

Breaking Energy

LNG, OIL PRICES

Impact of Falling Oil Prices on LNG

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Australian Prime Minister Julia Gillard talks with Corporate Citizenship Advisor Valentina Kaman during a tour of the ExxonMobil Liquefied Natural Gas plant on May 10, 2013 in Port Moresby, Papua New Guinea.

The recent surprise drop in crude oil prices is having big impacts on international LNG prices and may cause a slowdown in the development of LNG export plants globally. LNG is liquefied natural gas, cooled to a temperature of -260° F, for the purpose of compression and transportation. International shipments of LNG by container ship are generally price-indexed to crude oil, meaning

that falling oil prices have led to a comparable drop in LNG prices.

Demand for LNG in Asia has been soft due to mild weather this winter, contributing to the slide in prices. 75% of global LNG demand is in Asia with the bulk of the cargoes going to Japan, followed by South Korea and then China, India and Taiwan.

In South Korea, 2014 imports were down nine per cent year-on-year. Slowing gas demand growth has also led to concerns that China will struggle to absorb contracted LNG, volumes of which will double over the next three years.

Supply of LNG in the Pacific basin has grown substantially in recent years, leading to an oversupplied market.

Prices for LNG in Japan hit \$10.069 per million Btu (MMBtu) on December 15, having fallen from around \$16 at the start of 2014. As LNG contract prices are typically based on the average of the preceding six to nine months, it will be mid-2015 before suppliers feel the full effects of lower oil prices on their cash flow.

The LNG price decline came in two stages. Prices dropped in the summer, as new supply from ExxonMobil's Papua New Guinea (PNG LNG) project hit the market. Prices then fell further as Brent oil dropped from \$110/bbl in August, to below \$60/bbl in December.

When Brent crude sells for \$100, oil-linked natural gas contracts typically translate to around \$14 MMBtu, giving U.S. LNG a big price advantage. This advantage disappears as crude prices fall, with crude at \$60 LNG indexes to \$8.40 per MMBtu. U.S. LNG producers have been targeting prices of \$11 or \$12 per MMBtu to be profitable after absorbing the costs of buying the gas, liquefying it, shipping it around the globe and regasifying it.

World LNG Estimated December 2014 Landed Prices



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Source: Waterborne Energy, Inc. Data in \$US/MMBtu. Landed prices are based on a netback calculation.

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When crude oil prices dropped below \$80 per barrel, LNG from the US became less competitive in Asia compared to plentiful gas from Australia and Qatar. Falling oil prices have the effect of increasing competition from oil. Price action in Asia may lead to more gas

being diverted to Europe and South America, where U.S. gas may find a niche. Such a shift also could reshape European gas markets by lowering prices and squeezing out some Russian pipeline gas.

Many countries have entered the LNG export trade in the last decade, contributing to a crowded market. Egypt began shipping LNG in 2005, Equatorial Guinea and Norway in 2007, Russia and Yemen in 2009, Peru in 2010, Angola in 2013 and Papua New Guinea in 2014. Australia has also greatly increased its export capacity and expects to overtake Qatar as the world export leader. Major project proposals are also in the works in Russia, Canada and East Africa, all of which contribute to a well-supplied international market.

LNG INDUSTRY GROWTH OVER THE PAST 20 YEARS			
	1993	2003	2013
Liquefaction plants	11	15	26
Receiving terminals	31	46	104
Number of exporting countries	8	12	17
Number of importing countries	9	13	29
LNG carriers	76	152	393
LNG imports (million tonnes)	61.0	125.2	236.9
Source: GIIGNL			

The US today has issued permits for four LNG export terminals, in addition to the existing Kenai terminal in Alaska. A dozen or more applications are in process at FERC, but only a few more are expected to be given permits. Projects that have not received FIDs (Final Investment Decisions) have uncertain futures, both in the US and globally. A number of proposed projects in Australia have been shelved and greenfield projects in Canada have been challenged as well due to high costs.

With projects under construction going ahead as companies treat them as sunk costs, Australia's LNG export capacity is set to more than triple to 86 million tonnes a year before 2020, putting it ahead of current leader Qatar which exports 77 million tonnes annually and U.S. expectations of selling 61.5 million tonnes per year by 2020.

Even though the U.S. has only ever had minimal LNG exports, US LNG suppliers have been seen as attractive to Asian buyers due to the perception of the U.S. offering very secure supply, with firm contract commitments.

US Gulf Coast LNG to Japan - Henry Hub Linked Price (Proposed)

(US\$ per million BTUs)						
Henry Hub spot	\$2.00	\$3.00	\$4.00	\$5.00	\$6.00	\$7.00
Energy cost (15%)	\$0.30	\$0.45	\$0.60	\$0.75	\$0.90	\$1.05
Capacity charge	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00
FOB cost	\$5.30	\$6.45	\$7.60	\$8.75	\$9.90	\$11.05
Shipping	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50	\$2.50
CIF cost	\$7.80	\$8.95	\$10.10	\$11.25	\$12.40	\$13.55

Source: Deutsche Bank Markets Research, *Global LNG*, 17 September 2012

Adding to the interest in U.S. supplies have been efforts in recent years to index U.S. LNG to Henry Hub prices rather than crude oil prices. Asian buyers were seeking to break away from expensive oil linked contracts and take advantage of inexpensive U.S. gas prices, but now with crude oil prices in a freefall, buyers are backing away from changing the formula for now.

LNG suppliers will be hoping for a cold 2015, but the background of a low oil price environment will place pressure on LNG prices in the near term. However, long-term growth prospects remain compelling due to demand expectations.

Topics: Australia, Japan, LNG, LNG Demand, LNG Exports, LNG Markets, LNG Suppliers, Natural Gas, Oil Prices, Papua New Guinea, Qatar, South Korea
