

# ENGINEERING



<b>CAPEX</b>	Capital Expenditure	One-off expenditure on the acquisition, construction or enhancement of significant fixed assets including land, buildings and equipment.
<b>CCC</b>	Committee on Climate Change	An independent, statutory body established under the Climate Change Act 2008. The CCC's purpose is to advise the UK Government and Devolved Administrations on emissions targets and report to Parliament on progress made in reducing greenhouse gas emissions and preparing for climate change.
<b>CCGT</b>	Combined Cycle Gas Turbines	A form of highly efficient energy generation technology – combining gas-fired turbines and steam.
<b>CCS</b>	Carbon Capture and Storage	Sometimes referred to as Carbon Capture, Usage and Storage (CCUS), CCS consists of three parts; capturing the carbon dioxide, transporting the carbon dioxide, and securely storing the carbon dioxide emissions, underground in depleted oil and gas fields or deep saline aquifer formations.
<b>CfD</b>	Contracts for Difference	CfDs incentivise investment in low carbon energy by providing developers of projects with high upfront costs and long lifetimes with direct protection from volatile wholesale prices, and they protect consumers from paying increased support costs when electricity prices are high.
<b>DSO</b>	Distribution System Operator	A Distribution System Operator (DSO) securely operates and develops an active distribution system comprising networks, demand, generation and other flexible distributed energy resources.
<b>DSR</b>	Demand Side Response	DSR is an umbrella term for a type of energy service that large-scale industrial and commercial consumers of electricity (such as manufacturers) and in the future, domestic consumers, can use to help keep the grid balanced. As a DSR participant, you decrease or increase your power consumption when you receive signals (requests) to do so, thereby helping the grid to maintain its 50Hz frequency.

<b>DUKES</b>	Digest of UK Energy Statistics	UK Government-produced source of UK energy information.
<b>Electrolysis</b>	N/A	Electrolysis is the process of using electricity to split water into hydrogen and oxygen. This reaction takes place in a unit called an electrolyser.
<b>EPR</b>	N/A	A French PWR nuclear reactor design currently being constructed at Hinkley Point C.
<b>ESA</b>	Energy System Architect	Our proposed Government role/department responsible for the
<b>ESO</b>	Electricity System Operator	Responsible for ensuring the stable and secure operation of the national electricity transmission system.
<b>EV</b>	Electric Vehicle	A vehicle powered by electricity as opposed to a traditional internal combustion engine.
<b>FEED</b>	Front End Engineering Design	The FEED is basic engineering which comes after the Conceptual design or Feasibility study. The FEED design focuses the technical requirements as well as rough investment cost for the project.
<b>FES</b>	Future Energy Scenarios	A National Grid initiative, Future Energy Scenarios are intended to identify a range of credible scenarios across gas and electricity on a GB-wide basis. In order to support planning of the GB electricity transmission system, National Grid split the GB-level data down into regional data sets using best available data.
<b>FIT</b>	Feed in Tariffs	A UK Government scheme designed to encourage uptake of a range of small-scale renewable and low-carbon electricity generation technologies.
<b>GW</b>	Gigawatt	Unit of electric power equal to one billion watts, 1,000 megawatts (MW).
<b>Interconnectors</b>	N/A	An interconnector is a structure which enables energy to flow between networks. The term is used more specifically to refer to international connections between electricity and natural gas networks.
<b>LCOE</b>	Levelised cost of energy	In electrical energy production LCOE can be defined as the present value of the price of the produced electrical energy (usually expressed in cost per kilowatt hour), considering the economic life of the plant and the costs incurred in the construction, operation, maintenance, decommissioning, and the fuel costs.
<b>LWR</b>	Light Water Reactor	A type of thermal-neutron reactor that uses normal water, as opposed to heavy water, as both its coolant and neutron moderator – furthermore a solid form of fissile elements is used as fuel.
<b>MR</b>	(Steam) Methane Reforming	Pre-combustion carbon removal from methane.
<b>Mt/yr</b>	Mega tonnes per year	Equivalent to one million tonnes / year. (1 tonne = 1000kg).

<b>MtCO<sub>2</sub></b>	Million tonnes of carbon dioxide (equivalent)	Represents an amount of a greenhouse gas whose atmospheric impact has been standardised to that of one unit mass of carbon dioxide.
<b>MW</b>	Megawatt	Equal to 1,000 kilowatts (kW = 1,000 Watts).
<b>Net Zero</b>	N/A	Net zero greenhouse gas emissions within the UK by 2050.
<b>PWR</b>	Pressurised Water Reactor	A common nuclear power reactor design in which very pure water is heated to a very high temperature by fission, kept under high pressure (to prevent it from boiling), and converted to steam by a steam generator.
<b>RAB</b>	Regulatory Asset Base	The UK developed the RAB to provide comfort to investors in privatised network utilities such as electricity, natural gas, railways, telecoms, transport and water that their investments would not be treated unfairly. RABs were initially developed in the early 1990s and are currently under consideration for the nuclear sector.
<b>RO</b>	Renewables Obligations	A UK Government support mechanism for large-scale renewable electricity projects in the UK, however ROs are now closed to new generation sources.
<b>SMR</b>	Small Modular Reactor	A type of nuclear fission reactor which are smaller than conventional reactors, and manufactured at a plant and brought to a site to be assembled. Modular reactors allow for less on-site construction, increased containment efficiency, and heightened nuclear materials security.
<b>TW</b>	Terawatt hour	Equal to 1,000 gigawatts (GW).