Energy Glossary

Most frequently used terms

A

Additionality
In the context of renewable generation, additionality is about whether the customer's action or decision has made a genuine reduction in emissions above and beyond what would have happened anyway.

Advanced Conversion Technology
It is a new and developing thermal processes, such as gasification and pyrolysis, which can be utilised to dispose of Municipal Solid Waste (MSW).

Air Handling Unit (AHU)
An equipment package that includes a fan or blower for providing heating, ventilation, and air conditioning (HVAC) to a building. Efficiency is improved through enabling control.

Air Source Heat Pump (ASHP)
The heat pump absorbs heat from the outside air and transfers the heat to the space to be heated in the heating mode. In the cooling mode the heat pump absorbs heat from the space to be cooled and rejects the heat to the outside air.

Alternating Current (AC)
Electricity that changes direction periodically. The period is measured in Cycles per Second (Hertz, Hz).

AMP
The unit that measures the rate of flow of an electrical current.

Anaerobic Digestion
A biological process that produces a gas principally composed of methane (CH4) and carbon dioxide (CO2) otherwise known as biogas. These gases are produced from organic wastes such as livestock manure, food processing waste, etc.

Annual Quantity (AQ)
Is the sum of the annual gas consumption of all meters on a site. This comes from National Grid, and is based on historical usage from previous years. Measured in kWh Supply Point AQ is the total annual consumption of all meters on a site. Meter Point AQ is the AQ for a particular Meter Point. See EAC for electricity equivalent

Apparent Power
The product of the voltage (volts) and the current amps. Comprises both active and reactive power. Measured in kVa or MVa

Automated Meter Read (AMR)
AMR is the term given to a system that provides automated meter readings remotely. It uses telephone technology and holds the ability to transfer data into a billing system.

Availability (KVA)
Availability (kVA) or Agreed Capacity refers to the limit of capacity for a site. E.g. if a site has an Availability of 150 kVA then maximum demand should not exceed that figure at any time. It is set and charged by the local Distribution Network Operator (DNO), according to the kVA of a premise. This fee covers investment and maintenance of the electricity network and can also be called the Capacity Charge. Customers pay a fee (per unit) according to the agreed capacity for that site. In theory, maximum demand should not exceed the agreed capacity at any time.

B

Balancing Mechanism
The mechanism used by the National Grid Company to balance the supply and demand of electricity.

Base Load
Base load is the level below which electricity demand never drops, i.e. a site with a high maximum demand of 750 kVa whose demand never drops below 250 kVa would have a base load of 250 kVa.

Battery
Two or more electrical cells joined together which produce and store electricity.

Bilateral Energy Trading
Trading whereby two parties (for example a generator and a supplier) enter into a contract to deliver electricity at an agreed time in the future.

Biogas
Biogas is generated when bacteria degrades biological material in the absence of oxygen, in a process known as anaerobic digestion. Since biogas is a mixture of methane (also known as marsh gas or natural gas) and carbon dioxide it is a renewable fuel produced from waste treatment.

Biomass & Biofuel
Biomass, also known as biofuels or bioenergy, it's obtained from organic matter either directly from plants or indirectly from industrial, commercial, domestic or agricultural products. The use of biomass is classed as a 'carbon neutral' process because the carbon dioxide released during the generation of energy from biomass is balanced by that absorbed by plants during their growth.

Bottom Ash
The non-airborne combustion residue from burning pulverized coal in a boiler; the material which falls to the bottom of the boiler and is removed mechanically; a concentration of the non-combustible materials.

British Electricity Trading And Transmission Arrangements (BETTA)
The BETTA arrangement was introduced in 2005 to create a single wholesale electricity market for Great Britain. It replacing NETA which did not cover Scotland.

Bubble
An option in the Kyoto Protocol that allows a group of countries to meet their targets jointly by aggregating their total emissions. The member states of the European Union are utilizing this option.

Building Energy Rating (BER)
Legislation launch in March 2007. Under the proposed legislation the energy efficiency of new and existing non-residential buildings in terms of their heating and ventilating requirements will be judged against a naturally ventilated building benchmark.

Building Research Establishment Environmental Assessment Method (BREEAM)

BREEAM is used to assess the environmental performance of both new and existing buildings. Credits are awarded in each area according to performance.

Burnup
Measure of thermal energy released by nuclear fuel relative to its mass, typically Gigawatt days per tonne (GWd/tU).

C

Calorific Value (CV)
Amount of heat given by the specified quantity of gas. This is used to calculate the energy consumed based on the volume of gas used. It is measured in joules per kilogram.

Cap and Trade Scheme
A scheme, e.g. covering CO2 or greenhouse gas emissions, in which the quantity of pollutant is fixed and participants trade emission allowances to meet the cap at lowest cost.

Capacity Charge
A set charge by the local Distribution Network Operator (DNO) for investment and maintenance of the electricity network, based on the Agreed Capacity of a property. This can also be called the Availability Charge.

Capacity Margin Instruments (CMI)
A mechanism such as a capacity obligation that requires electricity industry participants to provide a defined level of generating capacity.

Capital at Risk
The risk an investor faces that he or she may lose all or part of the principal amount invested.
The risk a company faces that it may lose value on its capital. The capital of a company can include equipment, factories and liquid securities.

Carbon Capture / Storage (CCS)
A technological solution for capturing carbon dioxide as it is released into the atmosphere from fossil fuels either before or after combustion.

Carbon storage
Sometimes called 'carbon sequestration', this is the long-term storage of carbon or CO2 in the forests, soil, ocean, or underground in depleted oil and gas reservoirs, coal seams, and saline aquifers. Carbon Capture and Storage can be referred to as CCS.

Carbon Credits
A credit or permit arising from a greenhouse gas emissions reduction scheme, such as emissions trading, JI or CDM. Emissions are controlled by setting a cap on total emissions and allowing the market sector(s) to reach an economically balanced response via trading of emissions allowances.

Carbon Dioxide
An inert non-toxic gas produced from decaying materials, respiration of plant and animal life, and combustion of organic matter, including fossil fuels.

Carbon Dioxide Equivalent (CO2e)
There are six main greenhouse gases which cause climate change and are limited by the Kyoto protocol. Each gas has a different global warming potential. For simplicity of reporting, the mass of each gas emitted is commonly translated into a carbon dioxide equivalent (CO2e) amount so that the total impact from all sources can be summed to one figure.

Carbon Dioxide Tonnage
In relation to carbon emissions, CO2 is measured in tonnes. A typical household has around 10.9 tonnes of CO2 emissions per year.

Carbon Emissions Reduction Target (CERT)
The CERT, previously the energy efficiency commitment (EEC2) is the government's main policy instrument for reducing carbon emissions from existing households. CERT is due to run from 2008-2011, Defra will be responsible for setting the CER target for suppliers and OFGEM is responsible for administrating the programme. (see Emissions Trading Scheme which has taken over from CERTS)

Carbon Footprint
A measure of the amount of carbon dioxide or CO2 emitted through the combustion of fossil fuels; can be measured on a personal or national level, or according to a specific activity, such as taking a flight to go on holiday.

Carbon Intensity
The amount of CO2 emitted for a given volume of electricity. It allows the emissions from different amounts of electricity to be compared. For example, a coal power station produces around 890 grams of CO2 for every kilowatt hour of electricity, whereas a gas-fired power station produces around 370 grams of CO2 for each kilowatt hour of electricity.

Carbon Neutral
An activity or process that doesn't add to the net amount of CO2 in the atmosphere. As the organisation or product will typically have caused some greenhouse gas emissions, it is usually necessary to use carbon offsets to achieve neutrality.

Carbon Offset
A carbon offset negates the overall amount of carbon released into the atmosphere by avoiding the release or removing it elsewhere – e.g. through a renewable energy or energy conservation project. Voluntary carbon offsetting schemes can help people reduce their carbon footprint, but should only be used as a last resort. It is also important that a credible scheme is used.

Carbon Reduction Commitment (CRC)
The CRC is a UK government emissions trading scheme for large organisations which are not eligible for EU Emissions Trading. This includes banks, large offices, universities, large hospitals, large local authorities and central government departments. The scheme is mandatory. The CRC is expected to deliver emissions reductions totaling 0.5m tonnes of carbon (Mtc) per year by 2015.

Carbon Trading
The trading of personal, corporate or national credits to maintain and gradually reduce carbon emissions. Companies, nations or individuals who beat the targets can sell the balance as credits to those that exceed their limits.

Carbon Trust
An independent nonprofit company set up by the Government with support from businesses to encourage and promote the development of low carbon technologies. Key to this aim is its support for UK businesses in reducing carbon emissions through funding, supporting technological innovation and by encouraging more efficient working practices.

Carbon Value

In order to encourage individuals to reduce carbon dioxide emissions a value has been placed on carbon. The more you produce the more you pay. Within the EU, the Emissions Trading Scheme provides a mechanism for capping total C02 emissions and generates a carbon value, as market participants and given are given 'allocation' of CO2 they are permitted to produce, and can buy from or sell to each other to balance their allocations with their requirements. To give investors the confidence to invest in low carbon solutions and thereby help to reduce emissions it is necessary to have certainty that there will be a long-term value of carbon.

Circuit
A joined up series of electrical conductors, wires and components that allow an electrical current to flow.

Circuit breaker
A device that protects a circuit from power surges by stopping the power flowing.

Clean Coal Technologies (CCTs)
There are significantly higher greenhouse gas emissions for each unit of electricity produced by coal-fired generation than there are for alternative methods of generation. CCT makes using coal as a power source more environmentally friendly.

Clean Development Mechanism (CDM)
One of the three market mechanisms established by the Kyoto Protocol. The CDM is designed to promote sustainable development in developing countries and assist Annex I Parties in meeting their greenhouse gas emission reduction commitments. It enables industrialized countries to invest in emission reduction projects in developing countries and to receive credits for reductions achieved.

Climate Change
The variation in the Earth's global climate over time. Man-made climate change is a variation directly attributable to human behaviour.

Climate Change Agreement
An agreement between the Government and a business user, whereby a reduced rate of Climate Change Levy is payable in return for a commitment by the user to achieve certain pre-determined targets for energy usage or carbon emissions.

Climate Change Levy (CCL)
CCL is a government-imposed tax to encourage reduction in gas emissions and greater efficiency of energy used for business or non-domestic purposes. CCL is chargeable only on units/kWh used and not on any other component of the bill, e.g. standing charge. The rate of CCL is now index-linked and therefore likely to increase on 1 April each year.
Under current legislation:
• Where VAT is charged at the standard rate, CCL (plus VAT on CCL) will usually be added to the bill
• Where VAT is charged at the reduced rate, the supply is automatically excluded from CCL
• Green energy (i.e. from renewable sources) is automatically exempt from CCL.
Where VAT is charged at the standard rate but sites are entitled to full or partial relief from CCL, you will need to submit a PP11 Supplier Certificate for each site to advise your supplier what percentage of relief is applicable. PP11s are only available from HM Revenue & Customs (HMRC) and can be downloaded from their website www.hmrc.gov.uk. Please note that PP11 Supplier Certificates are not transferable between suppliers.
Climate Change Levy (CCL)

Climate Change Programme
Published in 2000, sets out the Government and Devolved Administration strategic approach to tackling Climate Change and meeting the UK's Kyoto target of a 12.5% reduction in greenhouse gas emissions from 1990 levels by 2008-2012 and the domestic goal of reducing CO2 emissions by 20% by 2010.

Coal Bed Methane
Natural gas generated and trapped in coal seams. Coal Bed Methane (CBM) involves directly drilling into unworked coal and coal measures strata to release the methane locked within it rather than utilising methane released as a result of mining activities.

Coal Generation
Coal is ground to fine powder and then burned in huge boilers to heat water. The steam produced passes through a turbine, making it rotate and generating electricity which is then fed into the national grid. Coal powered plants have been the mainstay of the industry for decades and account for around a third of Britain's electricity generation output.

Coal Mine Methane
Methane continues to emit from the coal mine after closure, and recently the concept of collecting the gas from abandoned mines to provide an energy source which would otherwise be waste has been developed.

Cogeneration
Also known as Combined Heat and Power

COGENT
Sector Skills Council for the oil and gas extraction and chemical manufacturing sector.

Combined Cooling Heat and Power (CCHP)
A system in which fuel is used to simultaneously produce electrical (or mechanical) power plus recovered useful thermal energy for use in cooling & heating.

Combined Cycle Gas Turbine (CCGT)
A gas fired electricity generation plant which uses waste heat to power a steam turbine.

Combined Half Hourly (HH) Data Charge
Costs associated with collecting and handling metering data from half hourly (HH) read meters.

Combined Heat and Power (CHP) generation
When electricity is generated up to 60% of the energy can be wasted as lost heat. Combined Heat and Power schemes are designed to recover most of this waste heat and use it to power a turbine and generate more electricity. In well-designed installations these can contribute to lowering carbon dioxide emissions.

Combined Heat and Power Quality Assurance (CHPQA)
CHPQA provides the means to assess and monitor Good Quality CHP Capacity.

Commodity Charge
A fee levied by National Grid on the quantity of gas transported through the system.

Competition Clause
In some electricity contracts there is a competition clause. This normally occurs after 12 months of an 18 month contract. What it means is that the client is free to renegotiate the contract after 12 months and the supplier will either match the lowest price or release the client from the contract to take up the lowest offer.

Conductors
A substance that allows an electric current to pass through it easily.

Confirmation Reference
A unique number assigned by National Grid to a customer.

Connection Agreement
A document which states the Agreed Capacity for a property with the local Distribution Network Operator (DNO).

Contract
An agreement made between the customer and supplier defining the rules of the trading relationship. There are three types: 1. Firm - the customer agrees to take a pre-determined quantity of gas at a pre-determined price negotiated as part of the contractual agreement (used by the Commercial Gas Business).2. Tariff - the customer buys gas at a standard rate and is billed according to the consumption indicated on the meter (used by Residential Business).

Contract Price
Price of a unit of gas or electricity which the supplier charges the customer.

Contract Price Structure
This indicates a supply offer, which has all delivery charges (DUoS & TUoS) built into the unit rates for the supply of electricity.

Corrector Meter
For sites using large amounts of gas it is often deemed necessary to measure the temperature and pressure variations more accurately rather than just applying a fixed conversion factor. In these cases an additional “corrector” meter is attached to the meter.

Cost to Serve
The cost to a supplier of providing the service to customers including the costs of maintaining IT systems cost of credit, paying staff to manage customer accounts and other overheads. Strictly, cost to serve excludes profit contribution, but is often used to refer to this as well as the costs outlined above

CT Metering
Metering that is 100 amp and above.

Combined Heat and Power (CHP) generation
When electricity is generated up to 60% of the energy can be wasted as lost heat. Combined Heat and Power schemes are designed to recover most of this waste heat and use it to power a turbine and generate more electricity. In well designed installations these can contribute to lowering carbon dioxide emissions.

D

Daily Contract Quantity (DCQ)
The quantity of gas to be supplied daily to a site (sales contract) or to a terminal (supply contract).

Daily Meter (DM)
A supply point whose annual quantity (consumption) is greater than 58,600,000kWh (2,000,000 therms per annum), will have a mandatory DM meter fitted.

Data Aggregator (DA)
The agent appointed to aggregate the meter reading data which is received from the Data Collectors (DC) and subsequently forwarded to the Supplier.

Data Collector (DC)
An organisation accredited by the pool accreditation body to carry out data collection for half hourly (HH) metering systems. The DC is appointed by the Suppliers to retrieve and validate metering data and forward it, by metering system, to the data aggregator. The DC may be appointed by the customer but must always be accredited and contracted to the customer's Supplier.

Data Logger
A device used to record meter readings and automatically transmit them to the meter reading agency.

Decay
Disintegration of atomic nuclei resulting in the emission of alpha or beta particles (usually with gamma radiation). Also the exponential decrease in radioactivity of a material as nuclear disintegrations take place and more stable nuclei are formed.

Declared Net Capacity (DNC)
The highest generation of electricity (assuming that the source of power is available continuously) being maintained indefinitely without causing damage to the plant, minus the capacity consumed by the plant.

Deemed Contract
A contract which is deemed applies when a customer begins a new supply at a property and has not signed a written contract for its supply. These contracts have a defaulted rate for supply until a customer requests a fixed price for a fixed period.

Department of Trade and Industry (DTI)
The Department of Trade and Industry, a UK government department which, among other responsibilities, has a leading role the UK Government oversight of energy policy (UK).

Depleted Uranium
Depleted uranium means the by-product residues from the uranium enrichment process in which the concentration of the isotope U235 is less than that occurring in natural uranium.

Direct Current (DC)
An electrical current which flows only in one direction in a circuit. Batteries and fuel cells produce direct current.

Distributed and Microgeneration
This is when electricity is generated for local distribution and is not connected directly to the National Grid. Microgeneration is typically used to describe smaller scale generating technology. Both of these types of generation have a role to play in Britain's energy mix, although it is important to be realistic about the overall size of the contribution they may not be the best economic or most environmentally friendly solution in every case.

Distributed Generation
Electricity generation usually on a relatively small scale that is connected to the distribution networks rather than directly to the national transmission systems.

Distribution Losses (Dloss)
Charges for the loss of distributing power through the wires.

Distribution Network Operators (DNO)
Companies that are responsible for operating the networks that connect electricity consumers to the national transmission system and provide interconnection with embedded generation. There are 14 regional distributors who maintain the electrical network.

Distribution Use Of System Charges (DUOS)
These charges are published costs made by each Distribution Company for delivering electricity from the Grid Supply Point to the customer's premises.

District Network Operator (DNO)
The DNO manages the installation and upkeep of the cabling, and the distribution of electricity to the grid supply point.

Domestic / Non Domestic Supply
A Supply Point with an AQ of 73,200kWH (2500 therms) or less, is deemed as a domestic site. (This does not mean the user is necessarily residential). A supply point with an AQ of over 73,00kWh is deemed as non-domestic.

E

Electric Current
The rate at which electricity flows through an electrical conductor, usually measured in amperes (amps).

Electrical Cell
A device which produces or stores electricity.

Electricity Meter
A device that measures the amount of electricity used.

Electricity Pool
The way by which electricity is traded between generators and suppliers (as well as some very large consumers**).**

Electromagnet
A magnetic field produced when an electric current is passed through a wire wrapped around a piece of iron.

Electronic Data Interchange (EDI)
Allows the transfer of bill data through a secure channel so that customers can receive their bills in a specified format.

Emissions Trading
A market mechanism that allows emitters (countries, companies or facilities) to buy emissions from or sell emissions to other emitters. Emissions trading is expected to bring down the costs of meeting emission targets by allowing those who can achieve reductions less expensively to sell excess reductions (e.g. reductions in excess of those required under some regulation) to those for whom achieving reductions is more costly.

Emissions Trading Scheme (ETS)
ETS is an EU mechanism for the trading of carbon dioxide and other greenhouse gas emissions.

Energie
An EU programme supporting research, development and demonstration aimed at delivering cost effective solutions to key energy related problems on a European scale. In particular the aims are to minimise the environmental impact of the production and use of energy and to increase the share of new and renewable energy sources in EU's energy balance.

Energy Charter Treaty (ECT)
A multilateral treaty to promote trade, investment and transit of energy products between Contracting Parties and sets a standard for non-discriminatory access to energy supplies.

Energy Cost
This is the cost of the electricity purchased on the wholesale market at the Notional Balancing Point (NBP) to cover current and predicted future usage. It is the single biggest component of the unit price and typically accounts for between 60 and 80% of a business's total bill. In the industry, this element is called Energy at NBP (Notional Balancing Point).

Energy Efficiency
Achieving desired levels of lighting, heating or cooling for minimum energy use. Cutting down on waste energy. A good example is an energy efficient light bulb which produces the same amount of light as a conventional bulb but uses up to 75% less energy to do so.

Energy Efficiency Commitment (EEC)
Formerly known as Energy Efficiency Standards of Performance (EESoP), is an obligation placed on all domestic energy suppliers to achieve a specified energy saving target through the installation of energy efficiency measures in homes across Great Britain.

Energy from Waste
Energy recovery of post recycling waste residue - an alternative to landfill.

Energy Only
An offer of electricity that has no delivery charges (DUoS & TUoS) added at the point of quotation.

Energy Performance Certificate (EPC)
EPC is intended to inform potential buyers or tenants about the energy performance of a building, so they can consider energy efficiency as part of their investment or business decision. The scale is from A-G, A being the most efficient.

Energy Performance of Building Directive (EPBD)
The principal objective of the Directive is to promote the improvement of the energy performance of buildings within the EU through cost-effective measures. There are four main aspects to the EPBD.
1) Establishment of a calculation methodology for buildings energy performance
2) Se minimum energy performance requirements for new and existing buildings
3) Energy performance certificate made available
4) Inspections of boilers and air-conditioning systems

Energy Saving Trust (EST)
The EST is an independent non-profit organisation, set up and largely funded by the Government to manage a number of programmes to improve energy efficiency, particularly in the domestic sector.

Energy Services Company (ESCO)
A company that specialises in managing energy and water conservation projects. The ESCo may perform any or all of the following services: auditing, developing packages of recommended measures, arranging financing, installing or overseeing installation of measures, resident and staff education, equipment commissioning, maintenance, measuring, verifying, and guaranteeing savings. An ESCo is normally a deregulated organisation set up to provide energy services (electricity, heat and chilled water) to a defined set of users or a local community separate from the incumbent regulated utilities serving the area.

Energy Services Directive (ESD)
The Directive's full name is the EC Directive on Energy End Use Efficiency and Energy Services. It aims to promote energy efficiency in the UK by developing a market for energy services and delivering energy efficiency programmes and measures to energy end users.

Enriched uranium
Uranium in which the proportion of U-235 (to U-238) has been increased above the natural 0.7%. Reactor-grade uranium is usually enriched to about 3.5% U-235; weapons-grade uranium is more than 90% U-235.

Enrichment
Physical process of increasing the proportion of U-235 to U-238.

Entry Point
Point at which gas is delivered into the National Transmission System i.e. the terminal.

Environment Agency
The leading public body for protecting and improving the environment in England and Wales.

European Emissions Trading Scheme
The EU emissions trading scheme, introduced in April 2005. See the section on 'Carbon emissions trading scheme', above.

Exit Zone
A defined zone in which the point of gas offtake is situated.

Export Metering
This enables a site to export electricity generated onsite.

F

Firm Gas
Gas supplied to a customer on a guaranteed basis, without interruption.

Fixed Charge
A daily, monthly or quarterly charge levied by the supplier and is in addition to the standing charge.

Fixed Term Contracts
Supply contract for a fixed price, over a fixed period of time which gives customers a constant price. Fixed Charges include Standing Charges and Availability Charges.

Flexible Term Contracts
Supply contract for a price that reflects market prices, over a fixed period of time, which gives the customer a variable price but has the facility to fix the price forwards when market conditions are right to do so. All delivery charges are normal charged at pass through.

Flex
Electrical wire covered with an insulating material.

Flue Gas Desulphurisation (FGD)
Burning coal produces sulphur dioxide which is emitted through the chimney of the power station. To reduce these emissions which contribute to acid rain, a Flue Gas Desulphurisation units can be fitted to coal powered plants. These work by capturing the gasses in an absorber, these are then mixed with limestone to produce gypsum which is then dried and can be used in industry. This method leads to a 90% reduction in sulphur dioxide from coal fired plants.

Force Majeure
Unexpected and disruptive event beyond the control of buyer or seller that interferes with a party's ability to perform under a contract. A force majeure event will typically relieve a party from a contractual obligation.

Forwards Contract
An agreement to buy electricity from another party at a specified time in the future at a specified price with money changing hands at the delivery date.

Fossil Fuel
An energy source formed in the Earth’s crust from decayed organic material. The common fossil fuels are oil, coal, and natural gas.

Fossil Fuel Levy
In England and Wales the Fossil Fuel Levy is set at 0.3%. This levy was introduced to cover the cost of decommissioning the nuclear generating plants. The Scottish equivalent is called the S.R.O. (Scottish Renewable Order) levy which was set at 0.8%

Fuel Cells

Fuel cells produce electricity from hydrogen and air, with water as the only emission. Potential applications include stationary power generation, transport (replacing the internal combustion engine) and portable power (replacing batteries in mobile phones).

Fuel Mix Disclosure (FMD)
The FMD regulations oblige all suppliers to calculate and publish the fuel source and emissions intensity of all the electricity they supply. This includes electricity generated by the supplier and electricity bought from other generators, either through contracts or in the marketplace.

Fuel Standardised Energy Savings
These are energy savings that have been adjusted according to the carbon concentration of each fuel. These coefficients are set out in the EEC Order and are as follows: coal 0.56, electricity 0.80, gas 0.35, LPG 0.43 and oil 0.46

Fuse
A safety device, which protects electrical appliances by preventing too much electricity flowing into them. The fuse is a thin wire inside a protective case. If the flow of electricity becomes too powerful, the wire melts and stops the current flowing.

G

Gas Act Owner (GAO)
The Gas Act Owner only relates to a meter. It is the Organisation or person responsible for providing installed metering for the measurement of gas consumption, and for maintaining the meter in good working order, as required by the Gas Act. The GAO may be Consumer, Supplier or Transporter.

Gas Substation
A pressure reduction station located on customers' premises where gas is reduced from mains pressure regulated at a medium or low pressure for domestic or industrial use.

Gas Transporter (GT)
Responsible for maintaining a gas supply network. They may also be requested by the Supplier via the Shipper to provide a meter for the consumer's usage. Requires a GT license.

Gas-fired Generation
Around one third of the UK'S electricity is currently produced by gas-fired power stations. Combined Cycle Gas Turbine (CCGTs) are currently the more favored option for new large-scale electricity generation in the UK compared to new coal power stations. Burning natural gas to produce electricity does emit carbon dioxide, but the emissions are significantly lower than from coal. However, the availability of gas and the cost is likely to be unpredictable so there could be a risk that when you need the electricity there may not be enough available, or that relying solely on gas fired generation will lead to increases in your energy bills.

Gasification
Breakdown of hydrocarbons into a syngas by carefully controlling the amount of oxygen present.

Generation
This covers the production of electricity at power stations. At present the main fuels used are gas, nuclear and coal, although there is now a growing use of renewable forms of energy, such as wind power, the burning of gas from landfill and waste incineration.

Generator
A machine that converts mechanical energy into electricity. The main generators of electricity in the UK are National Power, Scottish Hydro, Powergen, Scottish Power and Nuclear Electric.

Giga Watt (GW)
Giga Watt – 1,000 MW.

Global Warming
The gradual increase in the average temperature of the Earth's surface and atmosphere. The majority of scientists agree that the current warming we are experiencing is caused by the release of greenhouse gases from the burning of fossil fuels and other industrial processes.

Green Certificates

An official record proving that a specified amount of green electricity has been generated. Green certificates represent the environmental value of renewable energy production. The certificates can be traded separately from the energy produced.

Greenhouse Effect
The way gases in the earth's atmosphere trap heat. The buildup of these gases, especially carbon dioxide, are thought to cause global warming.

Greenhouse Gas (GHG)
A gas that absorbs infra-red radiation (i.e. the sun's heat and energy) in the atmosphere. Greenhouse gases include water vapour, carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), halogenated fluorocarbons (HCFCs), ozone (O3), perfluorinated carbons (PFCs), and hydrofluorocarbons (HFCs). These gases contribute to the 'greenhouse effect'.

Greenhouse Gas (GHG) Protocol
A widely used standard for emissions reporting. The protocol covers project emissions reporting and corporate emissions reporting. The corporate emissions reporting standard provides a methodology for calculation of a carbon footprint. The protocol was developed by the World Resources Institute and the World Business Council for Sustainable Development.

Grid Supply Point (GSP)
The (GSP) is the point at which energy is taken from the National Grid transmission system into a local distribution system.

Grid Trading Master Agreement (GTMA)
A standardised agreement for trading UK power at the National Balancing Point.

Ground Source Heat Pump (GSHP)
A type of heat pump that uses the natural heat storage ability of the earth and/or the groundwater to heat and/or cool a building. The earth has the ability to absorb and store heat energy from the sun. To use that stored energy, heat is extracted from the earth through a liquid medium (groundwater or an anti-freeze solution) and is pumped to the heat pump or heat exchanger. There, the heat is used to heat the building. In the summer, the process is reversed and indoor heat is extracted from the building and transferred to the earth through the liquid.

GSM
A mobile device which is connected to the meter and remotely reads the meter by signal. It has to be very good signal for the GSM to work.

H

Half Hourly (HH) Meters
A communication device connected to the meter allowing the data collector to remotely connect to the meter, obtaining half-hourly consumption.

Half Hourly Data (HHD)
HHD is the product of the half-hour data meter. The data is usually made available to end users by way of a spreadsheet. A full years' half-hour data will be a spreadsheet with approximately 18,520 cells of data.

Half Hourly Meters
Since April 1998, code 5 meters have been mandatory for all sites over 100 kVa, and voluntary for sites under 100 kVa. This meter sends your consumption record by telephone or radio every half-hour to a central data bank. The supplier will then receive this information from the data collector and bill the client accordingly.

Hand Held Reads In Outstations
No comms installed, a meter reader will attend weekly to read the meter.

HDC Levy
HDC is a levy enforced by the DTI on all electricity suppliers across Great Britain. It is a tax that has been generated to assist areas with high electricity distribution costs.

Heat Rate
Energy input per unit of time, usually expressed in kWh\h or BTU\h

High Voltage (HV)
High Voltage (11,000 Volts or above).

Highly (or High)-enriched uranium (HEU)
Uranium enriched to at least 20% U-235.

Home Energy Efficiency Database (HEED)

Hydroelectricity
Producing electricity by using the force of falling water to turn the turbine blades, usually accomplished by damming a river to create a source of falling water.

I

Import
Where a site consumes electricity as opposed to generating and exporting power. Import is the most common type of site.

Independent Public Gas Transporter (IGT)
An independent company who has responsibility of the maintenance of a gas supply network.

Infrastructure Costs
These relate mostly to the costs of providing the infrastructure required to deliver power. They include the cost of energy lost as heat as it travels from the power station down the transmission and distribution wires to you (which we call Tloss and Dloss), and charges for using the transmission and distribution networks (which are called TUoS and DUoS).

Insulator
A material that reduces or stops the flow of electricity.

Integrated Gasification Combined Cycle (IGCC)
IGCC plants initially gasify the raw fuel input, before passing the so-called synthesis gas through a conventional combined cycle set up. IGCCs can be designed to use a range of raw fuel inputs, including coal, oil products and wastes.

Integrated Pollution Prevention and Control (IPPC)
IPPC Directive is about minimising pollution from various point sources throughout the European Union. Based on the concept of Best Available Techniques (or BAT).

International Panel on Climate Change (IPCC)
Founded in 1988, the IPCC is a scientific intergovernmental body founded by the World Meteorological Organisation (WMO) and the United Nations Environment Programme (UNEP). It aims to provide an objective source of information about climate change to policy-makers by assessing the latest scientific, technical and socio-economic literature worldwide on the human causes of climate change.

Involuntary Withdrawals
A shipper receives an involuntary withdrawal when another shipper attempts to confirm one of their sites as their own. The shipper can either object (keeping the site, normally because of an amount outstanding, or the site is still in contract), or release the site to the new shipper.

ISO 14064
This is an international standard for corporate emissions reporting. It builds on the approach outlined in the Greenhouse Gas Protocol.

K

Kilovolt Amperes (KVA)
Also known as Total Power. The resultant effect of the active (kW) and reactive (KVArh) power is the total power measured in kVa. KVa = kW/power factor.

Kilowatt / Hour (KW / A)
A standard unit of electrical power equal to 1,000 watts. Kilowatts are the units used to measure Maximum Demand. Kilowatt hour is a unit of energy consumed.

Kyoto Accord
Agreed in Japan 1997 targets 'carbon-rich' gases and commits 38 industrialised countries to emissions cut of 5.2% by 2010.

Kyoto Protocol
In 1997, representatives from over 170 nations met in Kyoto, Japan to put together a new global treaty - the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC) - laying down legally binding reductions in greenhouse gas emissions throughout developed countries emissions by an average of 5.2 per cent below 1990 levels over the period 2008-2012.

L

Landfill Gas
Municipal solid waste contains significant portions of organic materials that produce a variety of gaseous products when dumped, compacted, and covered in landfills. Anaerobic bacteria thrives in the oxygen-free environment, resulting in the decomposition of organic materials and the production of primarily carbon dioxide and methane.

Large Site Peak Day Demand
Defined as the sum of Supply Offtake Quantity (SOQ) for all large sites.

Large Supply Point
A supply point where the reference consumption actual quantity (AQ) is equal to or exceeds 732,000 kWh/25,000 therms per annum.

Levy Exemption Certificates (UK)
Organisations that pay the CCL can enter into agreements with suppliers to purchase renewable electricity. The Levy Exemption Certificates (LECs) are evidence of CCL exempt electricity supply generated from qualifying renewable sources. LECs will be redeemed by suppliers to HM Customs and Excise to demonstrate the amount of non-climate change electricity able to be levied that had been supplied to non-domestic customers in the given period.

Line Loss Factor
Line Loss Factor codes are used to calculate the related DUoS charges for an MPAN. The figure gives us the voltage scale of the Mpan and reflects both the amount of transmission infrastructure used to supply the point and the amount of energy lost through heat etc.

Liquified Natural Gas (LNG)
When natural gas is cooled to a temperature of approximately -160 degrees Celsius at atmospheric pressure, it condenses to a liquid called LNG.

Load
The amount of electric power delivered or required at any specific point or points on an electrical system. The requirement originates at the energy-consuming equipment of the customer.

Load Factor
Measures the relationship between unit consumption and maximum demand and is the percentage capacity utilisation figure of a site's power consumption. To calculate load factor take the total number of units of consumption, divide by the maximum demand, divide by the number of hours in the period, and multiply by 100.

Load Management
Where sites are flexible as to when they use their electricity. This means that they can schedule their production and shift patterns according to the price of pool electricity. Consumers who can load manage are able to significantly reduce their consumption at the three times in the year when the National Grid takes the Triad maximum demand readings which are used to calculate the transmission charges.

Local Distribution Zone (LDZ)
Local Distribution Zone is a Transco defined area for which the total input and output demand can be measured each day.

London Climate Change Agency (LCCA)
A body set up to work closely with the private sector to tackle climate change. The LCCA has been formed as a Mayoral led agency by the London Development Agency to enable and deliver sustainable and renewable energy and energy efficiency projects that will lead to a reduction of carbon dioxide emissions in London.

Low Carbon Building Programme (LCBP)
Launched in 2006, the LCBP is a UK government programme that provides funding towards the cost of installing microgeneration and other low carbon technologies.

Low Voltage (LV)
Low Voltage, normally at 240 or 415 Volts.

Low-enriched uranium
Uranium enriched to less than 20% U-235. (That in power reactors is usually 3.5 - 5.0% U-235.).

M

M Number Database
A web based application held by National Grid used by suppliers to view basic site details of sites not in their ownership. See xoserve.

Mains Electricity
Electricity supplied from the National Grid.

Marine Generation (Tidal and Wave)
The principle behind tidal generation is similar to wind turbines, except that instead of wind turning the turbine blades, the process uses underwater current caused by tides. One of the benefits of tidal power over wind power is the predictability of tidal currents, enabling the developers to know exactly when the turbines will be producing power. Electricity can also be generated by harnessing the energy waves. The aim is to capture the vertical movement in the water surface caused by waves and to convert that energy to electricity by turning a generator, Both tidal and wave power are in the early stage of commercial use in the UK. Currently they are significantly more expensive that other renewable technologies such as wind and hydro, but it is hoped that costs will decrease in future.

Market Code Sector
A classification if a site is Industrial & Commercial or Domestic.

Maximum Annual Quantity (MAQ)
Total quantity of gas to be delivered to the customer sites during the contract year. Usually defined in a Take or Pay clause.

Maximum Demand
Maximum Demand is the highest peak of usage (kWh) in any Half Hour during a calendar month or between two meter readings measured in either kW or kVA. This value is multiplied by 2 to give the MD on an hourly basis.

Mega Watt (MW)
Mega Watt - a measure of power, one million watts.

Metal fuels
Natural uranium metal as used in a gas-cooled reactor.

Meter Asset Manager (MAM)
A role that can be taken on by a number of parties who will manage a portfolio of meters on behalf of their client. They could control the meter replacement program, arrange Meter Work. The MAM will act as the point of contact for a meter point and can supply all known information regarding that meter point.

Meter Asset Provider (MAP)
The party responsible for the ongoing provision of the meter installation at that meter point. Where a MAP provides the meter, the MAM may be the owner (title owner) of the meter or the MAM could lease or rent the meter from a third party.

Meter Operator (MOP)
The organisation appointed to maintain metering equipment.

Meter Operator Charges (MOP Charges)
This charge covers the cost of maintaining metering equipment.

Meter Point Administration Service (MPAS)
Organisation that holds all information of MPANs. www.mpas-online.co.uk

Meter Serial Number
The number stamped on the front of the meter and which is unique to that meter
Micro-CHP
CHP (as above), but in very small scale, typically below 5kW electrical output, (e.g. in the residential and commercial sectors). It is likely to operate in place of a domestic central heating boiler.

Micro-Generation
The small-scale generation of energy, for example solar panels or domestic wind turbines. These are often referred to as generation from renewable sources at a domestic or small community level.

Million Cubic Meters (MCM)
1 MCM is approximately 360,000 therms.

MWh
Mega Watt hour, one thousand kWh. A 1 MW power-generating unit running for 1 hour produces 1 MWh of electrical energy.

N

National Balancing Point (NBP)
The point where wholesale gas is traded within the UK.

National Grid
The National Grid owns the main transmission systems and is responsible for transmitting the electricity from the generator to the local RECs area. All electricity generated in mainland UK is put into the National Grid before fed into distribution networks.

National Transmission System (NTS)
National Grid's high pressure gas network.

Natural Uranium
Uranium with an isotopic composition as found in nature, containing 99.3% U-238, 0.7% U-235 and a trace of U-234. Can be used as fuel in heavy water-moderated reactors.

Network Code (NWC)
The rules and procedures that govern the way National Grid and all shippers operate within the deregulated market.

New Electricity Trading Arrangements (NETA)
In England and Wales these arrangements replaced 'the pool' from 27 March 2001. The arrangements are based on bi-lateral trading between generators, suppliers, traders and customers and are designed to be more efficient, and to provide greater choice for market participants.

Nomination
A notice to National Grid from a Shipper to indicate the request for the offer details for a supply point (transportation, metering, capacity, commodity costs, etc.).

Nomination Flow
A notice to xoserve from a Shipper to indicate the request for the offer details for a Supply point (transportation, metering, capacity, commodity costs, etc.)

Non Half Hourly (NHH) Meters
Unlike HH meter a meter reader must visit the site to obtain readings. There are different tariffs (SSC) available.

Non-Daily Metered (NDM) Supply Point
Volume of gas consumed at supply point is recorded at monthly, quarterly or longer intervals by traditional meter reading.

Non-Domestic
A supply point with an AQ of 73,200 kWh (2,500 therms) is deemed as a domestic site. A supply point with an AQ of over 73,000 kWh is deemed as non-domestic.

Notional Balancing Point (NBP)
NBP is where entry gas is brought to a virtual point in the system from which network users can transport to an exit point, thus becoming a trading hub.

Nuclear
Nuclear is a low carbon energy source. Even when all the processes such as construction, uranium mining and enrichment are included, its overall emissions are very low, and surprisingly, comparable to wind power.

Nuclear Power
Generates electricity using heat produced by an atomic reaction. The process of generation produces negligible amounts of carbon which is why nuclear is put forward as one way of reducing global carbon footprints. However, the huge financial expense, is the storage of spent radioactive materials, the safety record and potential for serious disaster like Chernobyl, and the carbon cost of extracting uranium ore to use as fuel are powerful arguments against the adoption of more nuclear power stations.

Nuclear reactor
A device in which a nuclear fission chain reaction occurs under controlled conditions so that the heat yield can be harnessed or the neutron beams utilised. All commercial reactors are thermal reactors, using a moderator to slow down the neutrons.

O

Objection
When a customers' current supplier objects to the transfer. The following are some examples why:
1. Current contract not up for renewal
2. Client did not give required termination notice
3. Client owes money to current supplier

Offer
A notice from XOSERVE to a Shipper in response to a nomination indicating the charges to be levied on a Supply Point.

Office of Gas and Electricity Markets (OFGEM)
OFGEM is the government regulator for Gas and electricity markets.

Offset
An emissions reduction, commonly resulting from a project undertaken in the developing world, which has been sold to compensate for emissions elsewhere. Offsets are commonly used to net off corporate emissions so that an organisation can claim to be carbon neutral.

Offtake
Gas consumed by a site or customer.

OPEC
Organisation of Petroleum Exporting Countries (OPEC)

Outstations
Communications method used to communicate with a meter i.e. GSM, modem, packnet.

P

Parallel grid mode
This is where the Cogeneration unit runs in parallel with the grid.

Pass Through Charges
Charges that appear on bills to cover the costs of third parties involved in the energy supply chain to deliver power.

Peak Demand
Point of maximum electricity demand on the national system.

Percentage Day
This refers to the percentage ratio of electricity used in the daytime against that used in the night. This information is used by suppliers to quickly identify the type of profile.

Photovoltaics (PV)
The direct conversion of solar radiation into electricity by the interaction of light with the electrons in a semiconductor device or cell.

Pool
The Electricity Pool of England and Wales - the now defunct wholesale market through which an authorised Supplier purchased electricity - the price for electricity in this market was determined by market forces and was not regulated.

Power Exchange (PX)
A cleared market for electricity trading, for example APX.

Power Factor
This relates to how efficiently electricity is used on your site. Certain types of equipment cause poor power factor which reduces the capacity of the network to supply power. Distribution Network Operators' (DNO) can charge customers for this through power factor charges.

Power Line
Electrical wires that carry electricity from the point of generation to the point of use.

Power Station Gate (PSG)
Point at which power station output is metered.

Pre-Network Code (PNC)
The operating methods and procedures used prior to the introduction of the Network Code.

Public Registration System (PRS)
Used to register suppliers, meter operators and distribution companies for settlement purposes for all premises in the UK.

Pylon
A large metal tower that carries very high voltage power lines.

Pyrolysis
Thermal degradation of waste in the absence of air to produce char, pyrolysis oil and syngas

Q

Qualifying Use Limit
The percentage of domestic use gas on a mixed use site, above which the entire supply is charged at the reduced rate

R

Ratcheting
Certain Distribution Networks apply Ratcheting to their MPANs in case the customer should use over their agreed Availability (kVA). Once the account has been billed for Excess Availability, the level up to what they were billed becomes their new Availability (kVA), depending on the specific Networks policy.

Reactive Charges
Charges applied to a client's invoice in cases where certain suppliers and distribution companies enforce a penalty for Reactive Power use.

Reactive Power (KVAR)
This is the difference between the electricity supplied and the electricity converted into useful power. If the difference is large, i.e. there is a large amount of power being wasted, its puts an additional strain on the distribution network. The loss of power can be caused by kinetic energy (heat) or through defective machinery. This is measured via the Reactive register on a meter and is charged to the customer depending on how much they accumulate.

Regional Economic Strategies (RES)
Produced by RDAs with partners and stakeholders in their region. These documents set out the framework of regional economic priorities which guide the activities of organisations promoting regional economic development, and are revised at least every three years.

Regulator
OFGEM is the Office of Gas and Electricity Markets, regulating the gas and electricity industries in the UK. This is a statutory body representing the interests of gas and electricity consumers in the UK.

Remote Non Half Hourly Meters
These meters have a NHH set up but they are connected to a communication device.

Renewable Energy
'Renewable energy' is used to describe the energy produced using naturally replenishing resources. This includes solar power, wind, wave and tide and hydroelectricity. Wood, straw and waste are often called solid renewable energy, while landfill gas and sewerage gas can be described as gaseous renewables.

Renewable Energy and Energy Efficiency Partnership (REEEP)
An international partnership to promote the growth of renewable energy and energy efficiency systems, launched by the UK at the World Summit on Sustainability Development (WSSD).

Renewable Energy Certificates (REC's)
RECs, also known as 'Green Certificates', green tags, or tradable renewable certificates, represent the environmental attributes of the power produced from renewable energy projects and are sold separate from commodity electricity.

Renewable Energy Guarantee of Origin (REGO)
Electronic certificate used to provide evidence that a unit of electricity has been produced by a renewable generator. One REGO representing one kilowatt/hour of electricity. In some countries they are called Guarantees of Origin - GoOs.

Renewable Obligation (RO)
This is the main government market mechanism to support renewable energy. It is an obligation on all electricity suppliers to supply a certain amount of their electricity sales from accredited renewable sources under the Climate Change Levy exemption scheme.

Renewable Power Association (RPA)
The Renewable Power Association is a trade association open to all companies supportive of the UK renewable energy industry.

Renewables Obligation (UK)
The new Renewables Obligation and associated Renewables (Scotland) Obligation came into force in April 2002 as part of the Utilities Act (2000). It requires power suppliers to derive a specified proportion of the electricity they supply to their customers from accredited renewable sources. This starts at 3% in 2003, rising gradually to around 10% by 2010 and 15.4% in 2015/16.

Renewables Obligation Certificate (ROC)
Eligible renewable generators receive Renewable Obligation Certificates (ROCs) for each MWh of electricity generated. These certificates can then be sold to suppliers. In order to fulfil their obligation, suppliers can either present enough certificates to cover the required percentage of their output, or they can pay a 'buyout' price of £34.30 per MWh (set by Ofgem for 2007-2008) for any shortfall. All proceeds from buyout payments are recycled to suppliers in proportion to the number of ROCs they present.

Review of Gas Meter Arrangements (RGMA)
A project to determine industry wide business processes supporting data flows to underpin competition in gas metering services.

S

Seasonal efficiency database of boilers in the UK (SEDBUK)
The percentage efficiency of a boiler model from this database is used in the calculation of the energy saving.

Service Industry Code (SIC)
The SIC is a standard classification code which identifies the types of business conducted at the site.

Settlement Agency Fee
Elexon, the UK's Balancing and Settlement Code Company, charge for making sure all parties involved in distributing, supplying and measuring energy supply are paid appropriately.

Settlements Agency
This is the body that "settles" the distribution of electricity to establish where and to whom the generated load has been distributed to.

Shipper
A shipper buys gas from producers / importers, transports this through the gas network by National Grid, and sells the gas to its customers. The shipper may have a contract directly with the customer, or may act on behalf of a 3rd party.

Shipper Interface Document
A document produced under the auspices of the (National Grid)

Shipper Reference
The unique reference defined by a Shipper to allow for all deliveries to be tracked.

Site
A geographic location at which gas is consumed by the customer. There may be several gas meters at a site, which measure the volume of gas consumed.

Small Site Peak Daily Demand
Small site PD Demand = Sum of (reference consumption) for all small sites.

Smart Metering
The ability to remotely read non-half hourly (NHH) meters. Data is more reliable and more accurate bills are produced.

Spark Spread
A form of analysis used to compare gas prices with electricity prices, by converting the gas price into a price per MWh and subtracting it from the electricity price in that period, taking into account power station efficiency. A negative spark spread indicates that it is more beneficial to sell gas than to produce and sell electricity.

Standing Charge

Is a daily or monthly charge to contribute towards installation, maintenance and administration costs for the local Distribution Network Operator (DNO).

Sub Station
These play an important part of the national grid. They contain transformers which increase or decrease the voltage of an electric current.

Sub-Metering
The term often used when a property owner installs a separate meter to monitor the consumption of a utility such as water, gas or electricity.

Supplier
A person authorised through a supply license granted by Ofgem to supply electricity or gas to the National Grid Network, via the Shipper. Separate licenses are required are for supply to domestic and non-domestic consumers

Supplier Activity
Energy efficiency work undertaken by suppliers to meet their energy efficiency targets.

Supplier Nominated Interruptible (SNI)
A site where the supplier has the right to interrupt the supply for commercial reasons.

Supply Hourly Quantity (SHQ)
SHQ is the maximum hourly consumption for a supply point.

Supply Number
S-Number (also known as MPAN - Meter Point Administration Number). A unique number identifying the distribution company and the location of the metering point.

Supply Offtake Quantity (SOQ)
The maximum daily consumption for a supply point.

Supply Point (SP)
A group of one or more meters for which National Grid shall make Natural Gas available for offtake by the Shipper.

Supply Point Administration (SPA)
The process by which Shippers and National Grid agree ownership and management of supply points.

T

Take or Pay
Is a rule structuring negotiations between companies and their suppliers. With this kind of contract, the company either takes the product from the supplier or pays the supplier a penalty. Take or pay contracts are common in the energy industry and, in particular, for gas sales.

Tariff Structure
Suppliers quote for electricity in numerous different formats. These range from simple one-rated structures (the same price per kW at all times throughout the year) to complex "Seasonal Time of Day" tariffs which are multi-rated. I.e. the price changes three, six or eight times a day.

Temperature and Pressure
Gas either expands or contracts slightly under varying temperature and pressure. It is also known as the Conversion Factor and usually set at 1.02264. The Conversion Factor is taken into account when converting gas usage from volume to energy.

Thermal efficiency
Quantity of heat produced in relation to fuel input.

Therms
The British Imperial Measurement of Gas. To calculate equivalent value in kWh, multiply by 29.3071.

Time Pattern Regimes (TPR)
Codes that state what date and time the meter registers start and finish.

Title (Meter) Owner
This is also referred to as Legal Title Owner. The person or Organisation to which the asset belongs, and that makes such assets available for the purpose of the Gas Act Owner.

Transformer
Equipment that is used to change the voltage of an electric current. Transformers can increase or decrease voltage.

Transmission
The transfer of electricity at high voltage from the power stations across the UK through wires on pylons to points where it can be distributed to users. This is known as the Grid System and is owned and operated by the National Grid Company (NGC).

Transmission Losses (Line Losses)
When transmitting electricity from generator to local distribution network areas some electricity is lost. Specific calculations have to be made by suppliers to determine the level of these losses.

Transmission Use of System (TUoS)
The charges are incurred for transmitting electricity across the National Grid network from the source of generation to the network of the local distribution company. The level of these charges is usually calculated by applying a rate charge to the TRIAD demand level.

Transportation Charge
A charge made by National Grid for the national transport of the shippers' gas through the gas network (National and Regional Transmission system and the low and medium pressure distribution system) to the customer. The transportation charge consists of three elements, which are dependent on the locations of the particular terminal and offtake site: capacity charge; commodity charge; and site charge.

Triad
It is used to calculate TUoS Charges. The TRIAD is calculated by looking at the three maximum demand points (in kW) of the supply at half hourly time periods, and then averaging the total. The figures used are usually selected from winter months, and at peak times, as these periods are set to reflect the point at which the highest demand occurs on the National Grid.

U

UK Kyoto Target
Kyoto target – all greenhouse gases 12.5% below 1990 levels by 2008-12 National goal – CO2 20% below 1990 levels by 2010 Long-term goal – Reducing CO2 emissions by some 60% from current levels by 2050

UN Framework Convention on Climate Change (UNFCCC)
The international framework established in 1992 to tackle the issue of climate change and greenhouse gas emissions. The UNFCCC aims to prevent dangerous man-made climate change and commits developed countries to take the lead in tackling climate change.

Uniform Network Code (UNC)
As of 1 May 2005, the UNC replaced National Grid Gas's Network Code as the contractual framework for the NTS, GDNs and system users.

Unit Price
The price per unit of energy which includes 3 components only – energy wholesale price (energy at NBP), infrastructure costs and a cost to serve element

Uranium (U)
A mildly radioactive element with two isotopes which are fissile (U-235 and U-233) and two which are fertile (U-238 and U-234). Uranium is the basic fuel of nuclear energy.

V

Value Added Tax (VAT)
VAT is a government-imposed tax on the supply of goods and services. There are currently 2 rates of VAT applicable to supplies of electricity and gas – the standard rate and the reduced rate. On supplies used solely for business purposes, VAT will usually be charged at the standard rate.

Where supplies are wholly or partly for domestic or charitable non-business use, that part of the supply qualifies for the reduced rate of VAT. This is known as 'qualifying use'.

Customers with qualifying use will need to submit a VAT Customer Declaration Certificate for each site, to advise the supplier what percentage of the supply meets the qualifying criteria set by HM Revenue and Customs (HMRC). Please note that VAT Declaration Certificates are not transferable between suppliers.

Value at Risk (VaR)
Is the maximum loss not exceeded with a given probability defined as the confidence level, over a given period of time? It is commonly used by security houses or investment banks to measure the market risk of their asset portfolios (market value at risk); however VaR is a very general concept that has broad applications. VaR is widely applied in finance for quantitative risk management for many types of risks. VaR does not give any information about the severity of loss by which it is exceeded. Other measures of risk include volatility/standard deviation, semi-variance (or downside risk) and expected shortfall.

Vertically integrated company
A company that is active at more than one level of an industry's supply chain (e.g. a company that generates electricity and also operates electricity distribution networks).

Voltage
A unit used to measure the electromotive force of an electric current.

Voltage Scales
The Voltage Scale is not set by the customer, but determined by Networks when the premises supply is connected. Depending on what kVA is requested by the customer, and what Networks are faced with when installing the supply, will determine which voltage scale is required. The voltage scale can also be determined via the Line Loss Factor.

Voltage Transformer
A device that reduces (or increases) the supply voltage for example and 11000/415 Volt transformer would convert volt supply to 415 volt supply.

Voluntary Withdrawal
A notice issued by a shipper indicating that they wish to cease ownership of a Supply Point.

W

Waste
High-level waste (HLW) is highly radioactive material arising from nuclear fission. It can be recovered from reprocessing spent fuel, though some countries regard spent fuel itself as HLW. It requires very careful handling, storage and disposal. Low-level waste (LLW) is mildly radioactive material usually disposed of by incineration and burial.

Waste Residue
The portion of the waste stream (domestic and commercial) which cannot currently be recovered or recycled.

Weighted Average Cost of Capital (WACC)
The weighted average of the cost of equity and the cost of debt, where the weighting is provided by the gearing ratio. This represents the cost to a company of raising the funds for its activities (specifically, its capex programme). As part of the price control process, Ofgem sets an allowance for the expected WACC that its regulated companies pay.

Whole Current Metering
Metering that is 100 amp and below.

Wind power
The conversion of energy in the wind into electrical power. The wind hits the blades of the wind turbine, which rotates like a giant propeller and powers the generator. Wind farms can be sited on land or at sea, with those offshore able to take advantage of the much stronger and consistent winds found off our coast.

Wobbe Index
The gross calorific value of Natural gas divided by the square root of the Relative Density.

World Alliance for Decentralized Energy (WADE)

X

XOSERVE
Xoserve, delivers transportation transactional services on behalf of all major gas transportation Companies