

ESO RIIO-2 Business Plan Annex 10

Glossary

9 December 2019

This glossary supports the ESO RIIO-2 business plan to define some of the terminology, references and acronyms used throughout the documents. The definitions listed below do not replace any formal definitions such as those in network code or licence documents.

Term	Acronym	Description
2050 carbon reduction target		A target to for the UK's carbon emissions to be net zero by 2050. The target was originally a reduction in 80% by 2050 but was amended in 2019.
AA1000 Stakeholder Engagement Standard	SES	A recognised benchmarking framework for assessing, designing, implementing and communicating an integrated approach to stakeholder engagement.
Agency for the Cooperation of Energy Regulators	ACER	Body consisting of energy regulators from across the EU.
Ancillary Service	AS	See balancing services.
Application development and application maintenance	ADAM	Our technology partners who support application development (AD) and application maintenance (AM).
Application Programming Interfaces	API	This enables software to interact with other software either within or between companies.
Artificial Intelligence	AI	A broad term used to describe the set of technologies that enable machines to sense, comprehend, act and learn
Asset Beta		A measure of a company's risk that is independent of its financial structure.
Balancing Mechanism	BM	A platform used to make sure electricity supply and demand is balanced. From one hour prior to real time until the end of a settlement period, the ESO can instruct (or dispatch) parties to increase or decrease their generation or consumption.
Balancing Mechanism Unit	BMU	Units that trade within the Balancing Mechanism.
Balancing services		Services procured by the ESO to balance demand and supply, and to ensure the security and quality of electricity supply across the transmission system. These services include reserve, frequency control and voltage control. Each service has different parameters that a provider must meet.

Term	Acronym	Description
Balancing Services Use of System (charge)	BSUoS	This charge recovers the cost of day-to-day operation of the transmission system from generators and suppliers. BSUoS charges are calculated daily, depending on the balancing actions that the ESO takes. We also provide a monthly forecast of expected BSUoS charges.
Balancing and Settlement Code	BSC	This is a legal document which defines the rules and governance for the balancing mechanism and imbalance settlement processes of electricity in Great Britain.
Big data		Extremely large data sets that may be analysed computationally to reveal patterns, trends, and associations, especially relating to human behaviour and interactions.
Black Start		Black Start is the procedure we use to restore power in the event of a total or partial shutdown of the national electricity transmission system.
Boundaries		Boundaries represent how the transmission network is divided to highlight potential power flow issues across key geographic areas.
Capacity Market	CM	Introduced by the UK Government as part of the Electricity Market Reform Programme to ensure the future security of our electricity supply. This is achieved by providing a payment for reliable sources of capacity, alongside their electricity revenues, ensuring they deliver energy when needed.
Capex		Capital expenditures are funds used by a company to acquire, upgrade, maintain and create assets such as IS systems, property, or equipment.
Capital Asset Pricing Model	CAPM	A theoretical model that describes the relationship between risk and required return of financial securities. The basic idea behind the CAPM is that investors require a return for the rate of interest, and a return for the level of risk in their investment.
Capitalisation rate		The proportion of totex spend that is added to the regulatory asset value (RAV). This rate is normally informed by the expected split of totex between capital expenditure (capex) and operating expenditure (opex).
Carbon Capture Use and Storage	CCUS	A process by which the carbon dioxide (CO ₂) produced in the combustion of fossil fuels is

Term	Acronym	Description
		captured, transported to a storage location and isolated from the atmosphere.
Challenge Group		As part of Ofgem's Enhanced Stakeholder Engagement approach, they have set up an independent RIIO-2 Challenge Group whose purpose is to assess, scrutinise and challenge companies' business plans in parallel to the companies' user groups.
Charging Futures		Industry programme to coordinate significant charging reform, in a way where every stakeholder can equally contribute to change. The ESO is the lead secretariat.
Cloud (public and private)		<p>The public cloud is defined as computing services offered by third-party providers over the public internet. Customers typically pay for usage of the processing, storage, or bandwidth they consume. Example public clouds include Microsoft Azure, Amazon Web Services (AWS), and Google.</p> <p>The private cloud is defined as computing services offered primarily over a private internal network and only for a single company. Private cloud computing gives businesses many of the benefits of a public cloud – self-service with some scalability – with the additional control and customisation available from dedicated computing infrastructure hosted on-premises.</p>
Combined cycle gas turbine	CCGT	A power station that uses the combustion of natural gas or liquid fuel to drive a gas turbine generator to produce electricity.
Committee on Climate Change	CCC	This is an independent, statutory body established under the Climate Change Act 2008. Its 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.
Community Renewables	CR	Community Renewables scenario from <i>FES</i> . In this scenario, both the level of decentralisation and speed of decarbonisation is high. The 2050 carbon reduction target is met.
Competition Markets Authority	CMA	A non-ministerial government department in the United Kingdom, responsible for strengthening business competition and preventing and reducing anti-competitive activities.

Term	Acronym	Description
Competitively Appointed Transmission Owner (regime)	CATO	In January 2018, Ofgem announced their intention to introduce competition into onshore electricity transmission build and this is the process that grants licences based on that competitive tendering.
Connection and Use of System Code	CUSC	The CUSC is the contractual framework for connection to, and use of, the National Electricity Transmission System (NETS).
Connection Infrastructure Options Notes	CIION	The CIION process evaluate and selects a preferred connection option from the technical, commercial, regulatory, environmental, planning and deliverability aspects. The CIION is the document where the output of the CIION process is recorded.
Connections portal		An IT platform that serves as the single interface between the ESO and transmission connected parties.
Connections wider works		This refers to extending network planning to consider schemes determined wider works in customer connection offers
Consumer		The end-user of the products and services we provide, including domestic households, with whom we have no direct relationships.
Consumer Evolution	CE	One of the <i>FES</i> scenarios, where the level of decentralisation is high, but the speed of decarbonisation is not. In this scenario, the 2050 carbon reduction target is not met.
Consumer Price Index	CPI	A measure that examines the weighted average of prices of a basket of consumer goods and services, such as transportation, food, and medical care. It is calculated by taking price changes for each item in the predetermined basket of goods and averaging them. Changes in the CPI are used to assess price changes associated with the cost of living; the CPI is one of the most frequently used statistics for identifying periods of inflation or deflation.
Consumer Price Index Household	CPIH	A measure of the annual rate of UK consumer price inflation that includes owner occupiers' housing costs (OOH), associated with owning, maintaining and living in one's own home. OOH does not include costs such as utility bills, minor repairs and maintenance, which are already included in the CPI.
(Electricity National) Control Centre	ENCC	The facilities from which the electricity system is managed in real time from

Term	Acronym	Description
Control Centre Architecture and Systems		The suite of IT tools used by the control room to monitor and balance the electricity network.
Controllable revenues		The ESO revenues that relate to reimbursement for the operating of the business. These revenues therefore exclude monies that are handled by us on an agency basis on behalf of the Great Britain electricity industry.
Coordination of Electricity System Operators	Coreso	A regional security centre for electricity that brings together European electricity transmission system operators to promote the efficient and safe management of the European electricity system.
Cost-benefit analysis	CBA	This is an options appraisal process, where the cost of a proposed process or action is calculated, then subtracted from the benefits associated with taking that action.
Cost of debt		An estimate of the return a business provides to its debt holders. Cost of debt is used in weighted average cost of capital (WACC) calculations in order to provide a return on capital invested in the regulatory asset value (RAV).
Cost of equity		An estimate of the return that equity investors expect for the risks they take when investing in a business. Cost of equity is used in WACC calculations in order to provide a return on capital invested in the regulatory asset value (RAV).
Credit rating		An evaluation of a potential borrower's ability to repay debt. Credit ratings are calculated from financial history and current assets and liabilities. There are three major credit rating agencies (Standard & Poor's, Fitch and Moody's) who use broadly similar credit rating scales, with D being the lowest rating (Moody's is C) (highest risk) and AAA being the highest rating (negligible risk).
Credit spread		The difference in yield between two bonds of similar maturity but different credit quality.
Critical national infrastructure	CNI	Assets that are considered vitally important to daily life and the economy. This includes infrastructure associated with the generation and transportation of electricity.
Customer		Organisations or individuals who pay us for the products and services we provide.

Term	Acronym	Description
Data centre		A location used to house computer systems and associated components.
Debt beta		Measures the sensitivity of a bond's return relative to the market return.
Demand side response	DSR	A deliberate change to an energy user's natural pattern of metered electricity or gas consumption, brought about by a signal from another party.
Department for Business, Energy and Industrial Strategy	BEIS	A UK Government department with responsibilities for business, industrial strategy, science, innovation, energy, and climate change.
Design authority		The ESO design authority will give stakeholders the opportunity to inform the direction of the ESO, and provide input into the design of services and capabilities. It will also provide transparency of the decision-making process and prioritisation of investments. At a more detailed level, it will allow us to consult and engage on the experience of interacting with the ESO and invite input into key design, development and testing phases of our solutions development. It will also provide transparency of the decision-making logic behind our systems.
Digital engagement platform		An IT platform that serves as the single interface between the ESO and market participants.
Digital twin		A digital twin uses software to replicate physical assets, processes, people, places, systems or devices for simulation, modelling and forecasting.
Digitalisation		The application of digital technology and data to improve processes.
Digitisation		Process of converting information from a physical format into a digital one.
Dispatch		The operation of generation facilities to produce energy at the lowest cost to reliably serve consumers, recognising any operational limits of generation and transmission facilities.
Distributed energy resource	DER	Resources connected to electricity distribution networks, which system operators can use to efficiently manage energy grids. These resources include flexible generation, flexible demand and storage.

Term	Acronym	Description
Distributed generation	DG	Any generation that is connected directly to the local distribution network, as opposed to the high voltage transmission network.
Distributed Restoration project		A three-year Ofgem funded partnership aimed to lead the way in finding a technical solution to utilising the power of distributed energy resources (DER) in a Black Start event.
Distribution Connection and Use of System Agreement	DCUSA	This is a multi-party contract between licensed electricity distributors, suppliers and generators in Great Britain concerned with the use of the electricity distribution system.
Distribution Network Operator	DNO	Owner of networks for the distribution of electricity.
Distribution System Operation	DSO	DSO is the effective execution of a set of functions and services that need to happen to run an electricity distribution network.
Electric vehicle	EV	A vehicle driven by an electric motor. It can either be driven solely using a battery, as part of a hybrid system, or have a generator that can recharge the battery but does not drive the wheels.
Electricity Balancing System	EBS	The EBS was implemented to replace the suite of systems used to execute the Balancing Mechanism.
Electricity Market Reform	EMR	A government policy to incentivise investment in secure, low-carbon electricity, improve the security of Great Britain's electricity supply, and improve affordability for consumers.
(Electricity) system		All the suppliers, services and infrastructure which are coordinated to maintain the safe and reliable supply of electricity to consumers by balancing electricity generation with demand. This includes generators, balancing services providers, interconnectors, transmission and distribution networks and the operators (DNOs, TOs and OFTOs).
Electricity System Operator	ESO	An entity entrusted with transporting electric energy on a regional or national level, using fixed infrastructure. The ESO may not necessarily own the assets concerned. For example, National Grid ESO operates the electricity transmission system in Scotland, which is owned by Scottish Hydro Electricity Transmission and Scottish Power Transmission.

Term	Acronym	Description
<i>Electricity Ten Year Statement</i>	ETYS	An annual ESO publication that shows the likely future transmission requirements of bulk power transfer capability of the National Electricity Transmission System, based on the Future Energy Scenarios (FES).
Elxon		Administrator for the Balancing and Settlement Code (BSC).
Embedded customers		Users connected to the distribution networks.
Energy Codes Review		A joint comprehensive review of the energy codes, by BEIS and Ofgem, to help govern the energy system. The aim of the review is to consider options for improving the existing arrangements, including scope for fundamental reform.
Energy Data Taskforce	EDTF	Industry group established by the government and Ofgem to investigate how the use of data could be transformed across the energy system.
Energy Networks Association	ENA	Trade association for gas and electricity transmission and distribution licence holders, including the ESO.
Enhanced Frequency Control Capability project	EFCC	Completed on 30th April 2019, National Grid Electricity System Operator (NGESO) teamed up with industry and academia in this project to find new ways to stabilise the Great Britain's (GB) electricity transmission system as the nation's energy becomes greener.
Enterprise Resource Planning	ERP	The ability to deliver an integrated suite of business applications. ERP tools share a common process and data model, covering broad and deep operational end-to-end processes.
Equity beta		Represents the level of systematic risk within an organisation for which investors expect a return under the Capital Asset Pricing Model.
ESO Board		Set up in advance of the ESO beginning to operate as a legally separate business (within the National Grid Group) from 1 April 2019, this new Board has a crucial role in overseeing the ESO as it evolves and engages in the transformation of the energy market.
ESO RIIO-2 Stakeholder Group	ERSG	An independently chaired group set up to scrutinise and challenge our business plan, making sure it reflects our stakeholders' priorities, as well as driving value for consumers. Its members are drawn

Term	Acronym	Description
		from a cross-section of customers, service providers and public interest groups.
European Network Code	ENC	The Third Energy Package of European legislation created a requirement for European network codes (ENC), covering grid connections, markets, and system operation. The codes are designed to provide a sustainable, secure and competitive electricity market across Europe.
European Network for Transmission System Operators	ENTSO-E	Organisation representing 43 electricity transmission system operators from 36 European companies.
Ex-ante		Notional or expected (literally “before the event”).
Ex-post		Actual or delivered (literally “after the event”).
Fast money		The amount of totex spend that is not added to the regulatory asset value (RAV) and is received in full during the year.
Federal Energy Regulatory Commission Form 1	FERC Form 1	This is a comprehensive financial and operating report submitted for electric rate regulation and financial audits in the United States of America.
Financeability		Ability for something to be financed or receive financing.
Flexible generation		Types of generation that can respond quickly to requests to change their output.
<i>Forward Plan</i>		Published each financial year, our <i>Forward Plan</i> describes what the ESO is planning to do to deliver benefits for our customers and stakeholders. It includes a set of criteria for our performance to be measured against.
Full time equivalent	FTE	Full time equivalent staff in employment.
<i>Future Energy Scenarios</i>	<i>FES</i>	The <i>FES</i> is a range of credible pathways for the future of energy out to 2050. They form the starting point for our transmission network and investment planning and are used to identify future operability challenges and potential solutions.
Future Worlds consultation		A consultation on electricity networks’ plans to deliver a smarter, more flexible and more decentralised energy system, launched by Energy Networks Association’s Open Networks Project on August 2018.

Term	Acronym	Description
Gearing		A ratio measuring the extent to which a company is financed through borrowing. Ofgem defines this as the percentage of net debt relative to the regulatory asset value (RAV).
Gigavolt-ampere	GVA	One billion volt-ampere - the unit of apparent power.
Gigawatt	GW	A unit of power. 1 GW = 1,000,000,000 watts.
Gigawatt hour	GWh	A unit of power usage equal to 1 gigawatt of electricity used continuously for one hour.
Great Britain	GB	A geographical, social and economic grouping of countries that contains England, Scotland and Wales.
Grid Code		Specifies the technical requirements for connection to, and use of, the national electricity transmission system.
Grid Supply Point	GSP	A point at which a transmission system is connected to a distribution system.
Human factors		How humans react physically and psychologically in relation to specific environments and situations.
Incentive scheme		An evaluative framework providing financial rewards or penalties based on the ESO's performance.
(System) inertia		The quality of kinetic energy stored in the rotating parts of the machines that are coupled to the power system. This relatively small store of usable energy inherently helps to regulate the balance between generation and demand.
Indexation		The adjustment of an economic variable so that the variable rises or falls in accordance with the rate of inflation.
Inflexible generation		Types of generation that require long notice periods to change their output or have obligations that influence when they can generate.
Integrated Energy Management System	iEMS	The core control system which enables the real-time operation and monitoring of the transmission system. It is categorised as Critical National Infrastructure.
Intermittent generation		Types of generation that can only produce electricity when their primary energy source is available. For example, wind turbines can only generate when the wind is blowing.

Term	Acronym	Description
Intertrip		Automatic control arrangements where generation may be reduced or disconnected following a system fault.
Key performance indicator	KPI	A measure of performance.
Loss of load expectation	LOLE	Used to describe electricity security of supply. It is an approach based on probability and is measured in hours per year. It measures the risk, across the whole winter, of demand exceeding supply under normal operation. This does not mean there will be loss of supply for 3 hours per year. It gives an indication of the amount of time, across the whole winter, which the ESO will need to call on balancing tools such as voltage reduction, maximum generation or emergency assistance from interconnectors. In most cases, loss of load would be managed without significant impact on end consumers.
Machine learning		An application of artificial intelligence that enables software solutions to automatically learn and improve.
Market platform		The Market Platform will provide a portal to participate in all our ESO balancing service markets, the Capacity Market and the Contracts for Difference (CfD) auctions. It will allow market participants to perform a range of tasks online including registration, contracting, participation in procurement events, access performance reporting and portfolio management.
Megavolt ampere reactive	MVAr	One million volt-ampere reactive, the unit of reactive power.
Megawatt	MW	A unit of power. 1 MW = 1,000,000 watts.
Megawatt hour	MWh	A unit of power usage equal to 1 megawatt of electricity used continuously for one hour.
Monthly Balancing Services Summary	MBSS	Monthly report that shows the cost associated with balancing the electricity system.
National Electricity Transmission System	NETS	The network and assets infrastructure that supports the electricity transmission system in England and Wales. This consists of approximately 7,200 kilometres (4,474 miles) of overhead line, 1,500 kilometres (932 miles) of underground cable and 342 substations.

Term	Acronym	Description
National Grid Electricity Transmission	NGET	Owns the electricity transmission network in England and Wales, helping to connect large or small energy projects.
National Infrastructure Commission	NIC	The NIC provides the government with impartial, expert advice on major long-term infrastructure challenges. National Infrastructure Commission works with HM Treasury.
Net present value	NPV	A method for calculating the value of a project or investment that accounts for the time value of money.
Net zero		An economy where any greenhouse gases emitted are offset by the removal of an equivalent amount. It is usually used in the context of the UK's target to be net zero by 2050, as per the 2008 Climate Change Act (as amended in 2019).
Networks		The physical infrastructure owned by the TOs and DNOs which connects electricity generators to end consumers, including substations, transformers, transmission and distribution power lines.
Network Access Policy	NAP	A process designed to facilitate efficient performance and effective liaison between the ESO and each of the TOs in relation to the planning, management and operation of the National Electricity Transmission System for the benefit of consumers.
<i>Network Development Roadmap</i>		Published in 2018, this report confirms the direction of travel for the Electricity System Operator's network planning activities over the next three years.
Network Innovation Allowance	NIA	This provides an annual allowance to fund innovation projects that create value for our customers.
Network Innovation Competition	NIC	An annual competition that funds flagship innovative projects to deliver financial and environmental benefits for gas customers.
<i>Network Options Assessment</i>	NOA	An ESO-run process that makes recommendations to TOs as to which projects are projected to proceed with to meet future network requirements as defined in the ETYS.
New Electricity Trading Agreement	NETA	The arrangements for buying and selling electricity in the GB wholesale market.

Term	Acronym	Description
Non-Synchronous Generators (also called non-synchronous generation technology)	NSG	Non-synchronous generators either produce DC power (like solar PV cells, wind turbines and HDVC convertors) or their output voltage waveform phase and frequency is different from the grid frequency, therefore DC converters are needed to connect these generators to the grid.
Office of Gas and Electricity Markets	Ofgem	The UK's independent National Regulatory Authority, a non-ministerial government department. Their principal objective is to protect the interests of existing and future electricity and gas consumers.
Off Shore Transmission Owner	OFTO	A transmission owner who assumes responsibility for offshore transmission assets.
Open data		Refers to the adoption of the principle that we will consider all of the data that we hold shareable, as long as it is not subject to consumer privacy, security, commercial sensitivity or negative consumer impact restrictions.
<i>Operability Strategy Report</i>		A twice-yearly ESO publication that seeks to highlight the challenges we face in maintaining an operable electricity system.
Opex		Operational expenditure which is an ongoing cost for running a product, business, or system.
<i>Our RIIO-2 Ambition</i>		Released in April 2019, this document sets out the mission for the legally separated Electricity System Operator which informs the basis of the RIIO-2 business plan.
Paris Agreement		An agreement within the United Nations Framework Convention on Climate Change, dealing with greenhouse-gas-emissions mitigation, adaptation, and finance, signed in 2016.
Pathfinder projects		Pilot projects to develop the regional options assessment process for voltage requirements focusing only on high voltage system issues.
Peer-to-peer trading		Where individuals can buy and sell energy with each other.
Photovoltaic generation	PV	Generation of electricity using solar cells.
Platform for ancillary services	PAS	A web-based platform used by the ESO to dispatch ancillary services.

Term	Acronym	Description
Power Responsive		A stakeholder led programme, facilitated by the ESO, to stimulate increased participation in different forms of flexible technology, such as demand side response and storage.
Project SIM		An innovation project led by National Grid and Reactive Technologies which measured grid stability and system inertia around the clock in real time in order to help stabilise the electricity network.
Rate of Change of Frequency	RoCoF	The measure of how quickly frequency changes over time.
Reactive demand		This represents the local need for reactive power used to facilitate the economic transfer of active power across the network by ensuring local voltage levels remain within the normal operating ranges. The voltage depends on the localised balance of reactive power supply and demand. Reactive power generation increases voltage, while reactive power absorption decreases it.
Reactive power		Reactive power describes the background energy movement in an alternating current (AC) system arising from the production of electric and magnetic fields. Devices that store energy through a magnetic field produced by a flow of current are said to absorb reactive power; those that store energy through electric fields are said to generate reactive power. The flows of reactive power on the system will affect voltage levels. We must manage voltage levels on a local level by procuring services to inject or absorb reactive power as necessary.
Real price effects		Expected changes in input prices, e.g. wages, relative to CPIH
RecorDER project		Funded by the Network Innovation Allowance, this project is a collaboration between National Grid, UK Power Networks, SP Energy Networks and Electron, to develop and demonstrate an asset register for Energy Resources. The project seeks to define, assess and pilot a blockchain-based asset register, enabling parties to use and reference a shared data set of generation and flexibility resources.
Regional Development Programmes	RDPs	A programme set up to provide detailed analysis of areas of the network with large amounts of distributed generation and known network issues in accommodating this. RDPs adopt a whole system

Term	Acronym	Description
		approach to push the boundaries of current thinking and optimise operations and investment across distribution and transmission networks.
Regulatory asset value	RAV	The value ascribed by Ofgem to the capital employed in the licensee's regulated business (the 'regulated asset base'). The RAV is calculated by summing an estimate of the initial market value of each licensee's regulated asset base at privatisation and all subsequent allowed additions to it at historical cost, and deducting annual depreciation amounts calculated in accordance with established regulatory methods. These vary between classes of licensee. A deduction is also made in certain cases to reflect the value realised from the disposal of assets comprised in the regulatory asset base. The RAV is indexed to RPI in order to allow for the effects of inflation on the licensee's capital stock.
Renewable generation		Renewable generation creates electricity from natural resources that are quickly replaced. For example: wind, solar or biomass generation.
Replacement Reserve	RR	Replacement Reserve is a harmonised service across participating European TSOs for the provision of both an increase and decrease of active power.
Residual balancer		An entity with overall responsibility for ensuring that electricity supply and demand match on a second-by-second basis. The ESO is the residual balancer for the GB electricity system.
Retail Price Index	RPI	A measure of inflation published monthly by the Office for National Statistics. It measures the change in the cost of a representative sample of retail goods and services. The Office for National Statistics no longer classifies it as a 'national statistic', emphasising the CPI instead.
Revenue = incentives + innovation + outputs.	RIIO	Ofgem's regulatory framework that sets price controls to determine the amount network companies can earn from the services they provide.
	RIIO-2	The next regulatory price control period, which starts in April 2021.
	RIIO-ED2	Price control for Electricity Distribution Network Owners, scheduled to commence in April 2023.

Term	Acronym	Description
	RIIO-1	The current regulatory price control period, which runs from 2013 to 2021.
Risk-free rate		The rate of return that an investor would expect to earn on a "riskless" asset. Typically, government-issued securities are considered the best available indicator of the risk-free rate due to the extremely low likelihood of the government defaulting on its obligations.
S&P 500		A stock market index that measures the stock performance of 500 large companies listed on stock exchanges in the United States. It is one of the most commonly followed equity indices, and many consider it to be one of the best representations of the U.S. stock market.
Sandbox		The ability to rapidly trial new products with a pre-agreed market subset, ahead of full integration.
Security and Quality of Supply Standard	SQSS	A set of standards used in the planning and operation of GB's national electricity transmission system, including both onshore and offshore.
Shadow control room		A physical space that mirrors the Control Centre environment. It allows us to test current and future processes with our new balancing and control capability in a 'real-life' environment with live data feeds.
Situational awareness		The ability to monitor and understand the status of the network and evolving operational limits.
Slow money		The amount of totex spend that is added to the Regulatory asset value (RAV) and is subsequently recovered by means of RAV depreciation over the regulatory asset life. RAV depreciation commences the year after the spend is added to the RAV.
Sterling over night index average	SONIA	This is based on actual transactions and reflects the average of the interest rates that banks pay to borrow sterling overnight from other financial institutions. SONIA is replacing LIBOR as the primary interest benchmark rate in sterling markets.
Stakeholder		All people, groups or organisations that either have an influence over our licence to operate or have an interest or concern in our activities.
Status quo		The state of play as is, also referred to as business as usual.

Term	Acronym	Description
Steady Progression	SP	One of the scenarios from <i>FES</i> , where both the level of decentralisation and speed of decarbonisation is low. In this scenario, the 2050 carbon target is not met.
Stranded assets		Capital investments that have unexpectedly become non-performing or obsolete but must be recorded on balance sheets as loss of profit.
Strategic Wider Works	SWW	An Ofgem mechanism to assess large transmission projects that are needed to extend and strengthen the transmission network.
Science, Technology, Engineering and Mathematics.	STEM	Usually used in reference to these as academic disciplines or relation to skills.
Supplier of Last Resort	SOLR	A company selected by Ofgem to take on the customers of a failed energy provider, under as close as possible the same terms as the failed provider. The new company is vetted by Ofgem and appointed as soon as possible to ensure customers do not experience any break in supply or charging.
Synchronous Generators		Synchronous generators produce voltage waveform that is synchronised with the rotor synchronous speed and that has the same frequency as the system they are connected to (50Hz in GB). These generators are usually directly connected to the AC power system without the use of converters.
(Electricity) system		All the suppliers, services and infrastructure which are coordinated to maintain the safe and reliable supply of electricity to consumers by balancing electricity generation with demand. This includes generators, balancing services providers, interconnectors, transmission and distribution networks and the operators (DNOs, TOs and OFTOs).
System operability		The ability to maintain system stability and all the asset ratings and operational parameters within pre-defined limits safely, economically and sustainably.
System Operator	SO	An entity entrusted with transporting energy in the form of natural gas or electricity on a regional or national level, using fixed infrastructure. The SO may not necessarily own the assets concerned. For example, National Grid ESO operates the electricity transmission system in Scotland, which is owned by

Term	Acronym	Description
		Scottish Hydro Electricity Transmission and Scottish Power.
System Operator Transmission Owner Code	STC	A code that defines the relationship between the transmission system owners and the ESO.
	T-1	Capacity Market auction held one year ahead of delivery.
	T-4	Capacity Market auction held four years ahead of delivery.
Technology Readiness Level	TRL	This is a scale for measuring the maturity of technology, from basic research through test, launch and operations. It indicates where a system is on development lifecycle and its readiness for operational use.
(Project) Trans European Replacement Reserve Exchange	TERRE	A European project to implement a new Replacement Reserve product.
Thermal needs		Where the amount of power that would flow exceeds the design rating (or capacity) of any network components for example, overhead lines, cable circuits, transformers and circuit breakers.
Total expenditure	Totex	Total cost of expenditure relating to licensees regulated activities.
Total market return		An estimate of the return investors expect for taking the market-average level of risk.
Transformational activities		These are activities that go beyond business-as-usual.
Transmission Network Use of System Charges	TNUoS	Charges made to recover the cost of installing and maintaining the electricity transmission network. TNUoS is collected by the ESO on behalf of transmission owners.
Transmission Outage and Generator Availability	TOGA	National Grid's system for receiving submissions of generator availability and outage dates. The system also provides reports of transmission outages.
Transmission Owner	TO	A collective term used to describe the three transmission asset owners within Great Britain, namely National Grid Electricity Transmission, Scottish Hydro Electric Transmission Limited and Scottish Power Transmission Limited.

Term	Acronym	Description
Two Degrees	TW	Two Degrees scenario from <i>FES</i> , where the speed of decarbonisation is high but the level of decentralisation is low. In this scenario, the 2050 carbon target is met.
UK Climate Change Act		Launched in 2018, this act outlines the Government targets to reduce carbon emissions by the year 2050.
Unified cost allocation model	UCAM	The UCAM is a process used to govern the allocation of shared costs to different business areas. The principles of the UCAM process are a simple, consistent and transparent method to allocate costs by maximising direct attribution of costs where possible and then using agreed drivers for costs not directly attributable (for example, headcount of the relevant companies). More details can be found in Annex 8 – Shared services.
United Kingdom of Great Britain and Northern Ireland	UK	A geographical, social and economic grouping of countries that contains England, Scotland, Wales and Northern Ireland.
Value of Lost Load	VoLL	This is a monetary indicator expressing the costs associated with an interruption of electricity supply.
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. As part of the price control process, Ofgem sets an allowance for the expected WACC and applies it to the regulatory asset value (RAV).
Wider Access	WA	A project to remove barriers to entry for independent aggregators wanting to participate in the Balancing Mechanism and TERRE.
Working capital facility	WCF	A pre-approved loan to finance the short-term finance needs of the business.
Zero carbon		Achieving net zero carbon dioxide emissions by balancing carbon emissions with carbon removal or simply eliminating carbon emissions altogether. In the context of zero carbon operation, it refers to the electricity system operating without any carbon-based generation.

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