



METHODOLOGY AND SPECIFICATIONS GUIDE

Liquefied Natural Gas Assessments and Netbacks

(Latest Update: May 2012)

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INTRODUCTION

Platts' methodology for assessing liquefied natural gas (LNG) markets has developed over a number of years. It draws on our experience in the international oil markets and in the US and European pipeline gas and power markets. Platts' methodology will continue to evolve as natural gas markets develop.

Platts places great importance on producing independent reports, indices and assessments. The indices and assessments we publish are not compiled in alliance with any other participant in the market.

If you have questions concerning reporting to Platts or our statement of methodology, or would like to discuss any LNG price reporting issues, please e-mail our editors at lng@platts.com.

Platts also has a compliance staff independent of the editorial group. For more information, contact Director of Compliance John Burnett, 212-904-6943 (john_burnett@platts.com).

Platts indices and assessments are based on our own surveys of market participants completed by Platts price reporters each day. Assessments aim to reflect the fair, repeatable value of the commodity at the close of normal business.

At the same time, Platts indices and assessments give priority weighting to confirmed trades and aim to maintain realistic spreads between markets and products. Therefore, the methodology for compiling these is relatively complex.

Platts assessments are based on a survey of as broad a cross-section of the market as possible. This includes canvassing traders, producers, end-users and brokers. Usually, key market players are contacted by phone or e-mail on a daily basis, while other smaller players are canvassed on a less frequent but regular basis. In each case, we aim to speak to those participants that were most active in the market on that particular day.

Platts discloses publicly the days of publication of its price assessments and indices. The dates of publication and the assessment periods are subject to change in the event of outside circumstances that affect Platts' ability to adhere to its normal publication schedule. Such circumstances include network outages, power failures, acts of terrorism and other situations that result in an interruption in Platts' operations at one or more of its worldwide offices. In the event that any such circumstance occurs, Platts will endeavor, whenever feasible, to communicate publicly any changes to its publication schedule and assessment periods, with as much advance notice as possible.

PLATTS MOC ASSESSMENTS

Platts assessments are market-on-close (MOC) prices based on the most recent trades and/or bids and offers prevailing at the end of the normal trading cycle. For LNG we define this as:

Asia: 4:30 pm Singapore time / 5:30 pm Japan/Korea time (0830 GMT).

Middle East: 4:30 pm Singapore time (0830 GMT).

Europe: 4:30 pm London time

The market-on-close assessment reflects the tradable value of the commodity at the given point in time, based on repeatable trades, bids and offers. In addition, only bids and offers that are raised or lowered in realistic increments are considered.

Confirmed trades are given preference when making the assessment. In the absence of trade, Platts reporters look at firm bids and offers at the end of the business day. Finally, if there are no qualified trades in a product and no firm bids and offers in the market, Platts reporters look at price spreads against associated products or markets.

Platts monitors the market structure throughout the day to ensure that market-on-close business converges with prevailing market values at the stated assessment times.

BANK HOLIDAY CLOSING TIMES

On certain days ahead of a Singapore public holiday, such as Christmas Eve and New Year's Eve, Platts assesses the MOC price earlier than normal, typically at 12:30 pm Singapore time (0430 GMT). This is to take account of the earlier end of trade. The values of US and UK futures prices are also taken at 12:30 pm Singapore time (0430 GMT) on these days.

On certain days ahead of a UK public holiday, such as Christmas Eve and New Year's Eve, Platts assesses the MOC price earlier than normal, typically at 12:00 pm London time. This is to take account of the earlier end of trade. The values of US and UK futures prices are also taken at 12:00 pm London time on these days.

All early publishing times are published in advance in the Platts holiday schedule, available at <http://www.platts.com/HolidayHome.aspx>

STANDARD CONTRACT DEFINITIONS

Platts assessments are based on standard contract definitions and volumes, as outlined in the following sections of this document. These vary according to market.

For the Japan/Korea Marker (JKM), Northwest Europe (NWE) LNG, Southwest Europe (SWE) LNG, FOB Middle East, DES West India and the LNG Netback FOB Australia, the standard cargo size is 125,000-155,000 cu m. Larger Qatari Q-Flex (210,000 cu m) and Q-Max (260,000 cu m) carriers will not be assessed directly, though they may be normalized to standard volume.

CONFIRMATION OF TRADES

When considering transactional information, Platts aims wherever possible to confirm trades reported by market participants with the counterparty and broker involved in the trade. Therefore, we request that market parties supply details of the contract type, location, price, volume, timing of the trade, whether the trade was a buy or a sell, counterparty, broker and platform for each reported transaction.

Priority when compiling indices and assessments will be given to trades which can be fully confirmed with the counterparties as bona fide. If details of the timing, counterparty and broker cannot be obtained, Platts reporters use their judgment to determine whether to include the individual trade in the index or assessment.

SLEEVE/ROUND TRIP/WASH TRADES

All trades discovered to be “round trip” or “wash” trades are excluded from all Platts assessments and indices. For this reason Platts requests information on counterparties, volumes and timings of transactions and Platts reporters may call for additional information from reporting companies with regard to certain trades as part of its market surveys.

Transactions involving a “sleeve” – a middleman to facilitate a trade between two counterparties that are otherwise prevented from trading with each other — are generally excluded from Platts indices and assessments.

OTHER NON-STANDARD TRANSACTIONS

Transactions known to be between affiliates, subsidiaries or otherwise related companies are also generally excluded from Platts indices and assessments.

Transactions involving counterparties for whom trade with the majority of market participants is restricted may be discounted. This is because the transacted price may be inflated or depressed relative to open market prices, as a result of the special relationship between the companies involved.

PLATTS ASIAN LIQUEFIED NATURAL GAS (LNG) SPOT PRICES

Platts launched on February 2, 2009, daily spot Asian LNG assessments under the benchmark name Japan/Korea Marker (JKM).

Platts also publishes differentials for the JKM against NYMEX Henry Hub and ICE NBP futures, and against Asian Dated Brent crude oil, as assessed by Platts at Asian market close (0830 GMT).

Asian LNG spot price assessments are published on the following Platts services: Natural Gas Alert (NGA), Platts Electricity Alert (PEA), European Power Alert (EPA) and Platts Global Alert (PGA); in Platts LNG Daily, Platts Market Data and on Platts LNG TraderNet.

Frequency: The JKM assessment is published each business day and reflects market values prevailing at the close of Asian markets, at 4:30 pm Singapore time / 5:30 pm Japan/Korea time (0830 GMT). On certain days ahead of a Singapore public holiday, such as Christmas Eve and New Year’s Eve, Platts assesses the MOC price earlier than normal, typically at 12:30 pm Singapore time (0430 GMT).

The assessment is published following editorial engagement with market participants such as producers, consumers, traders, brokers, shippers and other active spot market participants.

Basis & Location: Cargoes delivered ex-ship (DES) at the following ports in Japan: Chita, Kawagoe, Higashi Niigata, Sakai, Sodeshi, Yokkaichi, Yanai, Mizushima, Hachinohe, Futsu, Higashi Ogishima, Ogishima, Sodegaura, Negishi, Himeji, Senboku, Fukuoka, Kagoshima, Tobata, Oita and Sakaide; and in Korea: Incheon, Gwangyang, Pyeongtaek and Tongyeong.

Prices of LNG spot cargoes delivered into ports in Taiwan (Kaohsiung, Taichung) or China (Guangdong, Fujian) may be normalized to basis Japan/Korea, using an assessed

deviation cost from Japan/Korea to Taiwan/China. For example, a cargo delivered to Taiwan or China at \$5.00/MMBtu would be equated to a price of \$5.20/MMBtu delivered to Japan/Korea, given an assessed deviation freight cost of -20 cents.

Unit: All prices are quoted in US dollars per million British Thermal Units (\$/MMBtu) to three decimal places. ICE NBP futures in pence per therm are converted to \$/MMBtu using a US\$/GBP exchange rate assessed at Asian close.

As of January 4, 2010, Platts publishes a single value assessment for the JKM. This assessed value is based on confirmed spot transactions, firm bids / offers, or in the absence of liquidity, where a spot transaction would have been concluded. Prior to January 4, 2010, Platts published a low-high range of price, indicating a narrow tradable range either side of the mean spot market value, assessed at the close of Asian markets on a typical trading day.

Quality: Price assessments reflect lean and rich gas. Deviations in price resulting from extreme quality may be normalized to a medium-range grade.

Volume: Standard cargoes of 125,000-155,000 cu m.

Larger Qatari Q-Flex (210,000 cu m) and Q-Max (260,000 cu m) carriers will not be assessed directly in the JKM, though they may be normalized to standard volume. Once sufficient berths in Japan and Korea are made available to receive these larger vessels, Platts may publish a price differential against standard lot sizes.

Timing: Cargo delivery in the third, fourth and fifth half-month cycles forward from the date of trade. For instance, on February 2, Platts will assess cargoes for delivery in H1 March, H2 March and H1 April. The Platts JKM marker assessment represents the average of the two half-month cycles which comprise the first full month of delivery. For instance, on February 2, Platts’ JKM (Mar) represents the average of price assessments for cargoes for delivery in H1 March and H2 March. The JKM marker rolls over on the 16th of each calendar month unless that day is not a business day, in which case the JKM marker rolls over on the next business day. For instance, on February 16, Platts’ JKM (Apr) averages price assessments of cargoes for delivery in H1 April and H2 April.

Spot prices for prompt or deferred cargoes delivery on any day during the three assessed half-months of trading are normalized to the median point of the assessment timeframe for the JKM marker, by taking into account forward market structure. By example, a cargo traded on May 2 at \$5.00/MMBtu for H2 May delivery may be adjusted to \$5.50/MMBtu for H1 June-equivalent prices, given a prevailing 50-cent contango in physical cargo prices between the two half-month cycles. This market structure is assessed using analysis of fundamental conditions of supply and demand, and using observed bid, offer and trading price levels. Depending on market conditions, however, prices for very prompt cargoes for delivery less than one month from the date of transaction may be deemed distressed, and not taken into consideration for assessment.

PLATTS SOUTHWEST EUROPE (SWE) LIQUEFIED NATURAL GAS (LNG) SPOT PRICES

Platts launched on June 28, 2010, daily spot Southwest European (SWE) LNG assessments.

Platts also publishes differentials for the SWE against NYMEX Henry Hub and ICE NBP futures, and against Dated Brent crude oil, as assessed by Platts at London

market close (1630 London time). Platts also publishes the differential of the SWE against the Japan Korea Marker, Platts' assessment for spot LNG cargoes delivered into Japan and South Korea.

SWE LNG spot price assessments are published on the following Platts services: Natural Gas Alert (NGA), European Power Alert (EPA), Platts LNG TraderNet, in Platts LNG Daily, and Platts Market Data.

Frequency: The SWE assessment is published each business day and reflects market values prevailing at the close of European markets, at 4:30 pm London time / 5:30 pm Madrid time. On certain days ahead of a UK public holiday, such as Christmas Eve and New Year's Eve, Platts assesses the MOC price earlier than normal, typically at 12:00 pm London time.

The assessment is published following direct contact with market participants such as producers, consumers, traders, brokers, shippers and other active spot market participants.

Basis & Location: Cargoes delivered ex-ship (DES) at the following ports in Spain: Huelva, El Ferrol LNG (Mugarodos), Bilbao, Barcelona, Saggas LNG (Sagunto) and Cartagena; and at Sines LNG in Portugal.

Unit: All prices are quoted in US dollars per million British Thermal Units (\$/MMBtu) to three decimal places. ICE NBP futures in pence per therm are converted to \$/MMBtu using a US\$/GBP exchange rate at London close.

Platts publishes a single value assessment for the SWE. This assessed value is based on confirmed spot transactions, firm bids / offers, or in the absence of liquidity, where a spot transaction would have been concluded.

Quality: Price assessments reflect lean gas. Lean and rich cargoes will be considered in the assessment process, though deviations in price resulting from extreme quality may be normalized to a lean grade.

Volume: Standard cargoes of 125,000-155,000 cu m. Larger Qatari Q-Flex (210,000 cu m) and Q-Max (260,000 cu m) carriers will not be assessed directly in the SWE, though they may be normalized to standard volume. Once sufficient liquidity in the trade of such larger cargoes arises, Platts may publish a price differential against standard lot sizes.

Timing: Cargo delivery in the third, fourth and fifth half-month cycles forward from the date of trade. For instance, on June 28, Platts will assess cargoes for delivery in H2 July, H1 August and H2 August. The Platts SWE marker assessment represents the average of the two half-month cycles which comprise the first full month of delivery. For instance, on June 28, Platts' SWE (Aug) represents the average of price assessments for cargoes for delivery in H1 August and H2 August. The SWE marker rolls over on the 16th of each calendar month unless that day is not a business day, in which case the SWE marker rolls over on the next business day. For instance, on July 16, Platts' SWE (Sept) averages price assessments of cargoes for delivery in H1 September and H2 September.

Spot prices for prompt or deferred cargoes delivery on any day during the three assessed half-months of trading are normalized to the median point of the assessment timeframe for the SWE marker, by taking into account forward market structure. For example, a cargo traded on July 2 at \$5.00/MMBtu for H2 July delivery may be adjusted to \$5.10/MMBtu for H1 August-equivalent prices, given a prevailing 10-cent contango in physical cargo prices between the two half-month cycles. This market structure is assessed using analysis of fundamental

conditions of supply and demand, and using observed bid, offer and trading price levels. Depending on market conditions, however, prices for very prompt cargoes for delivery less than one month from the date of transaction may be deemed distressed, and not taken into consideration for assessment.

PLATTS NORTHWEST EUROPE (NWE) LIQUEFIED NATURAL GAS (LNG) SPOT PRICES

Platts launched on June 28, 2010, daily spot Northwest Europe (NWE) LNG assessments.

Platts also publishes differentials for the NWE against NYMEX Henry Hub and ICE NBP futures, and against Dated Brent crude oil, as assessed by Platts at London market close (1630 London time).

NWE LNG spot price assessments are published on the following Platts services: Natural Gas Alert (NGA), European Power Alert (EPA), Platts LNG TraderNet, in Platts LNG Daily, and Platts Market Data.

Frequency: The NWE assessment is published each business day and reflects market values prevailing at the close of European markets, at 4:30 pm London time / 5:30 pm Brussels time. On certain days ahead of a UK public holiday, such as Christmas Eve and New Year's Eve, Platts assesses the MOC price earlier than normal, typically at 12:00 pm London time.

The assessment is published following direct contact with market participants such as producers, consumers, traders, brokers, shippers and other active spot market participants.

Basis & Location: Cargoes delivered ex-ship (DES) at the following ports: Isle of Grain and Milford Haven (South Hook and Dragon) in the UK, Zeebrugge in Belgium, and Rotterdam (Gate LNG) in the Netherlands.

Unit: All prices are quoted in US dollars per million British Thermal Units (\$/MMBtu) to three decimal places. ICE NBP futures in pence per therm are converted to \$/MMBtu using a US\$/GBP exchange rate assessed at London close.

Platts publishes a single value assessment for the NWE. This assessed value is based on confirmed spot transactions, firm bids / offers, or in the absence of liquidity, where a spot transaction would have been concluded.

Quality: Price assessments reflect lean gas. Lean and rich cargoes will be considered in the assessment process, though deviations in price resulting from extreme quality may be normalized to a lean grade.

Volume: Standard cargoes of 125,000-155,000 cu m. Larger Qatari Q-Flex (210,000 cu m) and Q-Max (260,000 cu m) carriers will not be assessed directly in the NWE, though they may be normalized to standard volume. Once sufficient liquidity in the trade of such larger cargoes arises, Platts may publish a price differential against standard lot sizes.

Timing: Cargo delivery in the third, fourth and fifth half-month cycles forward from the date of trade. For instance, on June 28, Platts will assess cargoes for delivery in H2 July, H1 August and H2 August. The Platts NWE marker assessment represents the average of the two half-month cycles which comprise the first full month of delivery. For instance, on June 28, Platts' NWE (Aug) represents the average of

price assessments for cargoes for delivery in H1 August and H2 August. The NWE marker rolls over on the 16th of each calendar month unless that day is not a business day, in which case the NWE marker rolls over on the next business day. For instance, on July 16, Platts' NWE (Sept) averages price assessments of cargoes for delivery in H1 September and H2 September.

Spot prices for prompt or deferred cargoes delivery on any day during the three assessed half-months of trading are normalized to the median point of the assessment timeframe for the NWE marker, by taking into account forward market structure. For example, a cargo traded on July 2 at \$5.00/MMBtu for H2 July delivery may be adjusted to \$5.10/MMBtu for H1 August-equivalent prices, given a prevailing 10-cent contango in physical cargo prices between the two half-month cycles. This market structure is assessed using analysis of fundamental conditions of supply and demand, and using observed bid, offer and trading price levels. Depending on market conditions, however, prices for very prompt cargoes for delivery less than one month from the date of transaction may be deemed distressed, and not taken into consideration for assessment.

PLATTS LIQUEFIED NATURAL GAS (LNG) FOB MIDDLE EAST

Platts launched on January 8, 2010, daily spot assessments of LNG under the benchmark name FOB Middle East (FOB ME).

FOB ME spot price assessments are published on the following Platts services: Natural Gas Alert (NGA), Platts Electricity Alert (PEA), European Power Alert (EPA) and Platts Global Alert (PGA); in Platts LNG Daily, Platts Market Data and on Platts LNG TraderNet.

Frequency: The FOB ME assessment is published each business day and reflects market values prevailing at the close of Asian markets, typically at 4:30 pm Singapore time (0830 GMT). On certain days ahead of a Singapore public holiday, such as Christmas Eve and New Year's Eve, Platts assesses the market-on-close (MOC) price earlier than normal, typically at 12:30 pm Singapore time (0430 GMT).

The assessment is published following editorial engagement with producers, consumers, traders, brokers, shippers and other active spot market participants.

Basis & Location: Cargoes loaded free on board at ports in Das Island in Abu Dhabi and Ras Laffan in Qatar. Prices of LNG spot cargoes loaded at Qalhat in Oman and Balhaf Shabwa in Yemen may be normalized to basis FOB Qatar/Abu Dhabi, using an assessed deviation cost. For example, a cargo loaded at Yemen at \$5.00/MMBtu would be equated to a price of \$4.90/MMBtu loaded at Qatar/Abu Dhabi, given an assessed deviation freight cost of -10 cents.

Unit: All prices are quoted in US dollars per million British Thermal Units (\$/MMBtu) to three decimal places.

Assessment: Platts publishes a single value indicating the price at which a cargo could be traded at the close of the assessment period. This assessed value is based on confirmed spot transactions, firm bids/offers, or in the absence of liquidity, where a spot transaction would have been concluded. It also takes into account netbacks from prevailing consumer markets, using assessed spot day rates for LNG carriers, a boil-off rate of 0.15%/day, a 98% utilization rate, a bunker oil (FOB Fujairah) consumption rate of 150 mt/day, relevant voyage times and 50% of a round-trip fueled by boil-off. Voyage timing assumes an average speed of 17 knots.

Platts will adapt its methodology, providing advance notice to subscribers, in the event that these typical shipping practices evolve.

Quality: Price assessments reflect lean and rich gas. Deviations in price resulting from extreme quality may be normalized to a medium-range grade.

Volume: Standard cargoes of 125,000-155,000 cu m. Larger Qatari Q-Flex (from 210,000 cu m) and Q-Max (from 260,000 cu m) carriers will be assessed, but will be normalized to a standard volume, given supply/demand conditions, boil-off rates, spot LNG prices, voyage time and Platts' bunker oil price FOB Fujairah.

Timing: Assessment of cargoes loading 25-45 days forward from the date of publication. For instance, on March 1, Platts will assess cargoes for loading between March 26 and April 15. Cargo prices are normalized to the median point of this assessment timeframe using prevailing market structure (backwardation or contango). For example, a cargo for loading on March 26 at a price of \$5.00/MMBtu would be normalized for assessment on March 1 to a price of \$5.10/MMBtu for the median day in the assessment period (April 5), given a contango of \$0.30/month.

Market structure is assessed using analysis of fundamental conditions of supply and demand, and using observed bid, offer and trading price levels. Prices for cargoes loaded less than 25 days from the date of transaction may be deemed distressed, and not taken into consideration for assessment.

PLATTS LIQUEFIED NATURAL GAS (LNG) DES WEST INDIA

Effective August 1, 2011, Platts modified the methodology for the daily spot DES West India assessment for LNG delivered at Hazira or Dahej terminals from a net-forward calculation (launched January 8, 2010), which applied a freight cost addition to the FOB Middle East (FOB ME) assessments, to a stand-alone DES West India assessment based on Market-on-Close methodology.

DES West India spot price assessments are published on the following Platts services: Natural Gas Alert (NGA), Platts Electricity Alert (PEA), European Power Alert (EPA) and Platts Global Alert (PGA); in Platts LNG Daily, Platts Market Data and on Platts LNG TraderNet.

Frequency: The DES West India assessment is published each business day and reflects market values prevailing at the close of Asian markets, typically at 4:30 pm Singapore time (0830 GMT). On certain days ahead of a Singapore public holiday, such as Christmas Eve and New Year's Eve, Platts assesses the market-on-close (MOC) price earlier than normal, typically at 12:30 pm Singapore time (0430 GMT).

The assessment is published following editorial engagement with producers, consumers, traders, brokers, shippers and other active spot market participants.

Basis & Location: Cargoes delivered ex-ship (DES) at the ports of Hazira or Dahej.

Unit: All prices are quoted in US dollars per million British Thermal Units (\$/MMBtu) to three decimal places.

Assessment: Platts publishes a single value indicating the price at which a cargo could be traded at the close of the assessment period. This assessed value is based on confirmed spot transactions, firm bids/offers, or in the absence of liquidity, where a spot transaction would have been concluded. It also takes into account

netbacks from prevailing consumer markets, using assessed spot day rates for LNG carriers, a boil-off rate of 0.15%/day, a 98% utilization rate, a bunker oil (FOB Fujairah) consumption rate of 150 mt/day, relevant voyage times and 50% of a round-trip fueled by boil-off. Voyage timing assumes an average speed of 17 knots. Platts will adapt its methodology, providing advance notice to subscribers, in the event that these typical shipping practices evolve.

Quality: Price assessments reflect lean and rich gas.

Volume: Standard cargoes of 125,000-155,000 cu m.

Timing: Cargo delivery in the month matching the Platts Japan/Korea Marker (JKM). See JKM timing on page 3.

PLATTS ASIA PACIFIC LNG CARRIER DAY RATES (APDR)

Platts launched on January 8, 2010, daily spot charter rate LNG carrier assessments under the benchmark name Asia Pacific LNG Day Rates (APDR).

APDR spot price assessments are published on the following Platts services: Natural Gas Alert (NGA), Platts Electricity Alert (PEA), European Power Alert (EPA) and Platts Global Alert (PGA); in Platts LNG Daily, Platts Market Data and on Platts LNG TraderNet.

Frequency: The APDR assessment is published each business day and reflects market values prevailing at the close of Asian markets, typically at 4:30 pm Singapore time (0830 GMT). On certain days ahead of a Singapore public holiday, such as Christmas Eve and New Year's Eve, Platts assesses the market-on-close (MOC) price earlier than normal, typically at 12:30 pm Singapore time (0430 GMT).

The assessment is published following editorial engagement with ship owners, brokers, producers, consumers, traders and other active spot market participants.

Basis & Location: The day rate covers the daily cost of chartering a modern LNG vessel for a short (30- to 60-day) period. The rate covers carriers delivered in the Asia-Pacific region, without regional transfer costs. Fuel is assumed to be paid for by the charterer separately, and acquired on the open market. Carriers are assumed to be delivered cooled down. Ice class vessels will not be included for assessment.

Unit: All prices are quoted in US dollars per day (\$/day), to the nearest dollar.

Assessment: Platts publishes a single value indicating the price at which a ship can be chartered at the close of Asian markets, typically at 4:30 pm Singapore time (0830 GMT). This assessed value is based on confirmed spot transactions, firm bids/offers, or in the absence of liquidity, where a spot transaction would have been concluded.

Volume: Standard carriers of 125,000-155,000 cu m. Larger Qatari Q-Flex (from 210,000 cu m) and Q-Max (from 260,000 cu m) carriers will not be assessed directly in the APDR, though they may be normalized to standard volume.

Timing: Carriers for loading 25-45 days out from the date of assessment. For instance, on March 1, Platts would assess carriers loading between March 26 and April 15.

PLATTS ATLANTIC LNG CARRIER DAY RATES (ATDR)

Platts launched on June 28, 2010, daily spot charter rate LNG carrier assessments under the benchmark name Atlantic LNG Day Rates (ATDR).

ATDR spot price assessments are published on the following Platts services: Natural Gas Alert (NGA), European Power Alert (EPA), Platts LNG TraderNet, in Platts LNG Daily, and Platts Market Data.

Frequency: The ATDR assessment is published each business day and reflects market values prevailing at the close of European markets, typically at 4:30 pm London time. On certain days ahead of a UK public holiday, such as Christmas Eve and New Year's Eve, Platts assesses the market-on-close (MOC) price earlier than normal, typically at 12:00 pm London time.

The assessment is published following direct contact with ship owners, brokers, producers, consumers, traders and other active spot market participants.

Basis & Location: The day rate covers the daily cost of chartering a modern LNG vessel for a short (30- to 60-day) period. The rate covers carriers delivered in the Atlantic region, without regional transfer costs. Fuel is assumed to be paid for by the charterer separately, and acquired on the open market. Carriers are assumed to be delivered cooled down. Ice class vessels will not be included for assessment.

Timing: Carriers for loading 25-45 days out from the date of assessment. For instance, on July 1, Platts would assess carriers loading between July 26 and August 15.

Unit: All prices are quoted in US dollars per day (\$/day), to the nearest dollar.

Assessment: Platts publishes a single value indicating the price at which a ship can be chartered at the close of European markets, typically at 4:30 pm London time. This assessed value is based on confirmed spot transactions, firm bids/offers, or in the absence of liquidity, where a spot transaction would have been concluded.

Volume: Standard carriers of 125,000-155,000 cu m. Larger Qatari Q-Flex (from 210,000 cu m) and Q-Max (from 260,000 cu m) carriers will not be assessed directly in the ATDR, though they may be normalized to standard volume.

PLATTS LNG NETBACK FOB AUSTRALIA

Platts launched on January 8, 2010, a daily spot netback assessment for LNG loading in Australia which applies a freight cost subtraction from the DES Japan/Korea Marker (JKM).

The LNG Netback is published on the following Platts services: Natural Gas Alert (NGA), Platts Electricity Alert (PEA), European Power Alert (EPA) and Platts Global Alert (PGA); in Platts LNG Daily, Platts Market Data and on Platts LNG TraderNet.

Frequency: Platts LNG Netbacks are published each business day and reflect market values prevailing at the close of Asian markets, typically at 4:30 pm Singapore time / 5:30 pm Japan/Korea time. On certain days ahead of a Singapore public holiday, such as Christmas Eve and New Year's Eve, Platts assesses the market-on-close (MOC) price earlier than normal, typically at 12:30 pm Singapore time (0430 GMT).

Unit: All prices are quoted in US dollars per million British Thermal Units (\$/MMBtu) to three decimal places.

Quality: Price assessments reflect lean and rich gas.

Volume: Standard cargoes of 125,000-155,000 cu m.

Timing: Freight netbacks correspond to the outright assessment from the primary end-use market. Cargoes for loading in Australia are assessed using Platts DES Japan Korea Marker (JKM) assessments minus a freight period of eight days.

Location: Loading at Barrow Island for FOB Australia.

Assessment: Platts publishes a single value indicating the implied price of a cargo at Asian close using freight cost formulae. This value is based on applying the relevant freight rate to the base price point (DES JKM), using Platts Asia Pacific LNG Day Rates (APDR), a boil-off rate of 0.15%/day, a 98% utilization rate, bunker oil (FOB Melbourne) consumption rate of 150 mt/day, relevant voyage times and 50% of a round-trip fueled by boil-off. The voyage timing assumes an average speed of 17 knots. For FOB Australia, a freight rate covering an eight-day voyage will be subtracted from DES JKM. Platts will adapt its methodology, providing advance notice to subscribers, in the event that these typical shipping practices evolve.

Calculation: Cost of charter for the entire voyage, accounting for a round-trip and a two-day delivery time, and dividing that cost by the total delivered cargo in MMBtu; the cost of boil-off by multiplying the volume lost by the delivered price, divided by the delivered cargo size in MMBtu; the cost of bunker oil by multiplying

Platts' FOB Melbourne bunker fuel assessment in \$/mt by the consumption rate, and then half the round-trip voyage time (the remainder being fueled by boil-off gas). The delivered cargo size is calculated by multiplying the initial cargo size by itself minus the boil-off rate powered to the trip length, and then multiplied by a utilization rate of 98%.

PLATTS LNG GLOBAL FREIGHT COSTS

Platts launched on January 17, 2011, daily LNG freight cost assessments for 55 routes.

LNG Freight Costs are published on the following Platts services: Natural Gas Alert (NGA) and European Power Alert (EPA); in Platts LNG Daily, Platts Market Data and on Platts LNG TraderNet.

Frequency: Platts LNG Freight Costs are published each business day and reflect market values prevailing during the day.

On Singapore public holidays, no routes east of the Suez Canal will be published. On UK public holidays, no routes west of the Suez Canal will be published. On US public holidays, no routes to or from the Americas will be published.

Unit: All prices are quoted in US dollars per million British Thermal Units (\$/MMBtu) to two decimal places.

Quality: Price assessments reflect lean and rich gas.

Volume: Standard cargoes of 125,000-155,000 cu m.

Voyage times in days

	Japan/Korea	S China/Taiwan	West India	Southwest Europe	Northwest Europe	Northeast US	Argentina
ME	15	13	3	13*	16*	22*	21
Australia	8	7	9	21*	24*	29	21
Trinidad	33*	31*	22*	9	9	5	11
Nigeria	26	23	17	9	10	13	11
Algeria	24*	22*	13*	1	4	9	14
Belgium	28*	25*	16*	3	-	8	16
Peru	21	24	27	23	24	24	9
Russia	3	5	15	27*	29*	35*	27

* Route uses Suez canal, adds one day extra for shipping and 24 cents/MMBtu for canal fees

Bunker fuel bases

	Japan/Korea	S China/Taiwan	West India	Southwest Europe	Northwest Europe	Northeast US	Argentina
ME	Fujairah	Fujairah	Fujairah	Fujairah	Fujairah	Fujairah	Fujairah
Australia	Melbourne	Melbourne	Melbourne	Melbourne	Melbourne	Melbourne	Melbourne
Trinidad	Cartagena	Cartagena	Cartagena	Cartagena	Cartagena	Cartagena	Cartagena
Nigeria	Gibraltar	Gibraltar	Gibraltar	Gibraltar	Gibraltar	Gibraltar	Gibraltar
Algeria	Malta	Malta	Malta	Gibraltar	Gibraltar	Gibraltar	Gibraltar
Belgium	Antwerp	Antwerp	Antwerp	Antwerp	-	Antwerp	Antwerp
Peru	El Callao	El Callao	El Callao	El Callao	El Callao	El Callao	El Callao
Russia	Japan	Japan	Japan	Japan	Japan	Japan	Japan

Note: Fuel basis is chosen for the nearest liquid price point for the relevant route

Timing: Freight costs are calculated using spot cargo prices, spot vessel prices and spot bunker fuel prices, generally indicating a value for a voyage taken to deliver in the prompt calendar month. Due to differing roll dates, the prompt month may vary between markets.

Location: Loading at: Qatar/Abu Dhabi (Ras Laffan or Das Island); Australia (Barrow Island); Trinidad and Tobago (Point Fortin); Nigeria (Bonny Island); Algeria (Arzew or Skikda); Belgium (Zeebrugge); Peru (Pampa Melchorita); and Russia (Sakhalin).

Delivery Points: Japan/Korea (Chita, Kawagoe, Higashi Niigata, Sakai, Sodeshi, Yokkaichi, Yanai, Mizushima, Hachinohe, Futsu, Higashi Ogishima, Ogishima, Sodegaura, Negishi, Himeji, Senboku, Fukuoka, Kagoshima, Tobata, Oita and Sakaide in Japan; or Incheon, Gwangyang, Pyeongtaek and Tongyeong in South Korea); South China/Taiwan (Kaohsiung and Taichung in Taiwan; or Guangdong and Fujian in South China); West India (Hazira or Dahej); Southwest Europe (Huelva, El Ferrol LNG - Mugardos, Bilbao, Barcelona, Saggas LNG - Sagunto and Cartagena in Spain; or Sines LNG in Portugal); Northwest Europe (Zeebrugge, Isle of Grain or Milford Haven); Northeast US (Boston); and Argentina (Bahia Blanca).

Assessment: Platts publishes a single value indicating the implied cost of a voyage. This value is based on applying the relevant freight rate to the base price point (eg, Japan Korea Marker), using Platts Asia Pacific LNG Day Rates (APDR) or Atlantic LNG Day Rates (ATDR), a boil-off rate of 0.15%/day, a 98% utilization rate (leaving a 2% heel), bunker oil consumption rate of 150 mt/day (using the nearest applicable Platts bunker oil assessment), relevant voyage times and 50% of a round-trip fueled by boil-off. The voyage timing assumes an average

speed of 17 knots. Platts will adapt its methodology, providing advance notice to subscribers, in the event that these typical shipping practices evolve.

Calculation: Cost of charter for the entire voyage, accounting for a round-trip and a two-day delivery time, and dividing that cost by the total delivered cargo in MMBtu; the cost of boil-off by multiplying the volume lost by the delivered price, divided by the delivered cargo size in MMBtu; the cost of bunker oil by multiplying Platts bunker fuel assessment in \$/mt by the consumption rate, and then half the round-trip voyage time (the remainder being fueled by boil-off gas). The delivered cargo size is calculated by multiplying the initial cargo size by itself minus the boil-off rate powered to the trip length, and then multiplied by a utilization rate of 98%.

Assumptions: The following timing assumptions are used for each route:

UPDATES

Platts reviews its methodologies regularly to meet the developing needs of the market and to be consistent with market practices. Such updates are guided by Platts' high standards of editorial independence and integrity. Platts is an independent publisher utilizing transparent methodologies to reflect actual market practice and representative spot market value. Platts welcomes comments and ideas at any time from market participants and other interested parties.

COMMENTS

Please direct comments or queries to lng@platts.com.