

Methodology and Specifications Guide

Platts-ICE Forward Curve – Natural Gas (North America)

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PLATTS-ICE FORWARD CURVE – NATURAL GAS (NORTH AMERICA)



INTRODUCTION: HOW THIS DOCUMENT IS ORGANIZED:

This statement of methodology includes the following sections:

- † Platts coverage of North American forward natural gas markets and its basic methodology
- † The Platts-IntercontinentalExchange data agreement
- † Sources of data and information on forward markets
- † Security and confidentiality; Platts editorial standards
- † Standard forward packages and makeup of seasonal packages
- † Market-on-close methodology
- † Liquidity considerations in assessed markets
- † General principles applicable to all derivatives or forward markets
- † List of trading locations covered
- † Contacting Platts for additional information
- † Important disclosures

PLATTS COVERAGE OF FORWARD NATURAL GAS MARKETS AND ITS BASIC METHODOLOGY:

Platts has been publishing daily assessments of forward natural gas markets (forward curves) in North America since June 2003.

The Platts-ICE Forward Curve – Natural Gas (North America) brings more price transparency to forward natural gas markets in North America and provides an independent assessment of forward values for all relevant locations, including those where there is minimal or no trading activity on any given day. The assessments offer companies an independent view of forward values by aggregating multiple data sources to produce a single cross-checked series of forward curves under an open and validated methodology.

Forward assessments within the Platts-ICE Forward Curve products may be used as a tool for independent evaluation, for validating mark-to-market processes, or for other portfolio risk-management processes. Forward curves are used in value-at-risk, stress testing and risk disaggregation. Platts-ICE Forward Curve products provide another source of information for mark-to-market and for evaluating and verifying internally generated values for marking forward positions.

As of October 2011, Platts-ICE Forward Curve – Natural Gas (North America) includes daily assessments and associated ranges for the gas forward market at 28 key trading locations for 12 time periods extending out three calendar years. Gas forwards are typically traded as financial basis swaps with the exception of the balance of the month, which is commonly traded as a fixed-price swap. The forward natural gas assessments differ fundamentally from the Platts daily and monthly bidweek indexes in methodology and how they are used by the market, just as the forward electricity assessments comprising the Platts-ICE Forward Curve – Electricity (North America) differ markedly from Platts daily electricity indexes.

Financial basis swaps are traded as a basis differential to the corresponding New York Mercantile Exchange (NYMEX) Henry Hub futures contract — i.e., the closing price of that month's futures contract for a specified month, or the average of the months that comprise a seasonal strip of futures contracts. Depending on the location, the differential price may be a plus or minus to the Henry Hub futures contract. Prices are reported in US cents/MMBtu. In addition to a market-on-close assessment, Platts also publishes a range and a full-value equivalent price (the corresponding NYMEX Henry Hub gas futures contract price plus or minus the basis differential). For balance of the month, which trades at a fixed price, Platts also publishes both a full-value, fixed price and a price expressed as a basis differential to the Platts Henry Hub balance-of-the-month assessment. Historical data for many hubs over a period of years is also available.

The methodology is a market-on-close assessment that establishes values at the close of gas futures trading and relies more on editorial analysis and use of spread relationships among locations and time periods than do daily and monthly bidweek indexes based on mathematically derived measures of transactions over an entire trading period.

THE PLATTS-INTERCONTINENTAL EXCHANGE DATA AGREEMENT:

Platts and IntercontinentalExchange reached an agreement in October 2007 to combine the data-gathering capabilities of each company with Platts' expertise and avowed methodology systems to enhance the forward curve product offerings in North American natural gas and electricity.

Under the agreement Platts incorporates forward trading activity in gas and electricity markets on the ICE platform in formulating

and publishing daily forward curves for natural gas and electricity, known as the Platts-ICE Forward Curves.

Methodology systems used to assess forward markets remain the preserve of Platts Editorial. ICE provides some of the data considered by Platts editorial experts who formulate forward assessments for the gas and electricity markets. ICE transactions play a valuable but not dominant role in editors' analysis of price term structure and outright valuations of the daily forward market and thus the determination of market-on-close assessments.

SOURCES OF DATA AND INFORMATION ON FORWARD MARKETS:

In addition to using forward trading activity on ICE, Platts gathers information on the forward market from brokers and traders active in the markets and through the non-commercial departments (back offices) of companies.

The three streams of forward price information used by Platts editors are complementary. More liquid locations and time periods trade more on ICE, while less liquid locations and time periods further out the curve trade less on ICE. Transactional information Platts receives from companies through their back offices and from traders and brokers provides editors with three channels of information for comparison and to use for assessing the more liquid hubs.

Transactional information from company back offices and direct from individual market participants includes deals, bids and offers.

Platts may use spread trades on ICE and bid and offer information provided directly by market participants. These information streams provide editors with additional support in their assessment processes in those markets where there is minimal liquidity.

Platts strongly encourages companies that report transactional data from their back offices on daily and monthly bidweek deals to also report forward deals.

Companies that report forward deals define transactions by key attributes, including trade date, flow date(s), and whether a transaction is physical or financial. On the basis of those attributes, Platts is able to sort transactional data and include the applicable deals in the relevant assessments. Platts provides sample reporting formats to companies that are initiating reporting or considering expanding their reporting beyond daily and monthly bidweek transactions to include forward deals. The sample reporting formats are available upon request (please contact Brian Jordan, 202-383-2181, brian_jordan@platts.com or Mike Wilczek, 202-383-2246, mike_wilczek@platts.com).

Companies that report forward natural gas transactions in addition to daily and bidweek deals can submit all transactions in one report or report forwards in a separate report. The

deadline for submittal of daily transactions is 4:00 pm Eastern Prevailing Time. For forward transactions done by the 2:30 EPT market-on-close deadline to be considered in that day's assessments, they must be received by 3:30 pm EPT. Forward transactional data received after the 3:30 pm EDT time cut-off, while useful for general market understanding, will not be considered for the day's assessments.

Because of the fundamentally different nature of the daily forward gas assessments, which are market-on-close assessments rather than mathematically derived indexes or assessments like those for the daily and monthly bidweek natural gas markets, market editors formulating Platts forward assessments, as noted, may collect information on forward market prices from traders and brokers. That differs from Platts daily and monthly bidweek natural gas indexes, for which all price data comes from company back offices and none of the price data used to formulate indexes and assessments is collected directly from traders or brokers. For more information on Platts data standards and protocols for its daily and monthly bidweek natural gas prices, please see Platts Methodology for North American Natural Gas Markets at Platts.com under methodology and specifications under the natural gas tab.

SECURITY AND CONFIDENTIALITY; PLATTS EDITORIAL STANDARDS:

Platts has a long history of keeping price data secure and confidential. There are two key aspects to ensuring that data is kept secure and confidential. The first is the security of the information technology systems; the second is ensuring that access to the data is restricted inside Platts and is used only for constructing indexes and assessments and not for news-reporting purposes. Following is a description of Platts' processes that apply to data submitted by companies from their back offices:

- † Price data is e-mailed to a specific Platts e-mail address (gasprice_daily@platts.com for daily and forward deals and gasprice_monthly@platts.com for monthly bidweek prices). E-mails to those addresses enter a secure network protected by firewalls. They are accessible only by market editors. Encryption is available on request of the reporting company.
- † The data is then entered into a proprietary software system designed specifically to store and analyze trade data.
- † Data is stored in a secure network, and under internal procedures audited and enforced by a Platts compliance officer, is kept for a specified retention period, along with market editors' notes.
- † Regular compliance examinations check for adherence to the parameters set forth in the Platts Compliance Plan, which ensures that reporters and editors adhere to published methodologies, as well as to internal standards that require accurate records are kept, in order to document the work of editors and reporters.

- † Data is protected under formal confidentiality agreements signed by data providers and Platts.
- † Price data is used only and without exception for constructing indexes and assessments. Platts has a strict internal policy, reflected in its confidentiality agreements, of never using individual price data for news-reporting purposes.

Platts has in place a Code of Ethics with which all of its employees, including its editorial staff, must comply. In addition, all Platts employees are subject to and must adhere to The McGraw-Hill Companies' Code of Business Ethics. Editors must re-sign each code annually. Company policies, among other things, prohibit editorial personnel and their spouses from trading in commodities or stocks, bonds or options of companies in the industry covered by their publication(s) and from dealing with outside parties in a manner that creates even an appearance of a conflict of interest. The McGraw-Hill Companies' Code of Business Ethics reflects McGraw-Hill's commitment to integrity, honesty and acting in good faith in all its dealings. The Platts Code of Ethics is designed to ensure that Platts information is the product of honest, fair and open reporting.

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

STANDARD FORWARD PACKAGES AND MAKE-UP OF SEASONAL PACKAGES:

Daily assessments (expressed in basis differentials and full values) and associated ranges are formulated for the balance of the month, prompt month, second month, third month, balance of the current season, four full seasons, and three calendar years. Seasonal packages are the November-March winter package and the April-October summer package. Calendar-year packages include January through December.

MARKET-ON-CLOSE METHODOLOGY:

The Platts-ICE Forward Curve for natural gas comprises daily market-on-close assessments of the value of financial basis swaps or, in the case of the balance of the month, fixed-price swaps.

Platts assessments reflect the transactable values at 21 key trading locations at the 2:30 pm Eastern Prevailing Time, the close of open-outcry trading of the New York Mercantile Exchange Henry Hub gas futures contract, which allows the assessments to line up and be compared with the NYMEX Henry Hub contract settlement prices. Platts straddles the assessed value with a high/low range around the assessment value.

Assessments represent the value of the commodity at that point in the forward curve at the exact timestamp, namely 2:30 EPT. The process of assessing values on a market-on-close basis, rather than averaging transactions over the entire trading day, allows

the assessments to be in line with related markets. Market-on-close ensures all spread relationships are reflected and maintained at their accurate levels, rather than skewed due to variability in trading patterns over the course of the day.

Platts editors use the three streams of transactional and bid and offer information (ICE, company back offices, and conversations with traders and brokers) as well as differentials to other trading locations and differentials between time periods in making assessments. Bids and offers made and transactions done are assessed in relation to price formation in time, and normalized to fully reflect the 2:30 pm EPT timestamp. Assessments across the curve are in agreement. For example, the daily assessments for individual months are consistent with and reflected in the balance-of-season assessment that includes those months.

LIQUIDITY CONSIDERATIONS IN ASSESSED MARKETS:

Platts is committed to publishing assessments for forward instruments even in the complete absence of trade. Platts does not set absolute numerical boundaries on the number of indications that can facilitate an assessment on any given day. Platts assessments can be inferential in nature. Therefore, if a given hub is typically traded on a spread basis to another, perhaps more liquid hub, editors would determine reliable spread indications from several cross-checkable sources.

Platts considers all discrete price and spread information from multiple sources and formulates an assessment reflective of market value. Platts adheres to its general methodological principles of accuracy, transparency and repeatability in assessment systems, as well as standards of internal compliance. Platts continuously reviews markets, liquidity and trading patterns to ensure it is assessing in line with market information needs.

GENERAL PRINCIPLES APPLICABLE TO ALL DERIVATIVE OR FORWARD MARKETS:

- † Assessments reflect the value of market on close at 2:30 pm EPT.
- † Assessments are a reflection of deals and bid and offers and are subject to careful review.
- † Platts tracks values and interrelationships over the whole course of the day.
- † Information will be cross-checked to ensure data integrity.
- † Transactions done after the assessment closing time will not be considered for that day's assessments.
- † Illiquid markets may be assessed relative to active benchmarks and will still reflect end-of-day market-on-close values.

- † Platts only evaluates information from sources considered credible and all information is subject to stringent verification and cross-checks. Information that cannot be fully verified may be disregarded for assessment purposes.

Forward assessments reflect actual market conditions and are based on actual trades and bids and offers when available. Platts believes that every commodity has a tradable value, however, and formulates assessments that reflect a value at which a commodity could trade, even if for any given day it has not done so.

LIST OF HUBS AND MARKETS COVERED; PLATTS SYMBOLS:

Daily forward assessments, as of November 2010, are formulated for the following list of key natural gas trading locations. A description of the locations is available in the appendix of the Platts Methodology for North American Natural Gas Markets at Platts.com, under methodology and specifications under the natural gas tab. A directory of Platts symbols for its price data, including forward natural gas, can be found on Platts.com at the following link: www.platts.com/SymbolAndPageDirectories.aspx.

- † Algonquin, city-gates
- † Transco, zone 6 N.Y.
- † Texas Eastern, M-3
- † Columbia Gas, Appalachia
- † Dominion, South Point
- † Transco, zone 3
- † Transco, zone 4
- † Tennessee, Louisiana, 500 Leg
- † Florida Gas, zone 3
- † Trunkline, La.
- † Columbia Gulf, mainline
- † Chicago city-gates
- † MichCon city-gate
- † Northern, demarcation
- † Northern, Ventura
- † Panhandle, Tx.-Okla.
- † NGPL, Texok zone

- † Houston Ship Channel
- † Waha
- † El Paso, Permian Basin
- † El Paso, San Juan Basin
- † PG&E, city-gate
- † PG&E, Malin
- † Northwest, Rocky Mountains
- † SoCal Gas
- † Northwest, Canadian Border (Sumas)
- † Dawn, Ontario
- † TCPL Alberta, AECO-C

CONTACTING PLATTS FOR ADDITIONAL INFORMATION:

For editorial questions or additional information, please call either of two senior Platts editors who oversee the forward curves for natural gas and electricity: Mike Wilczek, 202-383-2246; mike_wilczek@platts.com, or Brian Jordan, 202-383-2181; brian_jordan@platts.com.

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