

ESO RIIO-2 Business Plan 2 Glossary

Annex 5

31 August 2022



BP2 Glossary

Glossary

This glossary supports the ESO RII0-2 Business Plan 2 and defines some of the terminology, references and acronyms used throughout the documents.

Term	Acronym	Description
Assistance for Areas with High Electricity Distribution Costs	AAHEDC	A scheme implemented as part of the Energy Act 2004 and designed to reduce the cost of electricity distribution in 'Specified Areas'.
Ancillary 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. Sometimes called Balancing services.
Ancillary services dispatch platform	ASDP	ESO web-based platform used to dispatch ancillary services.
Application Programming Interfaces	API	This enables software to interact with other software either within or between companies.
Artificial Intelligence	AI	Artificial Intelligence is the simulation of human intelligence processes by machines, especially computer systems.
Back office		The departments and capabilities that make up the administrative and support functions fundamental to the running of any organisation, such as finance, HR and IT.
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 dispatch (or instruct) parties to decrease or increase their generation or consumption.
Balancing Mechanism Unit / BM Unit	BMU	A unit which exports or imports electricity.
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. Sometimes called Ancillary services.
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	BtG	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.
Buy Order Methodologies		A process which outlines the calculation of our volume expectations for procurement of ancillary services.
Cap and floor		The cap and floor regime is the regulated route for electricity interconnector development in Great Britain (GB). It is a market-based approach which aims to incentivise developers to deliver interconnector capacity by limiting developers' exposure to electricity market price risk. Ofgem rolled out the regime to new electricity interconnectors in August 2014 to incentivise the timely delivery of more interconnectors.
Capacity adequacy		Ensuring appropriate resources in the generation mix to ensure we maintain security of supply.
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.
Capacity Market Advisory Group	CMAG	Enables the Capacity Market Rules change process to become more dynamic and adaptive to changing market conditions, while also increasing transparency and promoting collaboration between parties impacted by the Rules.
Capacity Market Unit	CMU	A CMU is a unit of electricity generation capacity or electricity demand reduction that can be put forward in a future Capacity Market auction. In this respect it is the product that forms the capacity to be purchased in the capacity market.
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 (CO ₂) produced in the combustion of fossil fuels is captured, transported to a storage location, and isolated from the atmosphere.

Centralised Strategic Network Plan	CSNP	Part of the Network Planning Review (A22.1 of BP2) the CSNP will encompass our existing strong network development processes such as the Network Options Assessment (NOA), as well as recently started processes such as the analysis we have been asked to do by Ofgem on Interconnector Cap and Floor Window 3.
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.
Common Grid Model	CGM	To allow operational coordination and to ensure security of supply on a European level, TSOs share information with Regional Coordination Centres (RCCs). Each TSO publishes its Individual Grid Model (IGM) which represents the best detailed forecast of its electricity grid. Afterwards, RCCs merge about 40 IGMs to create a Pan-European Common Grid Model (CGM) representing the European electricity network.
Common Information Model	CIM	An open standard that defines how managed elements in an IT environment are represented as a common set of objects and relationships between them.
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.
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.
Connections and Infrastructure Options Note	CIION	The document where the output of the CIION optioneering process is recorded. It provides a joint record of the rationale for the selection of the overall preferred connection option from the technical, commercial, regulatory, environmental, planning and deliverability aspects.
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.
Construction Planning Assumptions	CPA	Information held by the ESO relating to the National Electricity Transmission System, [and User System(s) (as appropriate)], including data submitted pursuant to or included within the Grid Code, CUSC Contracts and any other data held by us.

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. CfDs also protect consumers from paying increased costs when energy prices are high.
Control Centre Architecture and Systems		The suite of IT tools used by the Control Centre to monitor and balance the electricity network.
(Sub-synchronous) Control Interactions	SSCI	A stability problem caused by the interaction between the control system of doubly fed induction generator and a series-capacitor compensated electrical network.
Controllable revenues		Revenues that relate to reimbursement for the operating of our business. These revenues therefore exclude monies that are handled by us on an agency basis on behalf of Great Britain's electricity industry.
Coordination of Electricity System Operators	CORESO	Facilitates cooperation between nine electricity transmission system operators across Europe, covering the operation of the high-voltage electricity system for over 55% of the population of the European Union.
COP26	COP26	26 th Conference of Parties or the 2021 United Nations climate change conference. It took place in Glasgow, Scotland in November 2021.
Cost-benefit analysis	CBA	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.
Cost pass-through mechanism		As part of our regulatory agreements, we are entitled to recover certain costs directly from customers (pass-through costs). These amounts are included in the overall calculation of allowed revenue as stipulated by regulatory agreements.
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 us, 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 tariffs.
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 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 us 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.
DevOps		A compound of development (Dev) and operations (Ops), DevOps is the union of people, process, and technology to continually provide value to customers.
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 physical into digital.
Disallowance of Demonstrably Inefficient and Wasteful Expenditure	DIWE	Ofgem has indicated it will disallow any expenditure it deems to be Demonstrably Inefficient or Wasteful Expenditure ("DIWE"), within the scope of its published guidance.
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.
Dis-synergy		Dis-synergies are negative or adverse effects of a takeover or merger.
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 BP1 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.
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 Electricity Balancing System (EBS) was implemented to replace the existing Balancing Mechanism (BM) Systems. The Balancing suite of systems are those used to operate the Balancing Mechanism Market.
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, we operate the electricity transmission system in Scotland, which is owned by Scottish Hydro Electricity Transmission and Scottish Power Transmission.
Electricity System Restoration Standard	ESRS	Delivering net zero means 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 the restoration of electricity supplies.
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.
Electricity Network Access Management System	eNAMS	A tool created to effectively manage asset owners' electricity system outage requests and to give visibility of those outages to affected users.
Enduring Auction Capability	EAC / EAP	Our future solution for auctions. Also called Enduring Auction Platform.
Energy Codes Reform	ECR	A joint comprehensive reform of the energy codes, by BEIS and Ofgem, to help govern the energy system. The aim is to have a framework which is forward-looking, agile, easy to understand, and able to accommodate a growing number of market participants and increased complexity.
Energy Networks Association	ENA	The industry body representing energy network operators across the UK and Ireland.
Energy Supply Company Administration	ESCA	Energy Supply Company Administration is a special administration regime for large energy supply companies. It ensures uninterrupted and safe operation of essential services in the event of a large energy supply company becoming insolvent.
European Power Exchange	EPEX	The European Power Exchange EPEX SPOT SE and its affiliates operate physical short-term electricity markets in Central Western Europe and the United Kingdom. EPEX SPOT is committed to the creation of a pan-European power market.
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.
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.
Fault Ride Through	FRT	The capability of Power Generating Modules and HVDC Systems to be able to remain connected to the System and operate through periods of low voltage caused by secured faults.
Feature		A feature, in an agile framework, is a collection of related user stories that results in a service or function of the product that delivers business value and fulfils the customer's need.
Final Determinations	FDs	The outcome and conclusion of Ofgem's regulatory finance process that sets their decision on allowances for regulated energy companies.
Flexible Alternating Current Transmission System	FACTS	A system composed of static equipment used for the alternating current (AC) transmission of electrical energy.
Flexible generation		Types of generation that can respond quickly to requests to change their output.
<i>Frequency Risk and Control Report</i>	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.
<i>Future Energy Scenarios</i>	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.
Gas Market Plan	GMaP	To continue to deliver safe and reliable gas supplies at the best value for consumers as we transition to a net zero energy future, a process is needed to proactively and strategically consider how market frameworks may need to change across all potential energy futures.
Generation Export Management Systems	GEMS	A form of Active Network Management scheme.

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.
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.
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.
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.
Large Onshore Transmission Investment Re-opener	LOTI	The Large Onshore Transmission Investments re-opener (LOTI re-opener) provides electricity Transmission Owners (TOs) with a route to apply for funding for large investments in the network, for example that may be required during RIIO-2 to meet decarbonisation or system reliability needs.
Local Constraint Market	LCM	Constraint management is required where the electricity transmission system is unable to transmit power to the location of demand, due to congestion at one or more parts of the transmission network. LCMs are used to target constraint management accordingly.
Machine Learning	ML	An application of artificial intelligence that enables software solutions to automatically learn and improve.
Major Energy Users' Council	MEUC	A dedicated corporate membership organisation supporting major energy and water using companies in industry, commerce and the public sector; buying, managing, understanding and reducing energy, carbon and water.

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. We will be working closely with the MAC to test our ideas for the strategic direction of Net Zero Market Reform, in order to embed stakeholder perspectives and best practice, while ensuring transparency around our decision making.
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.
<i>Markets Roadmap</i>		The <i>Markets Roadmap</i> sets out our market design objectives, principles and transformational process to reform balancing service markets. It details our vision for response, reserve, thermal, reactive, stability and restoration markets as well as the Balancing Mechanism.
Medium Sized Investment Project	MSIP	As part of the RII0-2 price control, electricity transmission networks have the Medium Sized Investment Project (MSIP) re-opener for projects that meet certain conditions and cost less than £100m.
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> .
MHHS	MHHS	Market-wide Half-Hourly Settlement is designed as an enabler of the move to a smarter, more flexible energy system. MHHS will implement a new Targeting Operating Model for the electricity market where site-specific, half-hourly energy consumption is recorded for all metering points.
Minimum Viable Product	MVP	A version of a product with just enough features to be usable by early customers who can then provide feedback for future product development.
The Network and Information Systems Directive	NIS	The Network and Information Systems ('NIS') Directive transposed into UK law as The Network and Information Systems Regulations 2018 ('NIS Regulations'), and came into force on 10 May 2018. (This updated guidance supports Operators of Essential Services with their cyber security provisions under the regulations.)
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 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.
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	A process for assessing other options for reinforcing the national electricity transmission system.
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.
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.
Nodal Pricing		Nodal pricing (or locational marginal pricing) determines electricity prices by calculating the incremental cost of serving one additional MW of load at each location on the system, subject to system constraints. Each pricing location or 'node' represents a physical location on the transmission system such as a generator injection point, offtake point and transmission line intersection.
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 Energy Resilience and Emergency Management	OEREM	A proposal costed into our FSO plans which we believe could be a core element of the new organisation.
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.

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.
Offshore Coordination	OC	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.
Open Balancing Platform	OBP	The OBP is the platform upon which we will build our future balancing capabilities and deliver our commitments under A1.2.
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.
Operating expenditure	opex	Operational expenditure which is an ongoing cost for running a product, business, or system.
Operational Telecommunications	OpTel	OpTel is an operational telecommunications network. It is used to transfer grid telemetry data needed by network control, as well as to issue requests to generators.
Optional Downward Flexibility Management	ODFM	A service which allows the ESO to access downward flexibility that is not currently accessible in real time and expand our ability to control output from providers we cannot currently access through the Balancing Mechanism and the Platform for Ancillary Services.
Panel of Technical Experts	PTE	The BEIS 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.
Pathfinder projects		Pilot projects to develop the regional options assessment process for voltage requirements focusing only on high voltage system issues. Now referred to as Network Services Procurement
Photovoltaic generation	PV	Generation of electricity using solar cells.
POUYA		Software for running real-time simulations of power systems.
PowerFactory		A leading power system analysis software application for use in analysing generation, transmission, distribution and industrial systems.
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.
Queue Management	QM	Queue management is the process by which network companies manage contracted connections which have not yet connected in connection queues.
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.

Redispatching and countertrading		A methodology which describes how TSOs and regional coordination centres of capacity calculation regions manage network congestions at the day-ahead and intraday level.
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
Regulation on wholesale energy markets integrity and transparency	REMIT	Market participants are obliged to publish 'inside information' in respect of businesses or facilities they own or control (or are operationally responsible for) before they can trade on it. REMIT introduces, for the first time, a consistent EU-wide framework.
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.
Run the Business	RtB	Day-to-day work required to keep the business running.

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 bespoke 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.
Supervisor Control and Data Acquisition	SCADA	A control system architecture comprising computers, networked data communications and graphical user interfaces for high-level supervision of machines and processes.
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.
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.
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.
Siting Decisions		Decisions on where to place connections to the network.
Situational awareness		The ability to monitor and understand the status of the network and evolving operational limits.
Special Administration Regime	SAR	See Energy Supply Company Administration
Specialised Committee on Energy	SCE	The Specialised Committee on Energy is a joint forum between the UK and the EU. This Committee oversees the majority of the provisions agreed between the UK and EU in the energy title (Title VIII) of the Trade and Cooperation Agreement.
Software-as-a-Service	SaaS	A method of software delivery and licensing in which software is accessed online via a subscription, rather than bought and installed on individual computers.
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.
Strategic Innovation Fund	SIF	The purpose of Ofgem's Strategic Innovation Fund is to support network innovation that will contribute to achieving Net Zero rapidly and at lowest cost; deliver real net benefits to network companies, energy users and consumers
Strategic Wider Works	SWW	The purpose of the SWW arrangements is to assess large transmission projects during a price control that are needed to extend and strengthen the transmission network and transport electricity from where new generation is built to where demand is located.

Strategic Workforce Planning	SWP	Our approach to supply versus demand considerations of resources and capabilities within the company.
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		<p>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.</p> <p>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.</p>
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.
<i>System Operability Framework</i>	SOF	<p>The <i>System Operability Framework (SOF)</i> takes a holistic view of the changing energy landscape to assess the future operation of Britain’s electricity networks.</p> <p>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.</p>
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.
Target Operating Model	TOM	A description of the desired state of the operating model of an organisation.

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.
Technology Readiness Level	TRL	Different points on a scale (from 1-9) used to measure the progress or maturity level of a technology.
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 Entry Capacity	TEC	TEC (and its short term derivatives) cumulatively represent the maximum level of transmission access at which a Power Station owner wishes to purchase and use for a given financial year.
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	TO	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.
Transitional service agreement	TSA	A type of agreement that is made between the buyer and seller of a company. In this arrangement, the seller agrees to provide certain services to the buyer at a predetermined price.
Transmission System Operator	TSO	An entity entrusted with transporting energy in the form of natural gas or electrical power on a national or regional level, using fixed infrastructure. The term is defined by the European Commission.
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.
User story		A user story is the smallest unit of work in an agile framework. It's a final goal expressed from the end user's perspective.
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.
Virtual Energy System	VirtualES	The VES is a new programme initiated for energy industry stakeholders to create an ecosystem of connected digital twins.
Ways of Working	WoW	The ESO Ways of Working initiative will implement new processes 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 capital	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 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 Works		This refers to extending network planning at distribution level to support DNOs to have effective processes.
Whole System Technical Code	WSTC	Aims to create a single technical code for distribution and transmission connections. See A6.5 of BP2 Plan.
Working capital facility	WCF	A pre-approved loan to fund the short-term finance needs of the business.
Zero carbon		<p>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).</p> <p>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.</p>



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