



RIIO-ED2 Business Plan

2023 - 2028

SA-10 Supplementary Annex Glossary

July 2021

Glossary

A

Accident Frequency Rate (AFR)

Accident frequency rate is derived from the number of annual accidents and the number of staff, and is expressed as 'accidents per 100 members of staff'. The calculation allows a like-for-like comparison irrespective of the number of staff employed.

Active Network Management (ANM)

Using flexible network customers autonomously and in real-time to increase the utilisation of network assets without breaching operational limits, thereby reducing the need for reinforcement, speeding up connections and reducing costs.

Access SCR

Launched by Ofgem in December 2018, a Significant Code Review (SCR) of network access and forward-looking charge arrangements. The SCR includes a review of the definition and choice of access rights for transmission and distribution users, a review of Distribution Use of System (DUoS) and Transmission Use of System (TNUoS) charges, and a review of distribution connection charging boundary.

Application Programming Interfaces (API)

Flexible Power has created an electronic API, which allows our platform to monitor, instruct and settle all flexibility services without any human interaction. Our work in this area again makes us an industry leader.

Areas of Outstanding Natural Beauty (AONBs)

Improving visual amenity in National Parks and Areas of Outstanding Natural Beauty (AONBs), by identifying and replacing overhead lines with underground cables

B

BEIS

The government's Department for Business, Energy and Industrial Strategy.

Best View

WPD's Best View covers the total costs and volumes of investment we expect to be required on the network to deliver on government and local authority objectives, taking into account forecasts for future load growth and constraints.

Broad Measure of Customer Satisfaction (BMCS)

An incentive scheme made up of a customer satisfaction survey, an assessment of how complaints are dealt with and a review of stakeholder engagement. It was introduced for DPCR5 and is designed to drive improvements in the quality of the overall customer experience by capturing and measuring customers' experiences of contact with their DNO across the range of DNO services and activities.

Building Research Establishment Environmental Assessment Method (BREEAM)

A methodology used by the building industry to assess the environmental aspects of building construction and refurbishment.

Business Carbon Footprint (BCF)

BCF is a calculation which represents the effect our work has on the environment. BCF is measured and reported using equivalent tonnes of carbon dioxide to express the impact of energy usage in offices, emissions from vehicles and the release of greenhouse gases. BCF is used to encourage DNOs to consider the direct carbon impact of conducting their operations and to be proactive in the reduction of emissions.

C

Capital expenditure

Expenditure on investment in long-lived distribution assets, such as underground cables, overhead electricity lines and substations.

Centre for Sustainable Energy

An independent national charity that helps people and organisations from the public, private and voluntary sectors meet the twin challenges of rising energy costs and climate change.

Community Energy

This refers to the delivery of community-led renewable energy projects to reduce, purchase, manage and generate energy – and is a crucial part of tackling climate change. These projects may be wholly owned or controlled by communities, or run in partnership with commercial or public partners.

Competition in Connections (CIC)

Historically, the responsibility for providing new connections fell to the DNO. Over recent price controls, Ofgem has promoted greater involvement of third parties in both the design of connections and on-site delivery of connections work. This means that third party connection providers compete for the business of providing new connections in a competitive market.

Constraint Management Zones (CMZ)

Constraint Management Zones are designated areas of network where commercial techniques are used to manage electrical constraints.

Cost Benefit Analysis (CBA)

A methodology that compares the costs of carrying out an investment against the benefits (such as risk reduction or service improvement) to compare different options and demonstrate value for money.

Cost of Debt

The effective interest rate that a company pays for its loans.

Cost of Equity

The rate of return on investment required by a company's shareholders.

Covid-19 pandemic

The coronavirus global pandemic that began in 2019.

Customer Collaboration Panel

A group of expert stakeholders which helped to shape our Business Plan.

Customer Connection Steering Group (CCSG)

The Customer Connection Steering Group provides feedback on proposed initiatives and a strategic steer, ensuring that we address the priorities identified by our connection customers.

Customer Engagement Group (CEG)

Ofgem required all utility companies to set up an independent Customer Engagement Group (CEG), to challenge and scrutinise the RIIO-ED2 Business Plans.

Customer Interruptions (CIs)

This is calculated based on the number of customers whose supplies have been interrupted per 100 customers per year over all incidents, where an interruption of supply lasts for three minutes or longer, excluding re-interruptions to the supply of customers previously interrupted during the same incident.

Customer Minutes Lost (CMLs)

The average duration of interruptions to supply per year, where an interruption of supply to customer(s) lasts for three minutes or longer.

Customer Service Excellence (CSE) Standard

This is a government scheme which recognises organisations that provide effective and excellent customer service. Similar assessments were previously awarded through the Charter Mark.

D

Demand Response/Demand Side Response (DSR)

A technique that can be employed to reduce load on the network when maximum demand is reaching or exceeding the capacity of the

network. It relies upon commercial agreements being in place with customers who can reduce their load and have agreed to do so under the instruction of the DNO.

Digitalisation

The process of using digital technologies to make fundamental changes to the way the network is operated. There has been a gradual increase in digital technologies on the network – from automation to monitoring equipment.

Digitisation

Collecting information about the network using sensors and control equipment is known as digitisation. This includes converting existing analogue information into digital formats.

Distributed Energy Resources (DER)

Smaller power sources embedded in the distribution network that can be used to provide the power to meet demand.

Distribution Future Energy Scenarios (DFES)

Forecasts the volumes and regional distribution of low carbon technology uptake in our region. This uses stakeholder-informed bottom up analysis to align with national industry-developed future energy scenarios.

Distributed Generation (DG)

Electricity generation connected to the distribution network. It includes wind turbines, domestic solar panels, large scale photo-voltaic farms, hydro-electric power and biomass generators. Sometimes referred to as embedded generation.

Distribution Network Operators (DNOs)

A DNO is a holder of an electricity distribution licence. There are 14 DNOs which are owned by six different ownership groups.

Distribution Network Options Analysis (DNOA)

The options for investment are considered in the Distribution Network Options Assessment (DNOA) process which determines whether flexibility, conventional reinforcement or alternative innovative approaches provide the most economical solution.

Distribution Price Control Review 5 (DPCR5)

The price control period which preceded RIIO-ED1. DPCR5 ran from 1 April 2010 until 31 March 2015.

Distribution System Operator (DSO)

It is anticipated that changes to the energy sector will require Distribution Network Operators to adapt the traditional, passive role of network management and incorporate additional functions with full operational responsibility for forecasting energy production and consumption along with balancing demand and generation on the distribution network.

Distribution Use of System (DUoS) charges

These are the charges levied to electricity suppliers for DNO costs that can be recovered from customers. The amount is determined through price control reviews.

E

Electric Vehicles (EVs)

A mode of transport which is powered by electricity from batteries or a fuel cell.

Environmental Action Plan (EAP)

Environmental Action Plan sets out our ambitions to meet our stakeholders' net zero expectations, by reducing our environmental impact.

Embedded Generation

Generation that is directly connected to the distribution network. Sometimes referred to as distributed generation.

Embodied Carbon

This is the carbon footprint of a material or a product. It takes into account how much greenhouse gas (GHG) is released throughout the supply chain and is often measured over the entire life cycle of a product or service.

Energy Networks Association (ENA)

The industry body for UK transmission and distribution network operators for gas and electricity in the UK and Ireland.

Energy Data Taskforce

The Energy Data Task Force has promoted the concept of presumed open data. WPD has been developing ways of making more network data available to third parties. The Energy Data Hub on our website currently allows various data sets to be accessed.

Engagement

The process by which an organisation involves people who may be affected by the decisions it makes, or who can influence the way in which actions are delivered.

ESG

The Environment, Social and Governance criteria has been set by the Institutional Shareholding Services Inc, consist of standards for company operations that can be used by socially conscious investors to screen potential investments, and by wider stakeholders as assurance of a company's ethical approach.

ESO FES

The Electricity System Operator (ESO) has published Future Energy Scenarios (FES). These scenarios are intended to provide credible pathways for the future of energy, with each scenario considering how much energy will be required and where that energy may come from.

ESQCR

Electricity, Safety, Quality and Continuity Regulations 2002. The ESQCR specify safety standards, which aim to protect the general public and customers from danger.

Extra High Voltage (EHV)

Voltages over 20kV up to, but not including, 132kV.

F

Fast pot

Fast pot costs incurred in RIIO-ED2 are recovered in RIIO-ED2, in the year in which they are incurred.

Flexible Power

WPD was the first DNO to commit to a six monthly procurement cycle for flexibility services. Our customer-facing flexibility service, known as 'Flexible Power', uses an electronic, automated dispatch platform.

Flexible Services

Techniques used to provide more capacity in the network or reduce demand. These are provided by third parties through contractual arrangements. They can offset the need for reinforcement work.

Fuel Poor

A person who is experiencing fuel poverty may be referred to as being 'fuel poor'.

Fuel Poverty

Fuel poverty describes circumstances where customers struggle to afford electricity and to effectively heat their properties. While WPD is not directly responsible for dealing with fuel poverty, we refer customers to a network of expert partners for further advice and assistance.

G

Green Recovery

The government's plan to stimulate greener investment and cut emissions, following on from coronavirus.

Guaranteed Standards of Performance (GSOPs)

Guaranteed Standards of Performance set minimum service levels to be met across a range of activities covering supply interruptions, appointments and connections. The Guaranteed Standards are specified in statutory legislation. Where a licence holder fails to provide the level of service required, it must make a payment to the customer affected subject to certain exemptions.

H

Health Index (HI)

Framework for collating information on the health (or condition) of distribution assets and for tracking changes in their condition over time.

Health and Safety Executive (HSE)

A government organisation that has the responsibility for enforcing health and safety legislation.

Heat Pump

Systems which capture heat energy from the ground, bodies of water or air. They can be used for space heating, water heating, heat recovery and cooling in a range of buildings. A supply of electricity is required to power the heat pump system.

High Voltage (HV)

Voltages over 1kV and up to, but not including, 22kV.

Hydrogen

A colourless gas that can store and deliver usable energy. Hydrogen does not exist in nature and must be produced from compounds that contain it. Hydrogen can be used to fuel cells to generate electricity, or power and heat.

I

Incentive on Connections Engagement (ICE)

An incentive mechanism which drives DNOs to improve communication and interaction with major customers. Penalties can be imposed where DNOs fail to demonstrate sufficient engagement with major customers.

Independent Distribution Network Operator (IDNO)

A company that can construct new electricity networks, embedded within and connected to the DNO's network, retaining ownership of, and being responsible for, the operation of the new network.

Independent Connections Provider (ICP)

A third party company that can construct new connections and the associated electricity network on behalf of a customer, with the network being adopted by either an IDNO or the DNO.

Interruption Incentive Scheme (IIS)

The Interruption Incentive Scheme is a mechanism that provides annual rewards or penalties based on each DNO's performance against their targets for the number of customers interrupted per 100 customers (CI) and the number of customer minutes lost per customer (CML).

Inspections and Maintenance (I&M)

Activities carried out on a routine basis for the visual checking of the external condition of assets and the invasive examination of plant and equipment.

Integrated Network Model (INM)

The INM enables us to align our previously disparate data sets to enable data improvements and a consistent format of network data.

'In This Together' - Community Matters Fund

An annual £1m fund we set up during the coronavirus pandemic, which supported local people and local organisations to reach out to those hardest hit by the pandemic. This initiative is funded entirely by shareholders at no cost to customers.

ISO 14001

This is an international standard for environmental management systems.

ISS ESG

The responsible investment arm of Intuitonal Shareholder Services Inc, the world's leading provider of environmental, social and governance solutions, for asset owners, asset managers, hedge funds and asset servicing providers.

L

LED Lighting

A light emitting diode which contains a semiconductor compound, which converts electrical energy into light.

LiDAR

Light Detection and Ranging (LiDAR) equipment used to survey our overhead lines for infringement by trees; this allows targeted tree cutting at the optimum time to prevent the trees' growth affecting our network.

Load

The amount of power flowing through an asset or a network. This may also be referred to as demand. Maximum demand is compared to capacity to determine if the network needs to be reinforced.

Load Index (LI)

Framework, introduced as part of the DPCR5 Price Control, demonstrating the utilisation of individual substations or groups of interconnected substations. It is used as a secondary deliverable capturing the impact of load related investment.

Local Area Energy Plans (LAEPs)

Local authorities are required to develop Local Area Energy Plans to identify the changes they need to make to achieve net zero targets.

Long Term Evolution (LTE)

In telecommunications, Long-Term Evolution is a standard for wireless broadband communication for mobile devices and data terminals. It increases the capacity and speed using a different radio interface together with core network improvements.

Low Carbon Networks Fund (LCNF)

A funding mechanism introduced under DPCR5 to encourage DNOs to prepare for the move to a low carbon economy. A fund was made available for DNOs and partners to innovate and trial new technologies, commercial arrangements and ways of operating networks. The LCNF structure was replaced by the Network Innovation Competition and Network Innovation Allowance during RIIO-ED1. Some LCNF projects will continue during RIIO-ED1.

Low Carbon Technology (LCT)

This is the collective term for devices that reduce the amount of carbon being used for heating, transport and generation. It includes electric vehicles, heat pumps and solar generation.

Low Voltage (LV)

This refers to voltages up to, but not including, 1kV.

LVSSA

Connections customers are categorised by Ofgem according to a range of factors. LVSSA customers are those seeking single domestic connections requiring no mains work at low voltage.

LVSSB

Connections customers are categorised by Ofgem according to a range of factors. LVSSB customers are those seeking two to four domestic connections or one-off commercial connections at low voltage requiring no network reinforcement work.

M

Medically dependent customers

Customers who rely on electricity because of a health condition.

N

NARMs

Network Asset Risk Metrics (NARMs) are used to calculate the future risk associated with an asset over a number of years and to prioritise those assets which need to be changed.

National Grid Electricity Transmission (NGET)

The 400kV and 275kV network used to transport electricity around the country from sources of large scale generation such as power stations and off-shore wind farms to

substations that feed into DNO electricity networks.

Network Innovation Allowance (NIA)

An allowance agreed as part of the price control to fund smaller scale innovation projects. The purpose of the allowance is to encourage DNOs to innovate to address issues associated with the development of their networks. The NIA (and NIC) replaced the Low Carbon Networks Fund at the commencement of RIIO-ED1.

Network Innovation Competition (NIC)

An annual funding competition for larger and more complex innovation projects. The NIC (and NIA) replaced the Low Carbon Networks Fund at the commencement of RIIO-ED1.

Net Zero

The UK's Climate Change Act (2008) sets out how the UK tackles climate change. The Act says that by 2050 the UK Government must reduce greenhouse gas emissions by at least 100% compared with 1990 levels.

O

Office of Gas and Electricity Markets (Ofgem)

Ofgem is responsible for regulating the gas and electricity markets and network monopolies in the UK to ensure customers' needs are protected.

Office of Communications (Ofcom)

Ofcom is the regulator and competitions authority for the UK communications industries.

Open Data

The presumption that all data can be shared unless proven otherwise for privacy, security or commercial confidentiality reasons.

Operational Technology (OT)

OT is technology that communicates and interfaces with business systems and physical assets and includes systems such as our communications system which allows us to interact remotely with sensors and monitors on the physical distribution network.

P

Point of Connection (PoC)

The point on the licensee's distribution system at which the premises will be directly or indirectly connected to that system.

Polychlorinated Biphenyls (PCBs)

PCBs are now known to be highly toxic industrial compounds and were found in the oil of some pre- 1989 transformers and a small range of other equipment.

Perfluorocarbon Tracer (PFT)

A chemical that is injected into fluid filled cables, used to speed up the location of leaks.

Photovoltaic (PV)

The conversion of light into electricity using semiconducting materials that exhibit the photovoltaic effect; an example of this is a solar cell.

PR19

The 2019 price review for the water industry set by the regulator Ofwat. The period sets prices for water companies from 2020 to 2025.

Price Control

WPD is a regional monopoly – our customers are our customers because of where they live and work. WPD is therefore regulated by Ofgem to make sure that we provide a high level of service for the money we are allowed to charge. The revenues that can be earned are set for a specific period of time referred to as a price control. The current price control period RIIO-ED1 runs from 1 April 2015 to 31 March 2023.

Priority Services Register (PSR)

A database that records details about customers in vulnerable circumstances so that additional support can be provided if needed.

Protection Batteries

Most circuit breakers on the network rely on batteries to provide the power to monitor the network and initiate tripping and reclosing actions. These batteries are separate to SCADA batteries that provide the power for

communication systems between sites and central control centres.

Public Switched Telephone Network (PSTN)

The current UK standard for phone line connections to all homes and businesses in the UK which do not use a fibre connection.

Q

Quality of Service (unweighted)

The Interruption Incentive Scheme measures Quality of Service using two metrics: Customer Interruptions and Customer Minutes Lost. The comparison of actual performance against targets converts different types of interruption using weighting factors (for example unplanned interruptions are weighted at 50%). Quality of Service (unweighted) relates to the raw pre-weighted measures.

R

RAV

The value ascribed by Ofgem to the capital employed in the licensee's regulated distribution business. 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 made to it at historical cost, and deducting annual depreciation amounts calculated in accordance with established regulatory methods. The revenues that licensees are allowed to earn under their price controls include allowances for the regulatory depreciation and also for the return investors are estimated to require to provide the capital.

Real Price Effects (RPE)

Increase in prices of materials, direct staff or contract labour, over and above increases in inflation.

Regional Development Programmes (RDP)

These programmes were set up to provide detailed analysis of areas of the network where there were known transmission or distribution

network issues accommodating large amounts of Distributed Energy Resource.

Reinforcement

The provision of more network capacity by installing more assets or installing higher rated assets

Remote Terminal Units (RTUs)

RTUs are microprocessor devices that are installed at substations. They collect data from transducers fitted to equipment and enable this to be communicated back to control systems. As they are electronic devices, they have relatively short lives.

Resilience

The ability of the network to withstand extreme events such as storms and flooding, and to recover quickly from widespread power black outs.

Resilience Tree Cutting

This is the full removal or extensive cutting of trees that are found to be within the falling distance of overhead power lines. This ensures that they cannot cause damage to the power lines in the event of severe weather.

RFPR

Ofgem introduced Regulatory Financial Performance Reporting (RFPR) in October 2018, the purpose of the RFPR is to provide a framework to allow Ofgem to collect accurate and consistent information from licensed network operators. This report provides clear and transparent reporting on WPD's financial and operational performance, including WPD's performance against incentives under the RIIO price control arrangements.

RIIO (Revenue = incentives + innovation + outputs)

The current regulatory framework, introduced for electricity distribution in 2015/16. It places emphasis on incentives to drive the innovation needed to deliver a sustainable energy network at value for money to existing and future consumers.

RIIO Electricity Distribution 1 (RIIO-ED1)

The eight year price control period that runs from 1 April 2015 to 31 March 2023. It is the first electricity distribution price control that uses the RIIO framework for setting allowances.

RIIO Electricity Distribution 2 (RIIO-ED2)

The electricity distribution price control period that runs from 1 April 2023 to 31 March 2028. Ofgem has determined that the RIIO-ED2 price control will be five years in length.

RoRE

Ofgem assesses overall financial performance of network operators using a measure called Return on Regulatory Equity (RoRE). RoRE performance is compared to the cost of equity allowed at the start of the price control. It is a key financial and regulatory performance measure is used by Ofgem to assess overall financial performance of network operators against the price control settlement.

Routine Tree Cutting

Tree cutting is undertaken on a cyclical basis to provide sufficient clearance from equipment. Tree cutting prevents faults and keeps the public safe. Clearance is carried out to standard industry specified distances from equipment.

S

SBTs

Science-Based Targets provide a clearly defined pathway for companies to reduce greenhouse gas emissions. These targets are considered 'science-based' if they are in line with the latest climate science deemed necessary to meet the goals of the Paris Agreement – limiting global warming to well below 2°C above pre-industrial levels and pursuing efforts to limit warming to 1.5°C.

Site of Special Scientific Interest (SSSI)

A Site of Special Scientific Interest can describe an area that is of particular interest to science due to the rare species of fauna or flora it contains, or important geological or physiological features that may lie inside its boundaries.

Slow pot

Slow pot costs incurred in RIIO-ED2 are spread over a number of years (known as RAV depreciation) to reflect the long-term value of network assets.

Smart Grid

A generic term for a range of measures that are used to operate electricity networks more flexibly, allowing more generation or demand (load) to be connected and managing the associated power flows.

Smart Meters

Smart meters record the energy consumed within a property and are capable of being read remotely. Smart meters have the capability to allow WPD much greater visibility of the operational state of the low voltage network.

Social Contract

A social contract is a framework for the delivery of our stakeholders' priorities, through social and environmental initiatives that go above and beyond our Business Plan strategy.

Social Value Research

Social value is determined by asking a customer to make a series of trade-offs between different levels of potential service delivery and to assign values to the preferred outcomes they would like us to deliver.

Stakeholder Engagement and Consumer Vulnerability Strategy (SECV)

An incentive mechanism designed to encourage network companies to engage proactively with stakeholders and to deliver a consumer-focused, socially responsible and sustainable energy service. Rewards are available to network companies which can demonstrate high quality activities against set criteria.

Strategic Innovation Fund (SIF)

The Strategic Innovation Fund will support large scale, strategic innovation projects in RIIO-ED2.

Substation

A part of the distribution network that transforms voltage and allows the re-routing of power by switching the configuration. It contains transformers, switchgear and equipment that

protect the network components by interrupting supplies when there is a fault.

Sulphur Hexafluoride (SF₆)

A gas widely used as an insulating medium in transmission and distribution equipment. It has excellent insulating properties but is a potent greenhouse gas. It continues to be used because there are no alternatives available.

Supervisory Control and Data Acquisition (SCADA)

This is the term used for the system that monitors and controls distributed assets. It comprises the remote terminal units, communication infrastructure and human interface within central control rooms.

Switches / Switchgear

Devices on the network can be turned on or off and are used to alter the routing of electricity. Some can be operated remotely by central control engineers. Others need to be operated manually on site by authorised staff.

T

Target 60 (T60)

We use an internal measure to drive down the time to restore customers' supplies. This is known as 'Target 60' and sets an internal goal for the percentage of customers restored within 60 minutes of a high voltage (HV) fault.

Technical Network Losses

These are losses associated with power flowing through the network.

Ten Point Plan

The Ten Point Plan sets out the government's plan to 'build back better', support green jobs, and accelerate our path to net zero.

Time to Connect Incentive (TTC and TTQ)

An incentive scheme which focusses on two elements – the time taken to provide a quotation for a connection and, once the offer is accepted, the time taken to complete the necessary connection works. Rewards are available to

DNOs which outperform common targets set by Ofgem. Time to Connect and Time to Quote targets are expressed in days.

Third Party Connection Providers

Independent organisations that carry out elements of connections work that are contestable. Work which is non-contestable will always be undertaken by the DNO.

Totex

The licensee's total expenditure (with limited exceptions) on regulated business activities. It includes both capital and operating expenditure items that the licensee has control over.

Totex Incentive Mechanism (TIM)

Applies adjustment to the Totex figure to incentivise efficient overall total expenditure. It does this by sharing any over or under spend between the DNOs and Customers.

Transformer

Converts electricity from one voltage to another.

U

Uprating Assets

Using larger capacity network equipment rather than replacing like-for-like.

V

Vehicle to Grid (V2G)

This project allows an electric vehicle to power homes and support the electricity network.

Vulnerable Customers

Vulnerable customers include those customers who are medically dependent upon electricity, have special communication requirements, have other special needs with a dependence upon electricity (e.g. stair lift), are elderly, have a transient vulnerability to a power cut or need assistance with energy affordability.

W

Western Power Distribution (WPD)

The electricity distribution network operator that holds four distribution licences for West Midlands, East Midlands, South Wales and South West.

Worst Served Customers (WSC)

Customers who experience 12 or more higher voltage interruptions over a three year period, with a minimum of three in any one year.

WESTERN POWER DISTRIBUTION

Serving the Midlands, South West and Wales



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