

Glossary

Term	Section	Meaning
1 in 20 Demand	Electricity	As weather is one of the main drivers of the difference in demand from one day to the next, we use a statistical model based on 30 years of weather data to simulate the likelihood of weather conditions on particular days across the winter. We then calculate conditions that result in a 5% chance that the demand will reach this level on average over the winter (it is quoted as a restricted demand, which means that the estimated amount of customer demand management on the highest demand days is taken into account).
1 in 20 Peak Day Demand	Gas	The level of demand that, in a long series of winters, with connected load held at the levels appropriate to the winter in question, would be exceeded in one out of 20 winters, with each winter counted only once.
1/24th Flat Profile	Gas	A supply (or demand) profile which assumes that the rate of flow is even throughout the 24 hour gas day.
1 in 50 demand	Gas	The annual demand represented by the area (above a demand threshold of zero) under the 1-in-50 load duration curve, being the curve which, in a long series of years, with connected load held at the levels appropriate to the year in question, would be such that the volume of demand above any given demand threshold (represented by the area under the curve and above the threshold) would be exceeded in one out of 50 years.
ACS	Electricity	see Average Cold Spell
Arduous Forecast	Electricity	A forecast that assumes a generator variability and wind variability against a 1 in 20 and ACS demand forecast, with interconnector sensitivities.
Average Cold Spell	Electricity	As weather is one of the main drivers of the difference in demand from one day to the next, we use a statistical model based on 30 years of weather data to simulate the likelihood of weather conditions on particular days across the winter. We then calculate conditions that result in a 50% chance that the peak demand will be exceeded. The ACS peak demand has historically only ever occurred in December or January, minus a two week period over Christmas.

Glossary

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Average Winter	Gas	The average winter condition that has applied over the last 86 years.
Balancing Mechanism	Electricity	The balancing mechanism is a regulated market framework used to balance supply and demand in each half hour trading period of every day. If National Grid predicts that there will be a discrepancy between the amount of electricity produced and that which will be in demand, during a certain time period, they may accept a 'bid' or 'offer' to either increase or decrease generation (or consumption).
Balancing Mechanism Reporting System	Electricity	A website that provides near real-time and historic data about the Balancing Mechanism.
Baseload	Fuel Prices	The permanent minimum load that a system experiences.
BBL	Gas	Balgzand – Bacton Line A pipeline connecting Balgzand in the Netherlands to Bacton in the UK. This pipeline is currently uni-directional and flows from the Netherlands to the UK only.
bcm	Gas	Billion cubic meters, that is 1,000,000,000 cubic meters.
Bipole outages	Electricity	A combined outage on two associated poles on an interconnector. There can be more than one cable on an interconnector, a bipole outage is where both poles are out of service simultaneously.
BM	Electricity	see Balancing Mechanism
BMRS	Electricity	see Balancing Mechanism Reporting System
BritNed	Electricity	BritNed Development Limited: A joint venture of Dutch TenneT and British National Grid that operates the electricity link between Great Britain and The Netherlands. It is a bi-directional interconnector with a capacity of 1,000MW.
Calorific Value	Gas	The ratio of energy to volume measured in megajoules per cubic metre (MJ/m ³) which, for a gas, is measured and expressed under standard conditions of temperature and pressure.
Capacity Assessment	Electricity	Ofgem's annual report to the Secretary of State assessing the risks to electricity security of supply in Great Britain for the next five winters. The latest version was published in July 2014.

Glossary

Term	Section	Meaning
Carbon Price Support	Fuel Prices	A mechanism intended to improve incentives for investment in low-carbon electricity generation by setting a minimum price for carbon emissions, which would increase the price paid for generation by fossil fuel fired power stations. Also known as "Carbon Floor Price".
CCGT	Various	see Combined Cycle Gas Turbine
CDM	Electricity	see Customer demand management
Central Forecast	Electricity	A forecast that makes assumptions based on historic evidence for generator variability and wind variability on a weather corrected demand forecast (taking out the impact of weather) and includes interconnector sensitivities.
Clean Forecast	Electricity	A forecast that uses data that is largely unadjusted.
Close-Out Date	Gas	The last date for information revision on gas flow quantities on the NTS.
Closing Linepack	Gas	The volume of gas held within the NTS at the end of the gas day (06:00hrs).
CLP	Gas	see Closing Linepack
Cold Day	Gas	A day approaching 0 degrees CWV.
Combined Cycle Gas Turbines	Gas	A unit whereby electricity is generated by a gas powered turbine and also a second turbine. The hot exhaust gases expelled from the first turbine are fed into the heat exchanger to generate steam, which powers the second turbine.
Composite weather variable	Gas	A weather variable that is linearly related to non-daily metered gas demand. It takes into account not only temperature, but also other factors including wind speed, effective temperature, etc.
Compressor	Gas	Compressors are used to move gas around the network through high pressure transmission pipes. There are currently 68 compressors at 24 compressor sites across the country, these compressors move the gas from entry points to exit points on the gas network. They are predominately gas driven turbines which are in the process of being replaced with electric units.

Glossary

Term	Section	Meaning
Constraint	Various	A constraint occurs when the capacity of transmission assets is exceeded so that not all of the required supply can be transmitted to other parts of the network, or an area of demand cannot be supplied with all of the required supply. This occurs when there is congestion on a certain part of the network.
Customer Demand Management	Electricity	A reduction in the supply of electricity to a customer or disconnection of a customer in a manner agreed for commercial purposes between a supplier and its customer.
CV	Gas	see Calorific Value.
CWV	Gas	see Composite weather variable.
Cycling Rates	Gas	The average number of times a reservoir's working gas volume can be turned over during a specific period of time.
Daily Metered	Gas	Those meters that are read daily, these are invariably attached to large scale consumers.
Darkness Peak	Electricity	Peak evening electricity demand which coincides with lighting up in winter.
DECC	Gas	Department of Energy and Climate Change: The UK government department responsible energy and climate change policy.
Demand	Various	see Transmission System Demand
Demand Side Response	Various	An active, short term reduction in consumption either through shifting it to another period, using another type of generation, if applicable, or simply not using energy at that time.
De-rated Generation Availability	Electricity	Submitted generator data which has been reduced to allow for shortfalls and breakdowns which includes imports from the continent.

Glossary

Term	Section	Meaning
De-Rated Margin	Electricity	The average excess of available generation capacity over peak demand, expressed in percentage terms. Available generation capacity takes into account the contribution of installed capacity at peak demand by adjusting it by the appropriate de-rating (or availability) factors which take into account the fact that plant are sometimes unavailable due to outages.
De-Rating Factor	Electricity	A percentage applied to notified availability data submitted by power stations to allow for short falls and breakdowns.
Diversified	Gas	Diversified peak demand is the demand that could be expected for each of the demand sources across the whole country on a very cold day. Diversified demand is used for comparing with actual demand and for most operational and security planning, it is not a likely scenario.
DM	Gas	see Daily metered
DSR	Various	see Demand-Side Response
East West Interconnector	Electricity	A 500 MW interconnector that links the electricity transmission grids of Ireland and Great Britain.
EFA (5)	Electricity	see Electricity Forward Agreement (block 5)
EFC	Electricity	see Equivalent Firm Capacity
Electricity Forward Agreement	Electricity	A contract calling for the delivery of and payment for electric power in a future period. They are used much like oil derivative contracts to fix or hedge energy costs. Block five being the time period 15:00 - 19:00 GMT.
Embedded	Electricity	Any generation which is connected directly to the local distribution network, as opposed to the transmission network, as well as combined heat and power schemes of any scale. The electricity generated by such schemes is typically used in the local system rather than being transported across the UK (i.e. it is invisible to National

Glossary

Term	Section	Meaning
		Grid).
Emergency Assistance Service	Electricity	The potential to change interconnector flows in an emergency situation to a more favourable security of supply position for GB.
ENTSO-E	Electricity	European Network of Transmission System Owners for Electricity
ENTSO-G	Gas	European Network of Transmission System Owners for Gas
Equivalent Firm Capacity	Electricity	A measure of the quantity of firm capacity (can be expected to be available) that can be replaced by a certain volume of wind generation to give the same level of security of supply, as measured by LOLE. So, 22% of wind capacity is expected to be delivering energy across the winter.
ETS	Fuel Prices	see European Trading Scheme
European Trading Scheme	Fuel Prices	An EU wide system for trading greenhouse gas emission allowances which covers more than 11,000 power stations and industrial plants in 31 countries.
EWIC	Electricity	see East West Interconnector
FR	Electricity	see Frequency Response
Frequency Response	Electricity	<p>As well as balancing supply and demand, National Grid has a role to ensure frequency is kept as close to 50hz as possible.</p> <p>There are two types of Frequency Response; Dynamic and Non Dynamic Response. Dynamic Frequency Response is a continuously provided service used to manage the normal second by second changes on the system. While Non Dynamic Frequency Response is usually a discrete service triggered at a defined frequency deviation.</p> <p>National Grid has an obligation to control frequency within the limits specified in the 'Electricity Supply Regulations', i.e. $\pm 1\%$ of nominal system frequency (50.00Hz) save in abnormal or exceptional circumstances. National Grid must therefore ensure</p>

Glossary

Term	Section	Meaning
		that sufficient generation and / or demand is held in automatic readiness to manage all credible circumstances that might result in frequency variations.
GDP	Various	Gross Domestic Product
Generator capacity	Electricity	The total capacity of all generators.
GWh	Gas	Giga Watt hours that is 1,000,000,000 Watt hours.
IFA	Electricity	Interconnexion France Angleterre. The England-France Interconnector is a 2,000MW link between the French and British transmission systems with ownership shared between National Grid and Réseau de Transport d'Electricité.
Interconnectors	Electricity Gas	Electricity: Interconnectors are electric lines or other electrical plants based within the jurisdiction of Great Britain which convey electricity (whether in both directions or in only one) between Great Britain and another country or territory. Gas: Interconnectors are natural gas pipe lines that connect (whether in both directions or in only one) gas transmission systems from other countries to the NTS.
IUK	Gas	Interconnector (UK) Limited: The Interconnector is a natural gas pipeline between the United Kingdom and continental Europe. It crosses the North Sea between Bacton Zeebrugge in Belgium. It provides bi-directional transport capabilities.
Large Combustion Plant Directive	Electricity	An EU Directive placing restrictions on the levels of sulphur dioxide, nitrogen oxides and dust particulates which can be produced by combustion plants with a thermal output greater than 50MW. The implementation of the LCPD in the UK requires coal and oil plant to fit flue gas de-sulphurisation (FGD) equipment or have their total running hours restricted to 20,000 between 1 January 2008 and 31 December 2015 before closing prior to the end of that period.
LCPD	Electricity	see Large Combustion Plant Directive
LDZ	Gas	Local Distribution Zone: A geographic area supplied by one or more connections to the NTS consisting of local transmission systems and distribution system pipelines.

Glossary

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Linepack (NTS)	Gas	“The volume of gas within the National Transmission System (NTS) pipelines at any time.”
LNG	Gas	Liquefied natural gas. This is gas that is processed so that it is liquid and can therefore be carried in higher volumes. We import this in the UK from a range of countries.
Load	Electricity Gas	The energy demand experienced on a system.
Locational balancing actions	Gas	A physical market transaction pursuant to which the originating user agrees to make a flow change in respect of a specified system point.
LOLE	Electricity	see Loss of Load Expectation
Loss of Load Expectation	Electricity	A measure of how many hours of electricity demand is expected not to be met by expected available supplies over the coming winter period. A Reliability Standard has been set by Government under EMR of 3 hours per year. This does not mean that customers will be disconnected or that there will be hours of blackout. It means that in circumstances when available supply is not high enough to meet demand, National Grid may have to call upon a range of tools to mitigate the effects of unmet demand; either by bringing on extra generation or reducing demand.
Margin	Electricity Gas	The difference between the level of demand and supply that is available to meet it.
Marginal generation	Gas	The less favourable commercial generation option when all the options are ranked in an economic merit order.
Margins Notice	Gas	A day-ahead notification, to the industry, of a forecast supply deficit should forecasted NTS demand exceed assumed NTS supply.
Max Gen Service	Electricity	see Maximum Generation Service
Maximum Generation Service	Electricity	A facility that allows access to capacity which is outside of the generator's normal operating range in emergency circumstances for up to 2 hours.

Glossary

Term	Section	Meaning
Mcm	Gas	Million cubic meters
Monte Carlo Simulation	Electricity	A class of computational algorithms that rely on repeated random sampling to simulate results based on multiple variables; typically simulations are run many times over in order to obtain the distribution of a result.
Moyle	Electricity	A 250MW bi-directional interconnector between Northern Ireland and Scotland.
MW	Electricity Gas	Megawatt: The megawatt is equal to one million watts i.e. 1 megawatt = 1,000,000 watts.
National Transmission System	Electricity Gas	<p>Electricity: The system consisting (wholly or mainly) of high voltage electric lines used for the transmission of electricity from one power station to a substation or to another power station or between substations or to or from Offshore Transmission Systems or to or from any external interconnection, and includes any plant and apparatus and meters owned or operated by any Transmission Licensee in connection with the transmission of electricity.</p> <p>Gas: A high-pressure system consisting of terminals, compressor stations, pipeline systems and offtakes. Designed to operate at pressures up to 85 bar. NTS pipelines transport gas from terminals to NTS offtakes.</p>
NBP	Gas	National Balancing Point: A national point which represents the system for balancing purposes.
NDM	Gas	see Non-daily metered
NISM	Electricity	see Notification of Insufficient System Margin
Non-Daily Metered	Gas	A meter that is read monthly or at longer intervals.
Non-Synchronized	Electricity	Not synchronized (cf. synchronized)
Notification of Insufficient System Margin	Electricity	A formal communication that lets market participants know that the usual 'safety cushion' is less than is desired at a particular time of that day and an increase in generation or reduction in demand may be beneficial for security of supply. National

Glossary

Term	Section	Meaning
		Grid manage “trigger values” in light of experience.
NSS	Gas	see Non Storage Supply
NTS	Gas	see National Transmission System:
Obligated	Gas	The amount of Baseline Capacity, and any Incremental Capacity that exists, that National Grid is required to make available on every day of the year.
OCGT	Electricity	see Open Cycle Gas Turbines
Ofgem	Various	Office of Gas and Electricity Markets: the regulatory agency responsible for regulating Great Britain’s gas and electricity markets.
Ofgem’s Capacity Assessment Method	Various	The methodology used by Ofgem to assess the capacity margins that could be delivered by the electricity market over the next four years. They use a combination of a probabilistic approach with sensitivity analysis to assess this uncertainty.
Open Cycle Gas Turbines	Electricity	A gas turbine generator in which air is taken from the atmosphere, compressed and then fed into a combustion chamber. The exhaust products are then expelled unlike those in a Combined Cycle Gas Turbine.
Operating Planning Margin Requirement	Electricity	The amount of generation, in excess of demand forecast, that is required to meet National Grid’s Day-Ahead Reserve Requirement.
OPMR	Electricity	see Operating Planning Margin Requirement
p/th(erm)	Fuel Prices	Pence per therm
PCLP	Gas	see Projected Closing Linepack

Glossary

Term	Section	Meaning
Peak	Electricity Gas	Denotes 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. It 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).
Peak Day	Gas	The highest demand for gas, or electricity, on any day in that year.
Projected Closing Linepack	Gas	The predicted volume of gas held within the NTS at the end of the gas day (06:00hrs).
Pumped Storage	Electricity	Also known as hydroelectric storage, which is used for converting large quantities of electrical energy to potential energy by pumping water to a higher elevation, where it can be stored indefinitely and then released to pass through hydraulic turbines and generate electrical energy.
Residual Balancer	Gas	Users of the system are required to balance supply into, and demand from the network. If this balance is not expected to be achieved on any given day, then the System Operator (National Grid), as Residual Balancer, will enter the market and undertake trades (buys or sells) to seek to resolve any imbalance on the system.
Restricted	Electricity	An estimate of the demand after any Customer Demand Management has occurred.
Safety Monitor	Gas	A system to ensure that sufficient gas is held in storage to support those gas consumers whose premises cannot be physically and verifiably isolated from the gas network within a reasonable time period. The current Safety Monitor methodology treats all storage types equitably, by grouping all storage types/facilities together such that there is only one aggregated monitor for space.
Safety Monitor Space Requirements	Gas	The percentage of all the assumed storage space which is required to satisfy the Safety Monitor.
Seasonal Normal Demand	Gas	The demand expected for the period assuming average weather conditions for that time of year.

Glossary

Term	Section	Meaning
Short Term Operating Reserve	Electricity	National Grid procures reserve services from either generation or demand side providers to be able to deal with actual demand being greater than forecast demand, to cover last minute plant breakdowns and to cover wind generation output being lower than expected. This overall reserve requirement is met from both synchronized and non-synchronized sources.
STOR	Electricity	see Short Term Operating Reserve
Synchronised	Electricity	The condition where an incoming Generating Unit or Power Park Module or DC Converter or System is connected to System so that the Frequencies and phase relationships of that Generating Unit, Power Park Module, DC Converter or System, as the case may be, and the System to which it is connected are identical.
TEC	Electricity	see Transmission Entry Capacity
Transmission Entry Capacity	Electricity	The Transmission Entry Capacity of a power station is the maximum amount of active power deliverable by the Power Station at the Grid Entry Point (or in the case of an Embedded Power Station at the User System Entry Point), as declared by the Generator, expressed in whole MW. The maximum active power deliverable is the maximum amount deliverable simultaneously by the Generating Units and/or CCGT Modules less the MW consumed by the Generating Units and/or CCGT Modules in producing that active power and less any auxiliary demand supplied through the station transformers.
Transmission System Demand	Electricity	This is the national demand and it includes interconnector exports and station demand.
UKCS	Gas	United Kingdom Continental Shelf: The region of waters surrounding the United Kingdom, in which the country claims mineral rights. This principally refers to the North Sea, where there are large resources of hydrocarbons.
Undiversified	Gas	The peak day at every location added together. Undiversified demand is used where location is important, such as for network models.

Glossary

Term	Section	Meaning
Uniform Network Code	Gas	A legal and contractual framework to supply and transport gas. It has a common set of rules which ensure that competition can be facilitated on level terms. It governs processes, such as the balancing of the gas system, network planning, and the allocation of network capacity.
Weather Corrected Demand	Electricity Gas	<p>Electricity: A 30 year average of each relevant weather variable is constructed for each week of the year. This is then applied to linear regression models to calculate what the demand would have been with this standardised weather. So, demand expected/or outturned if with the impact of the weather removed.</p> <p>Gas: Actual demand converted to demand at seasonal normal weather conditions by subtracting the difference between the seasonal normal CWV and actual CWV multiplied by the weather sensitivity term in the daily demand model. So, demand expected with the impact of weather removed.</p>
Weekday Peak Demands	Electricity	The highest electricity demand expected/observed during each week expected between Monday and Thursday.
Winter Peak Demand	Electricity	The highest electricity demand expected/observed during the winter.
WOR	Various	The Winter Outlook Report.