

# Glossary

<b>Balancing Mechanism (BM)</b>	Operated by National Grid (the GB System Operator) to ensure the electricity system balances (i.e. supply equals demand) at any one time. Participants in the balancing mechanism can submit 'offers' (proposed trades to increase generation or decrease demand) and/or 'bids' (proposed trades to decrease generation or increase demand). National Grid then purchases offers and bids to balance the system.
<b>Bid offer spreads</b>	Indicates the difference between the price quoted for an immediate sale (bid) and an immediate purchase (ask).
<b>Big Six</b>	Largest six electricity providers in GB.
<b>Bilateral markets/ contracts</b>	A direct contract between the power producer and user or broker agreed outside of a centralised power exchange.
<b>BM Start Up</b>	A reserve service contracted on the day by the System Operator to ensure plant with a start-up time of several hours is available in the Balancing Mechanism at peak.
<b>British Electricity Trading and Transmission Arrangements (BETTA) market</b>	A single wholesale electricity market for GB with a single System Operator independent of generation and supply introduced in April 2005.
<b>Buy-out price</b>	The rate licensed electricity suppliers need to pay if they do not present sufficient numbers of Renewables Obligation Certificates to meet their obligations under the Renewables Obligation scheme.
<b>Call option</b>	A call option is a contract that gives the buyer of the option the right (but not the obligation) to purchase an agreed quantity of a commodity from the seller at an agreed time for an agreed price.
<b>Capacity margin</b>	The difference between peak demand and installed capacity, adjusted for probable availability at peak.
<b>Capacity Market</b>	A type of Capacity Mechanism in which the total volume of capacity required is estimated, and providers willing to offer capacity (whether in the form of generation or non-generation technologies and approaches such as storage or demand side response) can sell that capacity. There are several forms of Capacity Market, depending on the nature of the 'capacity' and how it is bought and sold.
<b>Capacity Mechanism</b>	Policy instrument designed to help ensure security of supply by providing a more secure capacity margin than that which would be determined by the market without intervention.

<b>Capacity payments</b>	A type of Capacity Mechanism where the price paid for capacity, rather than the volume required, is set centrally.
<b>Carbon Capture and Storage (CCS)</b>	CCS technology captures CO <sub>2</sub> from fossil fuel power stations. The CO <sub>2</sub> is then transported via pipelines and stored safely, offshore, in deep underground structures such as depleted oil and gas reservoirs, and deep saline aquifers.
<b>Carbon Price Floor (CPF)</b>	A carbon price support mechanism to support investment in low-carbon generation, announced in Budget 2011.
<b>Cash out</b>	The process used under British Electricity Trading and Transmission Arrangements designed to target the cost of energy balancing incurred by the System Operator to the parties who created those costs (i.e. those parties who do not balance their inputs and outputs within the relevant balancing period).
<b>Churn</b>	A measure of the extent to which energy is traded and re-traded in the market as market participants manage their risks. A higher churn rate is an indication of a more liquid market.
<b>Climate Change Levy (CCL)</b>	One of a range of measures designed to help the UK meet its legally-binding commitment to reduce greenhouse gas emissions. It is chargeable on the industrial and commercial supply of taxable commodities for lighting, heating and power by consumers in the following sectors of business: <ul style="list-style-type: none"> <li>• industry;</li> <li>• commerce;</li> <li>• agriculture;</li> <li>• public administration; and</li> <li>• other services.</li> </ul>
<b>Clip size</b>	The size of a contract to be traded. For flat electricity products, such as baseload and peak load, the clip size is generally in MW. For shaped products, clip size is normally defined in MWh of total volume.
<b>Combined Cycle Gas Turbine (CCGT)</b>	A power station that generates electricity by means of a number of gas turbines whose exhaust is used to make steam to generate additional electricity via a steam turbine, thereby increasing the efficiency of the plant above open cycle gas turbines.
<b>Combined Heat &amp; Power (CHP)</b>	Generation where both heat and power is produced. This results in a more efficient use of both fossil and renewable fuels if there is a customer for the heat.
<b>CO<sub>2</sub>/kWh</b>	Carbon dioxide emitted per kWh of electricity generated.

<b>Day Ahead Market</b>	Market for buying and selling electricity for delivery on the day after trading takes place.
<b>Demand Management</b>	Energy use management which includes demand side response, demand reduction and energy efficiency.
<b>Demand Reduction</b>	Changing behavioural patterns to reduce the amount of energy consumed, for example through switching off lights when they are not needed.
<b>Demand side response (DSR)</b>	An active, short-term reduction in electricity consumption either through shifting it to another period, using another type of generation, or simple not using electricity at that time.
<b>De-rated capacity margin</b>	The capacity margin adjusted to take account of the availability of plant, specific to each type of generation technology. It reflects the expected proportion of a source of electricity which is likely to be technically available to generate (even though a company may choose not to utilise this capacity for commercial reasons).
<b>Emissions Performance Standard (EPS)</b>	A limit on the amount of CO <sub>2</sub> that can be released into the atmosphere from a source (or sources) of electricity generation.
<b>Energy Company Obligation (ECO)</b>	Government proposal to create a new obligation on energy companies, from the end of 2012, which draws on the strengths of the existing energy company obligations. Vulnerable households on low incomes, as well as those in properties that are more difficult to treat, will be a key focus of the scheme. The ECO will ensure that households unable to take advantage of Green Deal finance can still be supported and can improve the energy efficiency of their homes.
<b>Energy Efficiency</b>	A change in the use of energy to reduce waste and lower energy use. For example, insulation in buildings reducing demand from heat, or increasing the efficiency of appliances so they use less energy.
<b>Energy Intensity</b>	A measure of total primary energy use per unit of gross domestic product.
<b>Energy unserved</b>	The amount of electricity demand each year that cannot be met due to insufficient supply.
<b>Environment Agency</b>	UK's independent environmental regulator.
<b>European Union Emissions Trading System (EU ETS)</b>	A Europe-wide cap and trade scheme that sets an overall cap on the total emissions allowed from all the installations covered by the System. This is converted into allowances (one allowance equals 1 tonne of CO <sub>2</sub> ) which are then distributed by EU member states to installations covered by the scheme. From 2013, there will be full auctioning for the power sector in GB.

<b>Feed-in Tariff (FiT)</b>	A type of support scheme that provides revenue support to certain generators, such as low-carbon generators.
<b>Feed-in Tariff with Contract for Difference (FiT CfD)</b>	A long-term contract set at a fixed level where variable payments are made to ensure the generator receives an agreed tariff (assuming they sell their electricity at the market price). The Feed-in Tariff payment would be made in addition to the generator's revenues from selling electricity in the market. The FiT CfD can be a two-way mechanism that has the potential to see generators return money to consumers if electricity prices are higher than the agreed tariff.
<b>Fixed Feed-in Tariff</b>	Support scheme where a fixed rate is paid per unit of electricity produced.
<b>Forward Market</b>	Market for buying and selling electricity for delivery at a future date, e.g. month, season or year ahead.
<b>Gas and Electricity Markets Authority (GEMA)</b>	The authority that governs Ofgem.
<b>Gigawatt (GW)</b>	A power measure (usually electricity) equivalent to 1,000,000 kilowatts. One gigawatt of electricity from wind could meet the annual energy needs of over 600,000 UK households, around 1.5 per cent of the UK energy demand. For example: <ul style="list-style-type: none"> <li>• 1,000,000,000 Watt (W)</li> <li>    = 1,000,000 kilowatt (kW)</li> <li>    = 1,000 megawatt (MW)</li> <li>    = 1 gigawatt (GW)</li> <li>    = 0.001 terawatt (TW)</li> </ul>
<b>Green Deal</b>	Government programme providing support for the implementation of energy efficiency measures in households and businesses.
<b>Green Investment Bank (GIB)</b>	An independent institution which will provide financial solutions to accelerate and increase private sector investment in the UK's transition to a green economy.
<b>Gigawatt-hour (GWh)</b>	An energy measure (usually electricity) equivalent to 1,000,000 kWh. One GWh of electricity would meet the hourly energy needs of over 600,000 UK households.
<b>Industrial Emissions Directive (IED)</b>	EU Directive which consolidates seven existing European Directives relating to industrial installations with the aim of providing a single clear and coherent legislative instrument for controlling pollution from industrial operations.
<b>Interconnection</b>	Physical linking of a network with electricity generation, usually between countries which allow electricity to be imported and exported in response to price signals.

<b>Kilowatt-hour (kWh)</b>	A unit of energy equivalent to 1 kW of power expended for one hour of time.
<b>Levy Exemption Certificates (LECs)</b>	Evidence of Climate Change Levy exempt electricity supply generated from qualifying renewable sources.
<b>Liquidity</b>	Liquidity refers to the proportion of energy trading, or the number of buyer and sellers willing to trade, in the market. Liquidity enables companies to quickly buy or sell a product without causing a significant change in its price and without incurring significant transaction costs. A liquid market is one in which market participants have confidence in traded prices. This in turn informs investment decisions and can help facilitate new entry.
<b>Marginal cost</b>	An economic term to mean the cost of an additional unit or the extra cost in relation to the baseline.
<b>Market coupling</b>	An approach used to allocate capacity on interconnectors. It links interconnected wholesale energy markets with an implicit auction that determines efficient cross-border flows according to price differentials between markets. Under market coupling, power flows from low to high price areas. This approach for allocation of cross-border capacity is endorsed by the European Commission.
<b>Megawatt Hour (MWh)</b>	A measure of energy equal to 1000 kWh.
<b>Office of Carbon Capture and Storage (OCCS)</b>	Part of the Department of Energy and Climate Change.
<b>Office of Nuclear Development (OND)</b>	Part of the Department of Energy and Climate Change.
<b>Office for Renewable Energy Deployment (ORED)</b>	Part of the Department of Energy and Climate Change.
<b>Ofgem</b>	The independent regulator for the GB energy sector.
<b>Offtake risk</b>	Risk that generators – particularly small, intermittent generators such as onshore wind – will be unable to guarantee a buyer for their electricity impacting their ability to obtain finance.
<b>Operating Reserve</b>	The generating capacity available to the System Operator within a short interval of time to meet demand in case other generation is not available, demand changes unexpectedly or there is another disruption to the supply.

<b>Peak load, peak demand</b>	These two terms are used interchangeably to denote the maximum power requirement of a system at a given time, or the amount of power required to supply customers at times when need is greatest. They can refer either to the load at a given moment (e.g. a specific time of day) or to averaged load over a given period of time (e.g. a specific day or hour of the day).
<b>Power Purchase Agreement (PPA)</b>	A contract between a generator and a licensed electricity supplier for the sale of the output of the generator for the contract duration at a price that is defined in the contract.
<b>Premium Feed-in Tariff (PFIT)</b>	A payment which generators receive in addition to their revenues from selling electricity in the wholesale market.
<b>Project TransmiT</b>	Ofgem's independent review of the charging, and associated connection, arrangements for use of the gas and electricity transmission networks.
<b>Reference price</b>	The market price for electricity that is stipulated in a Feed-in Tariff with Contract for Difference (FiT CfD). The payments made under a FiT CfD are calculated as the difference between this price and the strike price, usually per unit of electricity generated.
<b>Reliability Market</b>	A type of Capacity Market (which is a type of Capacity Mechanism). In a Reliability Market, what is purchased from providers (which could be generators or suppliers of storage or demand side response) is a 'reliability contract', essentially a call option. The reliability contract provides a hedge for the holder, enabling the holder to purchase energy at no more than the strike price or, if energy is simply not available, to be compensated for the missing energy. In return for this hedge, the provider receives a payment (the option premium) which provides a reliable source of income.
<b>Renewable Energy Strategy (RES)</b>	Government strategy aiming to increase the use of renewable energy in the UK, as part of the overall strategy for tackling climate change and to meet the UK and EU targets.
<b>(UK's) Renewable energy targets</b>	EU target requiring that at least 15 per cent of UK energy comes from renewable sources by 2020. Currently expected to require approximately 29 per cent from renewable electricity.
<b>Renewables Obligation (RO)</b>	The UK's current scheme to incentivise investment in renewable generation. An obligation on licensed electricity suppliers to provide a set number of Renewables Obligation Certificates per MWh of electricity supplied in the UK or to pay a buy-out price.
<b>Renewables Obligation Certificate (ROC)</b>	A green certificate issued by Ofgem to an accredited generator for eligible renewable electricity generated within the UK under the Renewables Obligation.

<b>Renewables Obligation Banding Review</b>	The process whereby the band levels for technologies eligible for support under the Renewables Obligation are set. A Banding Review is currently underway to determine the support levels that will be in effect from 1 April 2013 (1 April 2014 for offshore wind).
<b>The Renewables Roadmap</b>	Document published alongside the Electricity Market Reform package. The Roadmap focuses in particular on the eight technologies which evidence from the market suggests now have either the greatest potential to help the UK meet the 2020 renewable energy target in a cost-effective and sustainable way, or offer great potential for the decades that follow. It outlines specific time-bound actions to remove the barriers to renewables deployment.
<b>Scottish Environment Protection Agency (SEPA)</b>	Scotland's environmental regulator.
<b>Short-Term Operating Reserves (STOR)</b>	A service procured and used by the system operator for the provision of additional power from generation or demand reduction used to balance supply and demand over critical periods in the day. Providers of STOR must be available for at least two hours within four hours notice.
<b>Single Electricity Market (SEM)</b>	The electricity market for the island of Ireland.
<b>Small-scale Feed-in Tariff (FiT)</b>	A Feed-in-Tariff system to incentivise households, businesses and community groups to generate low-carbon electricity up to a maximum capacity cap of 5 MW.
<b>Spinning reserve</b>	The extra generating capacity that is available by increasing the power output of generators that are already generating electricity into the network.
<b>Spot Price</b>	The wholesale price for electricity that is traded for delivery on the same day.
<b>Spot trading</b>	Trading for delivery on the same day as the trade (within day).
<b>Strategic Reserve</b>	A form of Capacity Mechanism whereby an amount of reliable capacity is held outside the electricity market and only utilised in certain circumstances.
<b>Strike Price for Capacity Mechanism</b>	Price agreed by the parties under a reliability contract for a Reliability Market form of Capacity Mechanism. The strike price represents the effective maximum price that the electricity buyer will have to pay for the volume agreed in the contract. When the market price is higher than the strike price the provider of capacity pays the buyer the difference in price for the total volume of electricity agreed.

<p><b>Strike Price for Feed-in Tariff with Contract for Difference (FiT CfD)</b></p>	<p>The price (per unit of electricity) agreed by both parties to a FiT CfD. For a two-way FiT CfD, the contracting authority agrees to pay the generator the difference between the reference price (see above) and the strike price when the strike price is higher. The generator agrees to do the same when the strike price is lower than the reference price. Assuming that the generator can sell his electricity at the reference price, he is paid the strike price for each unit of electricity he generates.</p>
<p><b>System Operator (SO)</b></p>	<p>The System Operator (SO) is responsible for ensuring the electricity system remains balanced within each half hour period. Generators may generate more or less energy than they have sold; customers of suppliers may consume more or less energy than the supplier has purchased. The SO must ensure that imbalances in supply and demand are addressed on a second by second basis, within the constraints of the network.</p>
<p><b>tCO<sub>2</sub></b></p>	<p>Tonne of CO<sub>2</sub>.</p>
<p><b>Vertically-integrated utilities</b></p>	<p>Where one business owns two or more parts of the energy supply chain. For example, where the same entity owns generation capacity and also supplies energy to the retail market.</p>
<p><b>Vintaging</b></p>	<p>Vintaging the Renewables Obligation (RO) system means that it will no longer be open to accreditation for new stations. The closure of the RO to new stations will create a closed pool of capacity which will decrease over time as we approach the end date for the RO of 31 March 2037.</p>
<p><b>Wind cannibalisation</b></p>	<p>Term used to describe a future scenario in which the wholesale price for electricity is depressed by large numbers of wind farms simultaneously generating large volumes of zero marginal cost electricity. Under such circumstances, the larger the penetration of wind generation on the system, the more revenues for wind generators could fall.</p>
<p><b>2050 targets</b></p>	<p>The UK target to reduce our carbon emissions by 80 per cent below 1990 levels by 2050.</p>