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ESO Business Plan 2 Glossary



Glossary

This glossary supports the ESO RIIO-2 Business Plan 2 and defines some of the terminology, references and acronyms used throughout the documents.

| Term | Acronym | Description |
|--|---------|--|
| Application Programming Interfaces | API | This enables software to interact with other software either within or between companies. |
| Artificial Intelligence | Al | |
| Balancing Mechanism | ВМ | 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 dispatch (or instruct) parties to decrease or increase their generation or consumption. |
| Balancing services | | Services procured by a System Operator to balance demand and supply, and to ensure the security and quality of electricity supply across the transmission system. These services include reserve, response, frequency control and voltage control. Each service has different parameters that a provider must meet. |
| Balancing Services Use of System charges | 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. |
| 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. This term is no longer used by the industry – see Distributed Restart. |
| Bridging the Gap | | This work takes some of the key messages from FES each year and focuses not just on what could happen, but what needs to happen in the energy industry to reach net zero. In March 2022 we published our third Bridging the Gap report aiming to join the dots between our activities and present a whole system view of the actions needed to get us to net zero. |
| Boundaries | | Boundaries represent how the transmission network is divided to highlight potential power flow issues across key geographic areas. |
| Business as usual | BAU | The ongoing and unchanging state of operation and activity despite any difficulties or challenges. |
| Business Plan 1 | BP1 | Our first detailed Business Plan covering the RIIO-2 price control framework. Published in 2019 and covering the period from April 2021 to end of March 2023. Delivery of BP1 is now underway. |
| Business Plan 2 | BP2 | Our second Business Plan covering the RIIO-2 price control period. We have updated our plans to set out the detail of what we will deliver between 1 April 2023 to 31 March 2025. |





| 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. |
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| Capital Expenditure | Capex | Capital expenditure is funds used by a company to acquire, create, maintain, and upgrade assets such as information technology systems, property, or equipment. |
| Carbon Capture, Use and Storage | CCUS | A process by which the carbon dioxide (CO²) produced in the combustion of fossil fuels is captured, transported to a storage location, and isolated from the atmosphere. |
| Cloud (public and private) | | The public cloud is defined as computing services offered by third- party providers over the public internet. Customers typically pay for use of the processing, storage, or bandwidth they consume. Example public clouds include Microsoft Azure, AWS, and Google. 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. |
| Competition Markets Authority | СМА | A non-ministerial government department in the United Kingdom, responsible for strengthening business competition and preventing and reducing anti-competitive activities. |
| Competitive 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. |
| Connections portal | | An IT platform that serves as the single interface between the ESO and transmission connected parties. |
| Consumer | | The end-user of the system we operate and services we provide, including domestic households, with whom we have no direct relationships. |
| Contracts for Difference | CfD | The CfD scheme is the main mechanism for supporting low-carbon electricity generation. CfDs incentivise investment in renewable energy by providing project developers with high costs and long lifetimes with direct protection from volatile wholesale prices, and they protect consumers from paying increased support costs when energy prices are high. |
| 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 revenues of the ESO 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. |
| COP26 | COP26 | 26 th Conference of Parties or the 2021 United Nations climate change conference. It took place in Glasgow, Scotland in November 2021. |



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| Cost-benefit analysis | СВА | This is an options appraisal process. The cost of a proposed process or action is calculated, then subtracted from the benefits associated with taking that action, to derive a net present value. |
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| 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. |
| Crowdflex | | Crowdflex, is an innovation project undertaken by National Grid ESO, Scottish and Southern Electricity Networks Distribution, Octopus Energy and Ohme. The project investigated how 25,000 households responded to price signals by reducing or increasing electricity demand. The study found that active households could significantly reduce peak electricity demands by using time-of use tarrifs. |
| Customer | | Organisations or individuals who pay us for the products and services we provide. |
| Customer Relationship Management | CRM | The combination of practices, strategies and technologies that a company uses to manage and analyse customer interactions and data throughout the customer lifecycle. The aim is to improve customer service relationships and improve experiences. CRM systems compile customer data across different channels, or points of contact, between the customer and the company, which could include the websites, telephone calls, post, and social media networks. |
| Data centre | | A location used to house computer systems, digital data storage, and associated components. |
| Data and Analytics Platform | DAP | The Data and Analytics Platform (DAP) will provide a single source of trusted data, discoverable by, and accessible to both internal and external stakeholders, and a self-serve platform for data product development. |
| 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 (now known as the Technology Advisory Council) | | 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 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. It will also provide transparency of the decision-making logic behind our systems. This is now known as the Technology Advisory Council. |
| Digital Twin | | A digital twin uses software to replicate physical assets, processes, people, places, systems or devices for simulation, modelling and forecasting. |
| Digital Engagement Platform | DEP | The Digital Engagement Platform (DEP) will provide external stakeholders with a single point of access into the ESO data, content, and external-facing processes. |





| Digitisation | | Process of converting information from a physical format into a digital one. |
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| 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. |
| Distributed generation | DG | Any generation that is connected directly to the local distribution network, as opposed to the high voltage transmission network. |
| Distributed Restart | | 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 the unlikely event of a power cut. |
| 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 | Own and operate networks for the distribution of electricity. |
| Distribution System Operator | DSO | A DSO is the entity which monitors, controls, and actively manages the electricity flow on a lower voltage distribution network to maintain a safe, secure and reliable electricity supply. |
| Disallowance of Demonstrably Inefficient and wasteful expenditure Cap | DIWE | The ESO Final Determination included a limited amount of Demonstrably Inefficient and Wasteful Expenditure (DIWE) capped at 2.5% of RAV per annum. |
| Dynamic Containment | DC | Dynamic Containment is a new service designed to operate post-fault, meaning, for deployment after a significant frequency deviation in order to meet our most immediate need for faster-acting frequency response. This helps us keep the system safe, secure and reliable. |
| Dynamic Moderation | DM | Dynamic Moderation (DM) is part of our suite of fast acting frequency response services to help keep frequency within operational limits. Providers of DM will help manage sudden large imbalances between demand and generation for example due to an erroneous wind forecast by responding quickly when frequency moves towards the edge of the operational range. |
| Dynamic Regulation | DR | Dynamic Regulation (DR) is part of our suite of fast acting frequency response services to help keep frequency within operational limits. DR is a pre-fault service designed to slowly correct continuous but small deviations in frequency. The aim is to continually regulate frequency around the target of 50Hz. |
| Early Competition | EC | Early competition refers to competition that occurs prior to the detailed design, surveying and consenting phases of solution development. This means organisations could compete for the design, build and ownership of onshore transmission solutions. Early competition will help encourage new ways of working and aims to seek the best solutions at a fair cost for consumers. |
| Early Competition Plan | ECP | Our Early Competition Plan describes an end-to-end process of how early competition may work, proposing how models for early |





| | | competition could be implemented and outlines the roles and responsibilities of all parties in the end-to-end process. |
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| 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 Market Reform | EMR | 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 National Control Centre | ENCC | The ENCC is responsible for the real-time operation of the GB power system. This is where we take actions to operate the network, balance demand and supply, and run the GB system safely, securely and economically. |
| Electricity system | | This includes all the services, suppliers, and infrastructure necessary to regulate the balance between electricity generation and demand in real time. |
| Electricity System Operator | ESO | An entity entrusted with transporting electric energy on a regional or national level, using fixed infrastructure. The ESO may not 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. |
| Electricity System Restoration Standard | ESRS | Successful net zero necessitates changes to our Electricity System Restoration preparation arrangements. Investments in services, new technologies, frameworks, operational tools and methods will be required to accommodate the transition efficiently. BEIS have stated the need for a new standard to strengthen restoration provisions. |
| Electricity Ten Year Statement | ETYS | The Electricity Ten Year Statement (ETYS) is our view of future transmission requirements and the capability of Great Britain's National Electricity Transmission System (NETS) over the next 10 years. |
| Electricity Transmission Network Planning Review | ETNPR | Ofgem's ETNPR has been driven by the need to ensure that the transmission network, which is key in delivering decarbonisation, will be able to cope with the increase in renewable electricity generation and the changes in power consumption, expected to result from electrification of transport and heat. The key proposal is to introduce a new Centralised Strategic Network Planning model to be delivered by an independent expert body, a central network planner, proposed to be the Future System Operator. |
| Enduring Auction Capability | EAC / EAP | Our future solution for enduring auctions. Also Enduring Auction Platform. |
| Energy Codes Review | ECR | 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 Networks Association | ENA | The industry body representing energy network operators across the UK and Ireland. |
| ESO RIIO-2 Stakeholder Group | ERSG | An independently chaired group set up to scrutinise and challenge our business plans, making sure they reflect our stakeholders' priorities, as well as driving value for consumers. Members are drawn from a |





| | | cross-section of customers, service providers and public interest groups. |
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| European Network Codes | 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 of Transmission System Operators for Electricity | ENTSO-E | The association for the cooperation of the European SOs. The 39 member SOs represent 35 countries, responsible for the secure and coordinated operation of Europe's electricity system, the largest interconnected electrical grid in the world. |
| Flexible generation | | Types of generation that can respond quickly to requests to change their output. |
| Frequency Risk and Control Report | FRCR | The Frequency Risk and Control Report includes an assessment of the magnitude, duration and likelihood of transient frequency deviations, forecast impact and the cost of securing the system and confirms which risks will or will not be secured operationally. |
| Full time equivalent | FTE | The equivalent number of full-time staff in employment, often in a given team or department. Generally lower than the headcount given employees may be part-time. |
| Future Energy Scenarios | FES | The FES 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 System Operator | FSO | The FSO will be a public body to oversee the energy system, to ensure security of supply and support the transition to net zero in Great Britain by enhancing long-term holistic planning. As announced in April 2022 this organisation will build on the existing skills and expertise of the ESO with additional roles and responsibilities. It will be key to unlocking additional value for consumers and driving towards to net zero. |
| High Voltage Direct Current | HVDC | A high-voltage, direct current electric power transmission system uses direct current for the transmission of electrical power, in contrast with more common alternating current systems. HVDC is an effective way to transmit the vast amount of electrical power using DC (Direct Current) over long distance by overhead transmission lines, underground cables or submarine cables. |
| Gigawatt | GW | A unit of power. 1 GW = 1,000,000,000 watts. |
| 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. |
| Holistic Network Design | HND | In developing the HND, we are bringing together onshore and offshore network planning. Seeing the transmission system as a whole allows us to develop an optimum engineering solution for the transmission infrastructure that connects the offshore wind projects to the network. Objectives are: cost-efficiency, deliverability, and |





| | | minimising the impact new coordinated infrastructure has on communities and the environment. |
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| Incentive scheme | | An evaluative framework providing financial rewards or penalties based on the ESO's progress against a range of measures covering value for money, plan delivery, plan benefits, stakeholder evidence and metric performance. |
| 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. |
| Intertrip | | Automatic control arrangements where generation may be reduced or disconnected following a system fault. |
| Machine learning | | An application of artificial intelligence that enables software solutions to automatically learn and improve. |
| Markets advisory council | MAC | The new markets advisory council will set the strategic direction for the reform of Great Britain's markets to deliver net zero. |
| 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 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. |
| 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 <i>hour</i> . |
| 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. |
| 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 | The difference between the present value of cash inflows and the present value of cash outflows over a given period. NPV is used in budgeting and investment planning to analyse profitability. |
| Net Zero Market Reform | NZMR | Our Net Zero Market Reform project was established in early 2021 to examine holistically the changes to current GB electricity market design that will be required to achieve net zero. |
| Network Access Policy | NAP | National Grid Electricity Transmission's Network Access Policy is written to facilitate collaboration between the National Grid Electricity System Operator and National Grid Electricity Transmission Ltd. |
| Network Planning Review | NPR | The Network Planning Review (NPR) has been established by the ESO to ensure that network design and investment processes in Great Britain are fit for the future. |
| Network Control Management System | NCMS | Our NCMS solution will provide monitoring and dynamic control of medium and high voltage networks. Working together with other |





| Photovoltaic generation | PV | Generation of electricity using solar cells. |
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| Pathfinder projects | D) (| Pilot projects to develop the regional options assessment process for voltage requirements focusing only on high voltage system issues. |
| Panel of Technical Experts | PTE | The PTE is an advisory group of independent consultants who were appointed by government to perform a specific and technical function as part of the first Electricity Market Reform delivery plan process. |
| Operating expenditure | Opex | Operational expenditure which is an ongoing cost for running a product, business, or system. |
| 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. |
| Offshore Coordination | | A project set up by ESO with support from BEIS and Ofgem to help ensure that the offshore and onshore transmission network enables the growth of offshore wind in a way that is efficient for consumers and takes account of the impacts on communities and the environment. This project contributes to the OTNR. |
| Offshore Transmission Network Review | OTNR | The OTNR looks into the way that the offshore transmission network is designed and delivered, consistent with the ambition to deliver net zero emissions by 2050. |
| 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. |
| 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. |
| Net zero | | Net zero means that any carbon emissions created are balanced by taking the same amount out of the atmosphere. So we'll reach net zero when the amount of carbon emissions we add is no more than the amount taken away. |
| 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 Options Assessment | NOA | A process for assessing other options for reinforcing the national electricity transmission system. |
| Network Innovation Competition | NIC | An annual competition that funds flagship innovative projects to deliver financial and environmental benefits for gas customers. |
| Network Innovation Allowance | NIA | This provides an annual allowance to fund innovation projects that create value for our customers. |
| | | systems this will provide us with real-time on-line data, network information and modelling to help improve overall operational efficiency of the network and rapidly locate and resolve faults. |





| Power Responsive | | A stakeholder led programme, facilitated by National Grid, to stimulate increased participation in different forms of flexible technology, such as demand side response and storage. |
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| Rate of Change of Frequency | RoCoF | The measure of how quickly frequency changes over time. When there's a sudden change in system frequency, large heavy turbines carry on spinning – even if the generator itself has lost power – and will slow down that change (the rate of change of frequency) while our control room can restore balance. |
| Regional Development Programme | RDP | A project or study that looks at the electricity network across Great Britain. They identify areas of development between transmission and distribution networks in areas with large amounts of distributed energy resources. RDPs are designed to unlock additional network capacity, reduce constraints, and open new revenue streams for market participants |
| Regulatory asset value | RAV | The value ascribed by Ofgem to the capital employed in the licensee's regulated distribution or (as the case may be) transmission 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 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 to allow for the effects of inflation on the licensee's capital. |
| Renewable generation | | Renewable generation creates electricity from natural resources that are quickly replaced. For example: wind, solar or biomass generation. |
| Residual balancer | | An entity with overall responsibility for ensuring that electricity supply and demand match on a second-by-second basis. |
| Revenue = incentives + innovation + outputs. | RIIO | Ofgem's regulatory framework that sets price controls to determine the amount energy network companies can earn from the services they provide. |
| | RIIO-1 | The prior regulatory price control period, which ran from 2013 to 2021. |
| | RIIO-2 | The current regulatory price control period, RIIO-2 is the second set of price controls implemented under Ofgem's RIIO model. It's an investment programme to transform the energy networks and the electricity system operator to deliver emissions-free green energy in Great Britain, along with world-class service and reliability. Ofgem set the price controls under this framework. Timing details are below. |
| | RIIO-ED2 | Price control for Electricity Distribution Network Owners, scheduled to start in April 2023. |
| | RIIO-T2 | RIIO-T2 is the price control for the high voltage electricity transmission networks and high pressure gas transmission networks which transmit energy across Britain from where it is generated. The price control runs for five years, from 2021-2026. |
| Sandbox | | The ability to rapidly trial new products. One of the lessons of the firm frequency response auction trial is that integration with our core systems needs be poke development and takes a long time. This option would provide a scalable means of integrating with the core |





| | | systems to make trialling of new products quicker and cheaper. For example, by providing a 'trial mode' in the markets portal. |
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| 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. |
| Single Markets Platform | SMP | The SMP is being designed to help us become a better buyer of ancillary services by transforming the user experience. The aim is to provide frictionless access to ESO markets starting with the new and enduring day ahead Frequency Response markets. |
| Situational awareness | | The ability to monitor and understand the status of the network and evolving operational limits. |
| Short Term Operating Reserve | STOR | At certain times of the day we may need access to sources of extra power to help manage actual demand on the system being greater than forecast or unforeseen generation unavailability. |
| | | Where it is economic to do so, we will procure sources of extra power ahead of time through the STOR service. Providers of the service help to meet the reserve requirement either by providing additional generation or demand reduction. |
| 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. |
| Subject Matter Experts | SMEs | Professionals who are an expert in their field. |
| Synchronous Generators | | Synchronous generators produce a 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 | | This includes all the services, suppliers, and infrastructure necessary to regulate the balance between electricity generation and demand in real time. |
| System inertia | | Many generators producing electricity for the grid have spinning parts – they rotate at the right frequency to help balance supply and demand and can spin faster or slower if needed. |
| | | The kinetic energy 'stored' in these spinning parts is our system inertia. If there's a sudden change in system frequency, these parts will carry on spinning – even if the generator itself has lost power – and slow down that change (what we call the rate of change of frequency) while our control room restores balance. Renewables like wind and solar don't synchronise with the grid in a way that provides inertia, so as the older coal and gas plants come off the system we need to find new ways to provide stability. |
| System operability | | The ability to maintain system stability and all the asset ratings and operational parameters safely, economically and sustainably. System operation remains within pre-defined statutory limits in this scenario. |
| System Operability Framework | SOF | The System Operability Framework (SOF) takes a holistic view of the changing energy landscape to assess the future operation of Britain's electricity networks. |





| | | The SOF combines insight from the Future Energy Scenarios with a programme of technical assessments to identify medium-term and long-term requirements for operability. |
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| EU 'System Operation Guideline' | SOGL | The generation mix in Europe is integrating more renewables, more interconnections and cross-border competition has been considered in the System Operation Guideline. It lays the ground for the next power system and makes regional coordination a legal obligation for grid system operators. |
| 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 Scottish Hydro Electricity Transmission and Scottish Power. |
| System Operator Transmission Owner Code | STC | The STC defines the relationship between the transmission owners and the SO. As code administrator for the STC, we maintain the code and oversee any proposed changes to it. Changes must be reviewed by the STC modification Panel and approved by the Panel or Ofgem. |
| Technology Advisory Council | TAC | The TAC is an engagement route for some RIIO-2 deliverables allowing ESO to gather stakeholder input regarding the design, development and testing of IT solutions. |
| 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. |
| Trade and Cooperation Agreement | TCA | The TCA was signed on 30 December 2020, applied provisionally as of 1 January 2021 and entered into force on 1 May 2021. The EU-UK TCA sets out preferential arrangements in areas such as trade in goods and in services, digital trade, intellectual property, public procurement, aviation and road transport, energy, social security, law enforcement and cooperation. It is underpinned by provisions ensuring a level playing field and respect for fundamental rights. |
| Transformational activities | | These are activities that go beyond business-as-usual, delivering significant change. |
| Transmission Network Use of System Charges | TNUoS | Charges made by the System Operator for the use of the National Electricity Transmission System designed to cover the cost of installing and maintaining transmission system infrastructure. |
| Transmission Owner | ТО | A collective term used to describe the three transmission asset owners within Great Britain, namely National Grid Electricity Transmission, Scottish Hydro Electric Transmission and Scottish Power Transmission. |
| 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. |
| Vehicle to Grid | V2G | Vehicle to grid (V2G) technology allows electric vehicle (EV) batteries to store energy and discharge it back to the electricity network when it's most needed – for instance at peak times of the day when usage across the UK is at its highest. |



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Virtual Energy System **VirtualES** The VES is a new programme initiated for energy industry stakeholders to create an ecosystem of connected digital twins. The ESO Ways of Working initiative will implement new processes Ways of Working WoW and policies in IT and create Technology and Business Operations teams focused on output and the customer. This new approach will embrace an agile framework. Weighted average cost of 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 capital the cost to a company of raising the funds for its activities (specifically, its capex plan). As part of the price control process, Ofgem sets an allowance for the expected WACC that its regulated companies pay. (Connections) Wider This refers to extending network planning at distribution level to Works support DNOs to have effective processes. Working capital facility **WCF** A pre-approved loan to fund the short-term finance needs of the business. Zero carbon Zero carbon means that no carbon emissions are being produced from a product or service (for example, a wind farm generating electricity, or a battery deploying electricity). Energy sources like wind, nuclear and solar do not create carbon emissions when they are used to produce electricity – we refer to these sources as zero carbon.

