

Methodology and Specifications Guide

European Natural Gas Assessments and Indices

Introduction	2	Italian Punto di Scambio Virtuale (PSV)	5
Platts MOC assessments	2	French Point d'Exchange de Gaz (PEG Nord)	5
Platts indices	2	Timing:	5
Bank holiday closing times	2	German GASPOOL	5
Standard contract definitions	2	Timing:	5
Confirmation of trades	3	German NetConnect Germany	5
Sleeve/round trip/wash trades	3	Timing:	6
Spread trades and basis trades	3		
Other non-standard transactions	3	NW Europe oil-indexed gas price indicator (gci)	6
When Platts assessments and indices are published	3		
		Spark Spreads	6
Platts UK gas market coverage	3		
Specifications	3	Cross-fuels comparisons	6
Timing	4	Natural Gas	6
		Gasoil	7
Platts Continental European gas coverage	4	Fuel Oil	7
Specifications	4	Coal	7
Zeebrugge	4	Electricity	7
Timing:	4		
Dutch Title Transfer Facility (TTF)	4	Glossary	7
Timing:	5		

LATEST UPDATE: October 2009

INTRODUCTION

Platts methodology for assessing European gas markets has developed over a number of years. It draws on our experience in the international oil markets and in the US gas and power markets. Platts sets 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.

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 brokers, traders, foreign and local producers, distributors and end-users. Usually, key market players are contacted by phone or email on a daily basis, while other smaller players are canvassed on a less frequent but regular basis. In addition, some companies email us trade and market information, which we would consider in conjunction with other information gathered during our phone surveys. In each case, we aim to speak to those participants that were most active in the market on that particular day.

Platts reporters aim to call 8-10 players per market each day, but in practice would call as many players as we need until we are comfortable that we have sufficient information to start assessing the market. Most calls are made from mid- to late-afternoon London time. Platts market reporters may also call market participants at other times for intra-day market updates.

Platts discloses publicly the days of publication of its price assessments and indices, and the times during each trading day in which Platts considers transactions in determining its assessments and index levels. 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 prices based on the most recent trades and/or bids and offers prevailing at the end of the normal trading cycle. For European gas we define this as:

UK day-ahead contracts – 16:30 London time.

Continental European day-ahead contracts – 16:30 London time. (Time stamp change from 12:00 noon London time to 16:30 London time as of November 1, 2009.)

Continental European forward contracts – 16:30 London time. (Time stamp change from 16:00 London time to 16:30 London time as of November 1, 2009).

UK forward contracts – 16:30 London time. (Time stamp change from 17:00 London time to 16:30 London time as of November 1, 2009).

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 would be 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 day. Finally, if there are no qualified trades in a product and no firm bids and offers in the market, we look at spreads against other products or markets (e.g. Q2 versus Q3, Zeebrugge gas versus UK NPB gas, etc).

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.

PLATTS INDICES

Platts daily indices for the UK gas market are based on the midpoints of Platts' assessments. Daily assessment midpoints for UK day-ahead and UK month-ahead are published in *European Gas Daily* every day as are the UK day-ahead index and the UK month-ahead index. The assessments are also published on *European Power Alert* and are available as a data feed. The monthly averages of day-ahead and month-ahead midpoints are published at the start of each month for the previous month.

BANK HOLIDAY CLOSING TIMES

On certain days ahead of a UK Bank Holiday, such as Christmas Eve and New Year's Eve, Platts assesses the MOC price earlier than normal, at 12:00 noon London time. This is to take account of typically much lower liquidity and the earlier end of trade. The cut-off point for all indices, daily and forward, would also be 12:00 noon London time on these days.

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 UK and Zeebrugge gas markets, the standard prompt trade is 25,000-500,000 th/d in 25,000 th/d increments. The standard forward trade is 25,000 or 50,000 th/d. For the Dutch Title Transfer Facility, the Italian Punto di Scambio Virtuale, the French Point d'Exchange de Gaz, the German BEB and E.ON Ruhrgas trading points, the standard lot size would be 30 MW.

Trades involving smaller or larger volumes may be considered indirectly for the purpose of compiling Platts European gas assessments and indices. This would depend on other features of the deal, however, and whether or not the price was in line with other market indications at the time of transaction.

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 with each trade.

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 are not provided, Platts reporters must use their judgment to decide whether to include the individual trade in the index or assessments.

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.

SPREAD TRADES AND BASIS TRADES

Trades concluded as one leg of a transaction linked to a similar trade in another product or market – spread or basis trades – are excluded from Platts indices. Here it is the difference between the two products or markets, not the outright values, that is important. Platts produces separate assessments of the “basis” spread between the UK NBP and Zeebrugge gas markets for added transparency.

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 would also be discounted. This is because the price tag on the deal may be inflated or depressed as a result of the special relationship between the companies involved.

WHEN PLATTS ASSESSMENTS AND INDICES ARE PUBLISHED

Platts publishes a day-ahead assessment and index for the UK's NBP Monday-Friday each week. This includes coverage of UK bank holidays. On Fridays the day-ahead price is for delivery on the Monday.

Platts publishes spot assessments for Zeebrugge, the Dutch Title Transfer Facility, the Punto di Scambio Virtuale, Point d'Exchange de Gaz, GASPOOL and NetConnect Germany (formerly BEB and E.ON) facilities and forward assessments for the NBP, Zeebrugge, Dutch Title Transfer Facility, the Punto di Scambio Virtuale, the Point d'Exchange de Gaz, the GASPOOL and NetConnect Germany facilities on all UK working days. A schedule of UK bank holidays and publication dates can be found on the Platts web site at www.platts.com.

PLATTS UK GAS MARKET COVERAGE

The UK is home to Europe's oldest spot gas market. Trading emerged at UK beach terminals—the place where gas shipped in from offshore fields comes ashore—in the early 1990s. In 1996 with the signing of the Network Code, trade concentrated on a notional “National Balancing Point.” The NBP contract has become the standard for UK gas trade and allows counterparties to trade gas on the same terms for delivery anywhere within the National Transmission System operated by UK gas pipeline company National Grid.

Trade at the UK's two biggest beach terminals, St Fergus in Scotland and Bacton in East Anglia, at one end of the Belgium-UK Interconnector, is now very limited, while liquidity is firmly focused on the NBP. Platts therefore halted its assessments of gas delivered at St Fergus and Bacton as of November 10, 2008.

SPECIFICATIONS

Delivery: Platts quotes prices for firm, physical delivery in the UK at the notional “National Balancing Point” (NBP).

Units: All Platts UK gas assessment prices are in UK pence/therm, with equivalent prices provided in euro per megawatt hour, euro per gigajoule and US dollars per million British thermal units for easy comparison with continental European and global gas markets.

Lot size: Standard qualifying trades are 25,000-500,000 th/d in 25,000 th/d increments for prompt trade (within-day, day-ahead and weekend) and 25,000 or 50,000 th/d for forward trades. Trades involving smaller and larger volumes may be taken into account depending on other features of the trade.

Timing

Within-day = delivered within day of assessment/trade

Day-ahead = delivered next working day after assessment, (Friday's assessment reflects Monday delivery, including bank holidays when the price will often be close to the weekend price)

Weekend = delivered Saturday, Sunday

Week + 1 = delivered Monday-Friday of the front week

Balance of Month = delivery starting the next working day until the end of month. On the last day of the month balance of month = within day.

Months: All months are calendar months

Quarters: Q1 = January to March, Q2 = April to June, Q3 = July to September, Q4 = October to December

Seasons: Winter = October to March, Summer = April to September

Gas year = October 1-September 30

PLATTS CONTINENTAL EUROPEAN GAS COVERAGE

Platts launched coverage of the continental gas markets in August 1999, with assessments for the then-fledgling Belgian hub of Zeebrugge. As one end of the UK-Belgium Interconnector, the growth and features of the Zeebrugge market have—unsurprisingly—been dictated to a large extent by UK shippers. Zeebrugge gas typically trades in pence per therm, using the UK model, and will most often follow the NBP market at a premium or discount, depending on market conditions.

Trading at Zeebrugge is mostly focused at the formal trading hub operated by Distrigas subsidiary Huberator. Most trade, especially for forward delivery, occurs within the official hub. Platts assessments reflect delivery at the official hub.

Hubs are coming into being elsewhere in northwest Europe. The Dutch transporter Gasunie has created a version of the national balancing point called the Title Transfer Facility. From January 5, 2004, Platts also assessed prices at this trading point and at the Dutch-German border point Bunde-Oude. Due to a lack of liquidity Platts halted the Bunde-Oude assessments as of June 30, 2007.

Trading points elsewhere in continental Europe are developing as market and infrastructure conditions improve. Since June 18, 2007, Platts has been assessing prices at the Punto di Scambio Virtuale, the Point d'Exchange de Gaz (PEG Nord), the BEB and E.ON Ruhrgas facilities. From October 2009 BEB is renamed GASPOOL and E.ON Ruhrgas is renamed NetConnect Germany.

SPECIFICATIONS

Zeebrugge

Delivery: Prices are for firm, physical delivery at the Zeebrugge hub operated by Huberator.

Unit: All prices are quoted in UK pence/therm, with equivalent prices provided in euro per megawatt hour, euro per gigajoule and US dollars per million British thermal units for easy comparison with continental European and global gas markets.

Quality: As defined by Belgian network operator Fluxys.

Lot size: Standard qualifying trades are 25,000-500,000 th/d in 25,000 th/d increments for prompt trade (within-day, day-ahead and weekend) and 25,000 or 50,000 th/d for forward trades. Trades involving smaller and larger volumes may be taken into account depending on other features of the trade.

Timing:

Within-day = delivered within day of assessment/trade

Day-ahead = delivered next working day after assessment, (Friday's assessment reflects Monday delivery)

Weekend = delivered Saturday, Sunday

Week + 1 = delivered Monday-Friday of the front week

Balance of Month = delivery starting the next working day until the end of month. On the last day of the month balance of month = within day.

Months: All months are calendar months

Quarters: Q1 = January to March, Q2 = April to June, Q3 = July to September, Q4 = October to December

Seasons: Winter = October to March, Summer = April to September

Gas year = October 1-September 30

Dutch Title Transfer Facility (TTF)

Delivery: Prices are for firm, physical delivery at the notional trading point, the Dutch Title Transfer Facility.

Unit: All prices are quoted in euro per megawatt hour with equivalent values given in pence/therm, euro per gigajoule and US dollars per million British thermal units for easy comparison with continental European and global gas markets.

Quality: Prices are typically for high cal gas. Other specs are as defined by the Dutch network operator, Gasunie.

Lot size: Standard qualifying trades are 30 MW for prompt (day-ahead and weekend) and forward trade. Trades involving smaller and larger volumes may be taken into account indirectly, depending on other features of the trade.

Timing:

Day-ahead = delivered next working day after assessment, (Friday's assessment reflects Monday delivery)

Weekend = delivered Saturday, Sunday

Months: All months are calendar months

Quarters: Q1 = January to March, Q2 = April to June, Q3 = July to September, Q4 = October to December

Seasons: Winter = October to March, Summer = April to September

Gas year = October 1-September 30

Cal year = Calendar year

Italian Punto di Scambio Virtuale (PSV)

Delivery: Prices are for firm, physical delivery at the notional trading point, the Punto di Scambio Virtuale.

Unit: All prices are quoted in euro per megawatt hour with equivalent values given in pence/therm, euro per gigajoule and US dollars per million British thermal units for easy comparison with continental European and global gas markets.

Quality: Prices are typically for high cal gas. Other specs are as defined by the Italian network operator.

Lot size: Standard qualifying trades are 30 MW for prompt (day-ahead) and forward (month-ahead) trade. Trades involving smaller and larger volumes may be taken into account indirectly, depending on other features of the trade.

Timing:

Day-ahead = delivered next working day after assessment, (Friday's assessment reflects Monday delivery)

Month = calendar month

French Point d'Exchange de Gaz (PEG Nord)

Delivery: Prices are for firm, physical delivery at the notional trading point, the Point d'Exchange de Gaz Nord.

Unit: All prices are quoted in euro per megawatt hour with equivalent values given in pence/therm, euro per gigajoule and US dollars per million British thermal units for easy comparison with continental European and global gas markets.

Quality: Prices are typically for high cal gas. Other specs are as defined by the French network operator.

Lot size: Standard qualifying trades are 30 MW for prompt (day-ahead) and forward (month-ahead) trade. Trades involving smaller and larger volumes may be taken into account indirectly, depending on other features of the trade.

Timing:

Day-ahead = delivered next working day after assessment, (Friday's assessment reflects Monday delivery)

Month = calendar month

German GASPOOL

Delivery: Prices are for firm, physical delivery at the notional trading point, the GASPOOL hub. The GASPOOL area includes the former BEB price area, which merged with other market zones in October 2009. GASPOOL is now composed of: H-Gas Northern Germany, ONTRAS and WINGAS TRANSPORT market areas.

Unit: All prices are quoted in euro per megawatt hour with equivalent values given in pence/therm, euro per gigajoule and US dollars per million British thermal units for easy comparison with continental European and global gas markets.

Quality: Prices are typically for high cal gas. Other specs are as defined by the German network operator.

Lot size: Standard qualifying trades are 30 MW for prompt (day-ahead) and forward (month-ahead) trade. Trades involving smaller and larger volumes may be taken into account indirectly, depending on other features of the trade.

Timing:

Day-ahead = delivered next working day after assessment, (Friday's assessment reflects Monday delivery)

Month = calendar month

German NetConnect Germany

Delivery: Prices are for firm, physical delivery at the notional trading point, the NetConnect Germany market. NetConnect Germany replaces the E.ON hub. It represents a merger of the E.ON Gastransport, bayernets, GRTgaz Deutschland, Eni Gas Transport Deutschland and GVS Netz market areas. The areas merged in October 2009.

Unit: All prices are quoted in euro per megawatt hour with equivalent values given in pence/therm, euro per gigajoule and US dollars per million British thermal units for easy comparison with continental European and global gas markets.

Quality: Prices are typically for high cal gas. Other specs are as defined by the German network operator.

Lot size: Standard qualifying trades are 30 MW for prompt (day-ahead) and forward (month-ahead) trade. Trades involving smaller and larger volumes may be taken into account indirectly, depending on other features of the trade.

Timing:

Day-ahead = delivered next working day after assessment, (Friday's assessment reflects Monday delivery)

Month = calendar month

Seasons: Winter = October to March, Summer = April to September

Cal year = Calendar year

NW EUROPE OIL-INDEXED GAS PRICE INDICATOR (GCI)

The Platts NW Europe oil-indexed gas price indicator (GCI) is a gas price index, indicating the out-turn price of a model oil-linked long-term NW Europe gas sales contract. This is calculated monthly for the current month, month ahead and month ahead +1. We publish daily in *European Gas Daily* and on *European Power Alert* (fixed pages EP870 and EP872) the differentials between this monthly number and our existing gas price assessments for the day-ahead, month ahead and month ahead +1 contracts at the UK NBP and Dutch TTF.

The monthly indicator price is calculated in Euro per MWh. Platts will also publish converted values in pence/therm and \$/MMBtu using the respective GBP/Euro and US Dollar/Euro exchange rate of the day the monthly indicator is calculated.

The monthly indicator price, in Euro per MWh, is calculated according to a model long-term oil-indexed gas sales contract. Platts takes average low sulfur fuel oil and 0.1% gasoil prices for northwest Europe and converts these into a Euro per MWh price based on the average US dollar/Euro exchange rate over a six-month period and giving a 45% weighting to gasoil and a 55% weighting to fuel oil. After combining the gasoil and fuel oil prices, a fixed discount factor is applied in producing the gas price indicator to reflect the fact that sales contracts usually price gas below the straight oil-equivalent price.

Contracts used by industry normally have a six- to nine-month time lag. The Platts current month indicator is based on average prices for periods three to eight months ago. The forward month indicator is based on average prices for periods two to seven months ago. The forward month +1 indicator is based on average prices for periods one to six months ago.

For example, on October 1 the current month price would reflect average prices three to eight months ago, ie. gasoil and fuel oil prices during February to July. The month-ahead price would reflect two to seven months ago, ie. March to August. The two months-ahead price would reflect one to six months ago, ie. April to September.

SPARK SPREADS

Platts spark spreads are indicative prices giving the average difference between the cost of gas and the equivalent price of electricity on any given day.

Prices are quoted for the UK, Benelux and German markets.

UK spark spreads are based on Platts NBP gas assessments and the equivalent UK electricity assessment. Belgian spark spreads are based on Zeebrugge gas assessments and equivalent Belgian power assessment. Dutch spark spreads are based on Dutch gas assessments and equivalent Dutch power assessment. German spark spreads are based on TTF gas assessments and equivalent German power assessments, until such time as a liquid physical forward market for German gas becomes available.

The source of all gas prices is *European Power Alert* and *European Gas Daily*. The source of all power prices is *European Power Alert* and *European Power Daily*.

Platts calculates the spark spread for gas-fired plants with standard efficiencies of 50% and 60%.

Note: UK gas and power contracts roll at different times of the month. Therefore, Platts takes UK power conventions as the basis for its month-ahead spark spreads contracts.

CROSS-FUELS COMPARISONS

Platts cross-fuels comparisons are indicative prices of the costs of burning oil, gas and coal in power stations. In each case, the price of the fuel for spot and forward delivery is converted into an equivalent electricity price, quoted in Euro cents/kWh and US cents/kWh. The conversions assume the following plant efficiencies:

Natural Gas: 55%_Fuel Oil: 32%_Gasoil: 32%_Coal: 34%.

The standard specifications and sources of each fuel type are as follows:

Natural Gas

Quality: As specified by UK transporter National Grid.

Volumes: All prices are based on a standard contract lot size of 25,000 or 50,000 th/d.

Delivery: All prices are for physical delivery at the UK's National Balancing Point.

Timing: Balance month, one calendar month ahead, two calendar months ahead, and one quarter ahead.

Source: *European Gas Daily/European Power Alert*.

Gasoil

Quality: Gasoil with 0.1% sulfur content, including French Fuel Oil Domestique (FOD) and German Deutsche Industrie Norm (DIN) heating oil grades with a density of 0.845 g/ml and a sulfur content of 0.1% maximum. The assumed calorific value is 18,500 Btu/lb.

Volume: Prices are for 10,000-25,000 mt cargoes. Handy-size Russian cargoes delivered basis ARA and meeting DIN/FOD are also included.

Delivery: Prices are for cargoes delivered CIF Northwest Europe. This normally means cargoes delivered in a Le Havre/Hamburg port range.

Timing: Spot = 10-25 days ahead of publication, forward prices (one calendar month ahead, two calendar months ahead and one quarter ahead) are based on the volume-weighted average prices published by ICE for its futures contracts the previous day.

Source: *Platts Global Alert/ICE Futures.*

Fuel Oil

Quality: 1% sulfur fuel oil prices are based on a maximum 1% sulfur content. Cargo assessments are typically based on a viscosity of 380 centistokes at 50 degrees C, a specific gravity of 0.965 to 0.990 g/ml. 3.5 % sulfur fuel oil prices typically represent bunker grade material with a 3-4% sulfur content, specific gravity of 0.998-0.991 g/ml and a viscosity of 380 to 420 centistokes at 50 degrees C, a maximum of 300 parts per million of vanadium. The assumed calorific value is 17,800 Btu/lb.

Volume: 1% sulfur cargo prices typically reflect cargo parcels of 17,000-25,000 mt each, although smaller volumes may be considered. Cargoes up to 50,000 mt may also be taken into account for physical (spot) prices. 3.5% sulfur prices typically represent FOB barges of 1,000-5,000 mt.

Delivery: 1% sulfur prices are for cargoes sold FOB Northwest Europe. 3.5% sulfur prices are for barges sold FOB Amsterdam-Rotterdam-Antwerp.

Timing: For 1% prices, spot = 10-25 days ahead of publication. Forward contracts are for one calendar month ahead, two calendar months ahead and one quarter ahead. 3.5% sulfur prices are for barges loading 2-15 days forward.

Source: *Platts Global Alert.*

Coal

Quality: Prices are for steam coal standardized to 6,000 kilocalories per kilogram (10,800 Btu/lb) with a maximum 1% sulfur content.

Volume: Standard cargo volumes consider Capesize vessels.

Delivery: Prices are based on cargoes delivered CIF Northwest Europe (Amsterdam-Rotterdam-Antwerp).

Timing: Prices are assessed daily for the prompt month-ahead delivery and weekly for the 90-day forward delivery. Full methodology at www.platts.com.

Source: *Platts International Coal Report/Coal Trader International.*

Electricity

Delivery: All prices are for physical delivery on the England, Wales and Scotland high voltage (380 kV) grids. Distribution costs are not included.

Timing: Prices are quoted for the month ahead, two months ahead and quarter ahead.

Volume: All prices are based on trades in a standard volume of 10 or 20 MW.

Source: *European Power Daily/European Power Alert.*

GLOSSARY

AACHEN-EYNATTEN—Gas delivery hub at the border of Germany and Belgium

ABANDON—To allow an option to expire worthless

AMERICAN STYLE OPTION—An option which can be exercised by the buyer (holder) at any time during its life

ANTHRACITE—A hard, black coal with high energy content, often referred to as hard coal

ARBITRAGE—The simultaneous purchase of a commodity/derivative in one market and the sale of the same, or similar, commodity/derivative in another market in order to exploit price differentials

AT-THE-MONEY—An option whose exercise price is equal, or close to, the current price in the underlying market

BACKWARDATION—A market where the price for nearby delivery is higher than for further forward months

BARREL—A volumetric unit of crude oil, equivalent to 42 US gallons

BASELOAD—The minimum amount of electric power delivered or required over a given period of time at a steady rate. The minimum continuous load or demand in a power system over a given period of time

BBL—Balgzand-Bacton Line. Pipeline between the UK and the Netherlands, online in 2006.

Bcf—billion cubic feet

Bcm—billion cubic meters

BEARISH—Belief that a price will fall

BEB—A notional point within the German gas pipeline network. Part of the GASPOOL market zone since October 2009.

BID—A proposal to buy a commodity/derivative at a specified price

BID PRICE—The price at which a buyer is prepared to buy

BITUMINOUS COAL—The most common coal, which is dense, black and has a moisture content of less than 20%. Used for generating electricity, making coke, and space heating

BRITISH THERMAL UNIT (Btu)—The amount of energy necessary to raise the temperature of one pound of water one degree Fahrenheit

BULLISH—Belief that a price is going to rise

BUNDE-OUDE—Gas delivery hub at the border of Germany and the Netherlands

CALL OPTION—An option that gives the buyer (holder) the right but not the obligation to buy a specified quantity of an underlying futures at a fixed price, on or before a specified date. The grantor of the option is obliged to deliver the future at the fixed price if the holder exercises the option

CAPACITY—The gas throughput rating of a pipeline or storage rating of a storage facility.

CASH MARKET—The physical market underlying a futures or options contract

CASH AND CARRY—An arbitrage transaction involving the simultaneous purchase of a cash commodity with borrowed money and the sale of the appropriate futures contract

CASH SETTLEMENT—The settlement of futures or options by paying a cash difference, rather than taking/making physical delivery

CLEARING—The process of matching trades, settling trades and provision of a guarantee for traded contracts, often a service performed by exchanges

CLEARING FEE—A fee charged by a clearing house for clearing trades

CLOSE OUT—Finalizing a transaction by making an equal and opposite trade to an open position

COGENERATION—The simultaneous production of both useable heat or steam and electricity from a common fuel source

COMBINED CYCLE—The combination of one or more gas turbine and steam turbines in an electric generation plant. An electric generating technology in which electricity is produced from otherwise lost waste heat exiting from one or more gas (combustion) turbines. The heat is routed to a conventional boiler or to a heat recovery steam generator for use by a steam turbine in the production of electricity. This process increases the efficiency of the electric generating unit

CONNECTION—The physical junction between two gas systems permitting the transfer of gas

CONTANGO—Where the prompt price of a commodity/derivative is less than its price in further forward markets. Often described as the “healthy” state of commodities markets, except where seasonality is very strong

CONTI INDEX—Platts demand-weighted index of continental European power assessments

CONTRACT—A binding agreement between a buyer and a seller in a transaction

CONTRACT FOR DIFFERENCES (CFD)—A cash-settled futures contract between a supplier and buyer that is referenced to a settlement price

CUBIC FEET/METERS PER SECOND—A measurement of gas or water flow representing one cubic foot of gas or water moving past a given point in one second

CURTAILABLE RATE—An option offered by utilities to customers who can accept specified amounts of service reduction in return for reduced gas supply

DELTA HEDGING—The process whereby the grantor of an option decides to buy or sell more or less of an underlying futures contract in order to protect against being declared upon by the options holder. If delta hedging, the grantor of a call option will buy more of the futures contract if it rises in value towards the strike price (as the probability of being declared upon rises towards 100%). The grantor of a put option will typically sell more of the underlying futures contract if it slides in value (as the probability of being declared upon rises towards 100%)

DELTA NEUTRAL—When the grantor of an option has balanced the probability of being declared upon through buying/selling the underlying futures contract

DEGREE DAY—A measure of seasonal variation and intensity of temperature. In residential customer load, the more negative degree days in a year than the norm, the higher the electricity/gas consumption.

DEMAND—The rate at which gas is delivered to or by a system at a given instant or averaged over a designated period, usually expressed in cubic meters, cubic feet or kilowatt hours

DEMAND SIDE MANAGEMENT (DSM)—All activities or programs undertaken by a gas system or consumers to influence the amount and timing of gas use

DISCOUNT—The amount by which a future or option is priced below its existing market value

DISTRIBUTION—The system of gas pipelines that connect between the transmission network and end customers. The transport of gas to ultimate use points such as homes and businesses

EFP—Exchange of futures for physical, refers to the exchange of a futures position for a physical (swap) position

E.ON RUHRGAS FACILITY (EGT)—Notional point within the German gas pipeline network. Part of the NetConnect Germany market zone since October 2009.

EXERCISE—The procedure by which an option holder takes up the rights to the contract and is delivered a long (call) or short (put) futures position by the grantor at a fixed price

EXIT FEE—A fee that is paid by a customer leaving a utility network intended to compensate the utility in whole or part for the loss of fixed cost contribution from the exiting customer

EXPIRY (OPTIONS)—The date by which an option holder must decide whether to exercise or abandon an option

FIRM ENERGY—Energy sales which, although not subject to interruption for economic purposes, may be interrupted under force majeure conditions

FIRM GAS—Gas sold on a continuous basis for a defined contract term

FORCE MAJEURE—A contractual provision which contemplates forgiveness of an obligation to perform due to uncontrollable events such as acts of God, war or forces of the elements that are out of the control of the parties

FUTURES CONTRACT—An agreement to make or take delivery of a commodity at a fixed date or strip of dates in the future, at a price agreed upon at the time of dealing

GASPOOL—A gas trading hub in Germany, which replaces the former BEB hub from October 2009. GASPOOL incorporates the BEB, WINGAS and ONTRAS trading points in Germany into a single hub.

GCI—Gas Contract Indicator. Platts calculates an oil-indexed Gas Contract Indicator price for Northwest Europe to show an indicative price that would be paid by a European consumer buying their gas under a long-term, oil-indexed gas sales contract.

GIGAWATT—One billion watts

GIGAWATT HOUR (GWh)—One billion watt-hours

GRID—The layout of an electrical transmission system or a synchronized transmission network or a gas mainline pipeline network

HEDGE—The reduction of risk by covering anticipated commitments at a fixed price in the future through a futures or options contract. Buyers and sellers can hedge

IBT—International Bacton Terminal. Point at which the UK-Belgium gas pipeline lands in the UK.

INTERCONNECTION—Facilities that connect two electricity or gas grids or control areas

INTERRUPTIBLE DEMAND—The amount of customer demand that, in accordance with contractual arrangements, can be interrupted by direct control of the system operator, remote tripping, or by action of the customer at the direct request of the system operator

INTERRUPTIBLE GAS—Gas sold to customers with a provision that permits curtailment or cessation of service at the discretion of the supplier or transporter

IN-THE-MONEY—An option which has intrinsic value. A put option is in-the-money when its strike price is above the value of the underlying futures contract. A call option is in-the-money when its strike price is below the value of the underlying futures contract

IZT—International Zeebrugge Terminal. Point at which UK-Belgium gas interconnector lands in Belgium.

INITIAL MARGIN—The returnable collateral required to establish an options position

INTRINSIC VALUE—The value to an option holder if (s)he were to exercise an option today

JOULES—A measure of energy equal to 1 watt second

KILOWATT (kW)—A unit of electricity equal to one thousand watts

KILOWATT-HOUR (kWh)—A unit of electricity equivalent to one kilowatt of power used for one hour. One kilowatt-hour is equal to 1,000 watt-hours. An average household will use between 800-1300 kWh/month

KILOWATT YEAR (kW-y)—A unit of electrical capacity equivalent to one kilowatt of power used for 8760 hours

LIGNITE—A brownish-black coal of low rank with high inherent moisture and volatile matter (used almost exclusively for electric power generation). It is also referred to as brown coal

LONG—When the holder of futures positions has contract to buy more than (s)he has contracted to sell

LONG-RUN MARGINAL COSTS—All costs associated with the lowest cost incremental unit including variable production costs and capital costs

MARGINAL COST PRICING—A system of pricing designed to ignore all costs except those associated with producing the next incremental unit of gas. Sometimes referred to as incremental cost pricing

MARK-TO-MARKET—To revalue futures/options positions using current market prices to determine profit/loss. The profit/loss can then be paid/collected daily (see variation margin)

MEGAWATT (MW)—A unit of electrical power equal to one million watts or one thousand kilowatts

MEGAWATT-HOUR (MWh)—One million watt-hours of electricity. A unit of electrical energy which equals one megawatt of power used for one hour

MMBtu—One million British thermal units

MMcf—One million cubic feet of natural gas

MUNICIPAL UTILITY—A utility owned and operated by a municipality or group of municipalities

NATURAL GAS—A naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in porous geological formations beneath the earth's surface, often in association with crude. The principal constituent is methane

NETCONNECT GERMANY—A gas trading hub in Germany, that replaces the E.ON Ruhrgas (EGT) gas hub. From October 2009 it has incorporated the EGT, bayernets, GRTgaz Deutschland, Eni Gas Transport Deutschland and GVS Netz market areas.

NBP—National Balancing Point. A notional point within the UK gas pipeline network. Basis for most UK gas trades.

NETWORK—An interconnected system of gas transmission lines, compressors, gasification units etc connected together in such a way as to provide reliable transmission of gas

OFFER—An indication of willingness to sell a specified amount of a commodity at a specific price

OPEN INTEREST—The number of contracts left open in a market which need to be closed out or taken through to delivery

OPEN OUTCRY—A trading system in which members trade verbally on a trading floor

OUT-THE-MONEY – An option which has no intrinsic value. A put option is out-of-the-money when its strike price is below the value of the underlying futures contract. A call option is out-of-the money when its strike price is above that of an the underlying futures contract

PEAK LOAD—The maximum electrical load demand in a stated period of time. On a daily basis, peak loads occur at midmorning and/or in the early evening

PEAK LOAD PLANT—A plant usually housing low-efficiency, quick response steam units, gas turbines, diesels, or pumped-storage hydroelectric equipment normally used during the maximum load periods. Characterized by quick start times and generally high operating costs, but low capital costs

PEAKING CAPACITY—Capacity of generating equipment normally reserved for operation during the hours of highest daily, weekly, or seasonal loads.

PEG—Point d'Exchange de Gaz. A notional point within the French gas pipeline network

PEP INDEX—Platts demand-weighted index of all European electricity assessments

PHYSICAL DELIVERY—The transfer of ownership of an underlying commodity between a buyer and seller to settle a futures contract following expiry

POSTAGE STAMP RATE—A rate for electric transmission that does not vary according to distance from the source of the power supply. So-called because postage stamps for letters are typically at a fixed price, regardless of destination, within the same country.

PREMIUM—The price paid by the option holder to the option grantor

PRICE CAP—A method of setting a utility distribution company's rates where a maximum allowable price level is established by regulators, flexibility in individual pricing is allowed, and where efficiency gains can be encouraged and captured by the company

PSV—Punto di Scambio Virtuale. A notional point within the Italian gas pipeline network

PUT OPTION—An option that gives the holder the right (but not the obligation) to sell a specified quantity of the underlying instrument at a fixed price, on or before a specified date. The grantor of the option has the obligation to take delivery of the underlying instrument if the option is exercised

RALLY—A rapid rise in a price

RENEWABLE SOURCE—A power source that is continuously or cyclically renewed by nature like solar, wind, hydroelectric, geothermal or biomass

ROLL OVER—The transfer of a position from one futures period to another—involving the purchase (sale) of the nearby month and simultaneous sale (purchase) of a further-forward month

SETTLEMENT PRICE—A price established at the close of a trading day used to calculate the settlement of futures contracts

SHORT—When the holder of a futures position has contracted to sell more than (s)he has contracted to buy

SPOT MARKET—A market where goods are traded through rapid negotiation. Opposite of long-term contracting

SPREAD—The differential between two futures periods, or the difference between bids and offers for a specific period

SPREAD (OPTIONS)—An option trade in which two or more open positions are established in order to trade the differentials and offset risk. Option spreads may use different strike prices and/or expiry dates

STRIKE PRICE—The price at which an option holder has the right to buy or sell an underlying commodity/derivative

SYSTEM OPERATOR—A person or entity who operates the gas system

TARIFF—Rates an regulated entity will charge to provide service to its customers as well as the terms and conditions that it will follow in providing service

TERAWATT HOURS (TWh)—Thousand Gigawatt hours

THERMAL GENERATION—The production of electricity from plants that convert heat energy into electrical energy. The heat in thermal plants can be produced from a number of sources such as coal, oil, gas or nuclear fuel

TIERED RATES—A rate design which divides customer use into different tiers, or blocks, with different prices charged for each

TIME VALUE—The time component in a premium for an option. Typically the time value of an option declines as it moves closer to expiry

TRANSMISSION—The network of pipelines used to move gas from generators to the distribution system. Also used to interconnect different utility systems into a synchronized network. Transmission is considered to end when the energy is transformed for distribution to the consumer

TRANSMISSION LOSS—The gas lost in transmission between one point and another. It is measured as the difference between the net gas passing the first point and the net gas passing the second point

TTF—Title Transfer Facility. A notional point within the Dutch gas pipeline network.

TURBINE—The part of a generating unit usually consisting of a series of curved vanes or blades on a central spindle, which is spun by the force of water, steam or hot gas to drive an electricity generator

UNCOVERED POSITION (FUTURES)—Where a long market player has bought more of a commodity than he has agreed to sell, or where a short market player has sold more of a commodity than (s)he has to deliver

UNCOVERED POSITION (OPTIONS)—When the grantor of an options position has no cover in the underlying futures market against a price swing in the holder's favor (see delta hedging)

VAR—Voltage-Ampere-Reactive. A measure of reactive power

VARIABLE COSTS—The total costs incurred to produce energy, excluding fixed costs which are incurred regardless of whether the resource is operating. Variable costs usually include fuel, increased maintenance and additional labor

VARIATION MARGIN—Profits and losses on open positions which are calculated daily by the mark-to-market process, which are then paid or collected daily

VOLATILITY (HISTORICAL VOLATILITY)—The degree to which a particular price has fluctuated in the past

VOLATILITY (OPTIONS)—A value attributed to an underlying futures contract which determines the premium that is set by the grantor. Includes an element of historical volatility, and the volatility which the grantor of an option believes will still be seen in that futures contract

WATT—A measure of real power production or usage equal to one Joule per second. The rate of energy transfer equivalent to 1 ampere flowing under a pressure of 1 volt

WATT HOUR (Wh)—An electrical energy unit of measure equal to 1 watt of power supplied to, or taken from, an electricity circuit steadily for 1 hour