importer, said his company's strategy is to buy major volumes long term from reliable and stable sources "at reasonable prices." The price portfolio will include U.S.-linked as well as oil-linked prices to soften the risk of price fluctuations.

"The Asian market is looking forward to U.S. and Canada LNG without trade restriction," he said.

Radhakrishpan Guhan, deputy general manager for marketing at ONGC, a major energy company in India, noted companies in his country are trying to secure North American LNG with prices linked to the U.S. Henry Hub gas benchmark.

"The Indian market expectations have increased for an independent competitive LNG pricing," Guhan said in a statement. "This opens up an opportunity for suppliers to come up with new pricing ideas, with a floor and cap, acceptable norms for long-term stability. However, we do understand that suppliers have to be

adequately incentivized to keep investments going into LNG facilities."

## CAUTIOUS SELLERS

LNG producers and others connected to gas exports repeatedly emphasized the massive upfront cost of building liquefaction projects.

Joseph C. Geagea, president of Chevron Gas and Midstream, said that almost all of the last 35 LNG projects built or under construction, took at least 10 years from gas discovery to LNG start-up. More than half of them took over 15 years, he said.

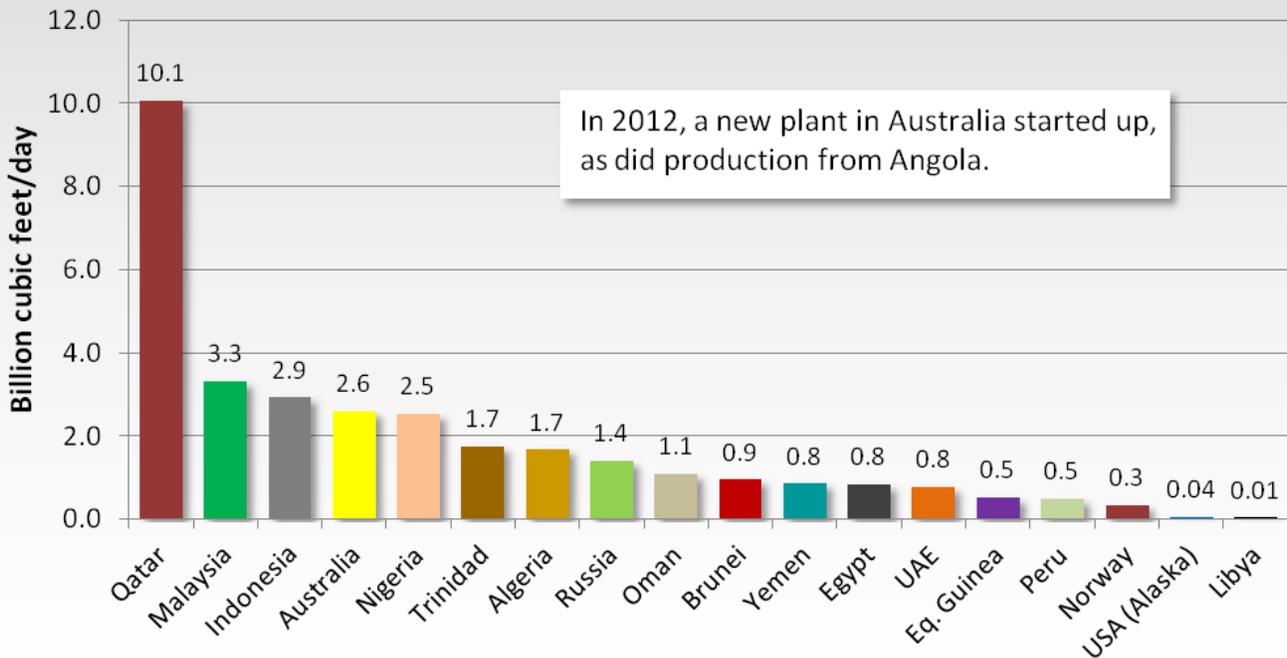
It can take two to five years for the exploration phase and to set a government's fiscal regime for a project. Project definition, detailed design and customer sign-up can take five to 15 years beyond that. Then construction can take another five years, Geagea said.

The risks and uncertainty are high, he said. A project needs "unanimous alignment" of buyers, sellers, government and others involved to succeed.

Walters of ExxonMobil said price is a function of supply and demand. Raise supply and the price will adjust. Because LNG demand is rising, policies that promote new supply are critical, he said.

## Who makes LNG?

2011 production averaged 32 billion cubic feet a day



In 2012, a new plant in Australia started up, as did production from Angola.

Source: International Gas Union

LNG sales contracts at oil-linked prices largely support an estimated \$280 billion in LNG projects under way worldwide, Walters said. That level of investment can't happen without the integrity of contract terms, he said.

Hari Karyulianto, gas director for Indonesia's Pertamina, an LNG producer, urged that the price formulas in existing contracts be left alone.

But he acknowledged that oil-linked prices do not reflect LNG supply and demand. "The differential between Indonesia's domestic gas prices and Henry Hub (U.S.) prices will narrow gradually," he predicted.

Mohammed Bin Saleh Al-Sada, Qatar energy and industry minister, also said North American LNG exports will alter the Asian price somewhat.

However, "the success of the long-term LNG trade model is based on the balance between sellers and buyers, with a paramount emphasis on reliability and performance. Securing future energy needs is dependent on the investments we make today. Making available future resources requires a stable

investment environment. Uncertainty and volatility could, however, discourage long-term investment."

### POSSIBLE SOLUTIONS

Jonathan Stern chairman of the Oxford Institute of Energy Studies' gas department, said a new book from the OIES concludes that oil-linked LNG prices "ceased to be logical" some years ago.

Japanese utilities must propose a new pricing mechanism that seems fair and logical to LNG makers, he said. The formula could blend in prices from North American and Europe. But ultimately, an Asian price hub similar to those in North America and Europe must emerge, he said. Two such hubs are under consideration, in Shanghai and Singapore.

Asia's price revolution won't happen quickly, he cautioned. Pricing formulas in Europe started changing four years ago and that revolution is still developing.

Rather than gas buyers proposing a new formula, Guhan of India's ONGC suggested LNG sellers should

take the lead. "I leave it to the ingenuity and imagination of LNG suppliers for arriving at ... an equitable mechanism."

Ken Koyama, chief economist at the Institute of Energy Economics Japan, predicted that one-fifth of Japan's LNG imports could be linked to the U.S. Henry Hub price by 2020.

"As a result of a decline in oil consumed for power generation, the competitive relationship of gas and oil has weakened, and oil-linked indexing is no longer reasonable," he said. "It's inappropriate to link to oil prices that are strongly swayed by financial markets."

A shorter-term solution could be to add North American prices to the oil-linked formulas used in Asia LNG contracts, Koyama said. Longer-term, he also called for a gas-pricing hub that reflects "gas market fundamentals in Asia."

Philippe Sauquet, president of gas and power for Total, a French oil company, said global price convergence could be helped along with Asian buyers investing in gas plays and LNG projects.

That's already happening. Buyers from India, China, Japan, South Korea and elsewhere are investing in North America, Australia and East Africa projects.

Such investments are starting to blur the line between buyers and sellers. They can help insure that neither the buyers nor the sellers absorb a disproportionate share of the risk if a new Asia pricing formula emerges, several speakers said.



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