



Mexico Energy Report Methodology

Methodology last updated: 30 January 2019

Expiry date for this methodology: 31 July 2020

Introduction to the Mexico Energy Report (MER)

The Mexico Energy Report (MER) focuses on Mexico's emerging gas and power markets. The report contains news, authoritative commentary and analysis and is published weekly from 3 January 2018 onwards.

The report contains pricing information relevant to Mexico's natural gas and power markets. ICIS continuously monitors market developments, and further pricing information will be incorporated as relevant energy markets in Mexico develop.

International natural gas prices represent NYMEX futures settlements and ICIS assessments from the day prior to publication of MER.

General methodology

ICIS continuously develops, reviews and revises its methodologies in consultation with industry participants. Product specifications and trading terms and conditions used are intended to reflect typical working practices prevalent in the industry.

ICIS publishes market assessments based on information continuously gathered from market participants about: spot transactions, spot bid and offer levels, contract and tender price negotiations, prices of related commodities, and relevant transmission costs.

ICIS does not make retrospective adjustments or changes to price assessments based on information received after publication time in all cases or after any cut-off point specified in individual methodology documents.

ICIS regards all arm's length transactions which meet its specification criteria as carrying equal weight.

ICIS uses proprietary models where necessary to normalise data to the typical specifications for cargo size and date ranges given for each commodity.

Some ICIS assessments are the product of calculation alone, for example in markets where insufficient market activity takes place to permit price assessment, or where a market habitually itself sets prices according to a formula. Such calculated assessments are noted as such in their detailed methodology specifications.

ICIS endeavours to cross-check all the transaction information it gathers. ICIS will not use information for assessment purposes where such checks call into doubt the accuracy of the original information, or where a transaction appears to have occurred under circumstances that render it non-repeatable or otherwise markedly unusual.

Mexico Energy Report prices

All ICIS energy prices contained in MER are intended to provide a reliable and accurate measure of physical market value on the over-the-counter traded markets.

To do this, ICIS has adopted two methodological approaches, which can be applied as reliable measures but at different stages in the development of trade at a particular location: assessment and index.

Mexico locational gas price indicator

ICIS calculates a three-month forward curve to indicate the lowest cost at which participants in Mexico's natural gas market could theoretically deliver natural gas to six geographical locations in the country's Sistrangas natural gas pipeline system, in both US\$/MMBtu and Mexican Pesos (Ps)/GJ.

These six points are Monterrey and Tuxpan in the Zona Golfo Sistrangas transport zone, El Encino in the Zona Norte, Mexico City in the Zona Central, Guadalajara in the Zona Occidental and Minatitlan in the Zona Sur.

ICIS calculates the forward curve through a formula that uses NYMEX natural gas futures settlements for specific US natural gas hubs and an extrapolation of the formula used by state oil company Pemex to generate the VPM price which is applied to gas produced in the south of Mexico as base indexations.

The cost of moving natural gas from these US and domestic supply points through pipelines in Texas and Mexico is then factored into the formula, based on the lowest cost transport route from the source points to the geographical locations

For US pipelines, transport tariffs are worked out using both publically available data and market intelligence.

The transport costs in Mexico are also derived from market intelligence and publically available tariffs for the Sistrangas pipeline grid employed by system operator Cenagas, and private pipelines, which do not form part of the system. These tariffs can be found in Spanish on the website of Mexico's energy regulator CRE:

https://www.gob.mx/cms/uploads/attachment/file/187290/RES_050_2017.pdf

<https://www.gob.mx/cre/articulos/listas-de-tarifas-vigentes-de-transporte-y-almacenamiento-de-gas-natural>

Price conversions employ forward curve currency exchange rates published by Bloomberg for each of the months under consideration. Conversions between GJ and MMBtu use the 1 GJ=0.947 MMBtu standard used by the International Energy Agency.

Spot LNG Assessment

The Mexico East spot LNG assessment is taken from ICIS LNG Markets Daily publication, representing the price at which a spot delivered ex ship (DES) cargo delivered into the port of Altamira would most likely transact.

As with other ICIS DES LNG assessments, the ICIS Mexico East spot price does not take into account the cost of regasification, blending or transport into the domestic network from the LNG import terminal.

Lean and rich quality cargoes are taken into account in the assessments. No premiums or discounts are applied for varying quality as there are no consistent patterns determining relative value attributed to different specifications. Two calendar months are assessed. The assessments roll on the 16th of the calendar month. For example, on 16 January, the two front months roll from February and March, to March and April. Where 16 January falls on Saturday or Sunday, the assessments roll on the following Monday.

DES LNG calculations

The two front-month values are calculated using settlements on the NYMEX natural gas futures market and fixed premium or discount constants which are understood by ICIS to constitute the pricing formulas used for the supply contracts at both the Altamira and Manzanillo terminals.

The numbers are calculated on a monthly basis in US\$/MMBtu. Adjustments to these calculated values are made based on any additional contract information obtained by ICIS. The assessments roll on the 16th of the calendar month.

Weekly fuel spot price assessments

ICIS publishes US Gulf price assessments for Ultra Low Sulphur Diesel (ULSD), Residual Fuel Oil No.6 3.0% and Propane, In Store MT Belvieu in the MER. These products are used as alternative fuels to natural gas in both the Mexican power and residential fuel retail sectors, and therefore have a relevance in the fundamentals of the Mexican energy market.

The ULSD and Residual Fuel Oil prices are published on a daily basis in the ICIS Daily Product Report. Prices published in the MER represent those assessed on the day prior to publication. The ULSD price is given in US\$ per US Gallon. Residual Fuel Oil No.6, 3.0% is assessed in US\$ per barrel (bbl).

For ULSD prices, assessments are derived from actual trades reported, bid/offer levels and differentials to the settlement price for the relevant month of the NYMEX heating oil futures contract. The Residual Fuel Oil price assessment is derived from actual trades reported and bid/offer levels discussed and reported during the trading day.

USLD and Residual Fuel Oil Specification

The two products assessed are normal US domestic qualities traded on the US Gulf Coast and reflect fungible qualities meeting the appropriate Colonial Pipeline Company specifications for the respective grades, with the usual seasonal variations.

For ULSD this is the equivalent to 62 grade meeting 0.2% maximum sulphur and minimum gravity of 30 API. For Residual Fuel Oil No. 6 the assessment reflects a 3.0% maximum sulphur content with a typical gravity of 10.5 API and a viscosity of 150-250 ssf.

The full methodology for these assessments can be found at this link.

<https://www.icis.com/compliance/reports/products-price-report/>

Propane, In Store Mt Belvieu

The Propane, In Store Mt Belvieu price is assessed on a weekly basis in the ICIS Weekly Atlantic Basin Feedstocks report, covering normal US domestic quality Propane traded on the US Gulf Coast. The price published in MER will be the assessment from the report prior to publication, quoted in US\$ per US Gallon.

The Propane, In Store Mt Belvieu assessment is based on the price assessed at the close of business on the Friday of the week in question. Assessments are derived from actual trades reported, bid/offer levels and differentials to the NYMEX futures contracts, as obtained from members of the market such as buyers, sellers, brokers and traders.

The full methodology for this assessment can be found at this link.

<https://www.icis.com/compliance/reports/feedstocks-report/>

Recent changes to this methodology

Date	Price reference	Change
5 July 2017	Pemex Regional Price Indicator	Added
5 July 2017	Venta de Primer Mano (VPM) price and VPM forward curve	Removed. In line with the decision of Mexico's energy regulator CRE to remove the maximum price cap for the VPM natural gas pricing formula, ICIS has removed the CRE Mexico gas price and VPM forward curve from the list of prices covered on the front page of the MER.
30 January 2019	Weekly fuel spot prices	Added

Publication

The calculated numbers are revised on a monthly basis, on the first working day of every month, but may remain unchanged for quarterly periods depending on the formula used in each calculation.

Prices in formulae which are revised on a quarterly basis will be updated with changes in exchange rate calculations. The forward-curve values will also be updated each month on changes in forward fuel markets prices and exchange rates.

ICIS continually develops, reviews and revises its methodologies in consultation with industry participants. Product specifications and trading terms and conditions are intended to reflect typical working practices prevalent in the industry.

Changes to methodology

All markets evolve, and ICIS has a duty to ensure its methodologies for market reporting evolve in step with markets.

ICIS therefore regularly conducts internal reviews of the appropriateness of its methodologies.

Draft changes are then made public and comment requested from industry participants, with a minimum one-month notice period, except where, exceptionally, a force majeure event (natural disaster, war, bankruptcy of a trading exchange, etc) makes necessary a shorter notice period.

ICIS is committed to reviewing all comments on proposed methodology changes, but in some cases may find it necessary to alter its methodologies against the wishes of some market participants.

In addition, ICIS has a formal methodology consultation process. The company commits to holding this consultation one year after launch for MER, and every two years thereafter. The date of the last consultation launched and the expiry date by which the company commits to conducting the next consultation can be seen at the top of the methodology document.

Please also refer to the Methodology Consultation Process section of the company's Compliance Manual. This contains detailed flow charts documenting the internal and external review and consultation process.

ICIS Contact Details

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