



Environment Strategy

April 2021

westernpower.co.uk



WESTERN POWER 
DISTRIBUTION

Serving the Midlands, South West and Wales



Contents

- Overview..... 03**
- Our Environment Strategy – Structure 04**
- Purpose and Aims of the Strategy 06**
- Becoming a Net Zero Organisation 07**
 - The Changing Operation of the Network 07
 - Transport 07
 - Heat 08
 - Communities 08
 - Business Carbon Footprint 08
 - Embodied Carbon 08
 - Global Climate Change 09
- Being Environmentally Responsible 10**
 - Pollution Prevention 10
 - Improving Biodiversity 11
 - Waste & Resource Use..... 11
 - Supply Chain 11
 - Air Quality 11
 - Visual Amenity 11
- RIIO-ED2 Environmental Action Plan 12**
- United Nations Sustainable 13**
Development Goals

Overview

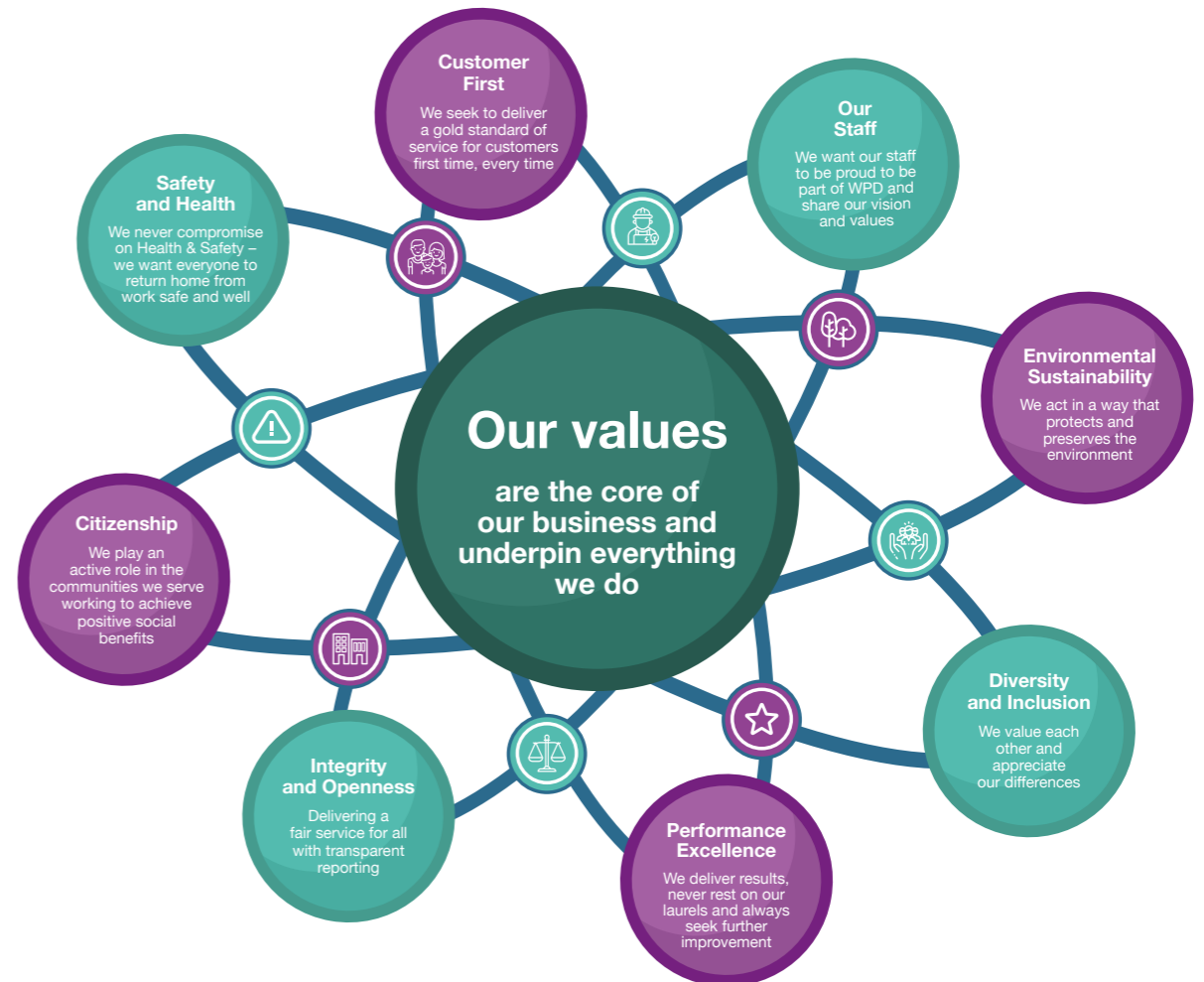
Decarbonisation, environmental sustainability and the protection of the environment are key concerns for WPD, our stakeholders and society in general.

In line with WPD’s Values, feedback received from our stakeholders and our current RIIO-ED2 Business Plan this Strategy details our business aspirations and our ambitions in the following two core strategic business areas;

-  **Becoming a net zero carbon organisation.**
-  **Ensuring we are environmentally responsible.**

This document describes the structure of our strategy in relation to RIIO-ED2 and future price review periods (see Fig. 1) before considering the necessary action required to address each of the two core strategic business areas. The document then goes on to describe how our Strategy aligns with the UN Sustainable Development Goals (SDGs). The structure and content of this strategy has been reviewed by WPD senior management as well as a wide-range of stakeholders at bespoke strategic stakeholder events held in early 2021.

As such we are confident that our Environment Strategy proposals are focused, ambitious and stakeholder led, setting a clear and successful course to achieve net zero whilst being environmentally responsible throughout the remainder of RIIO-ED1, RIIO-ED2 and future price control periods.



Our Environment Strategy - Structure



Our Environment Strategy is just one of a number of specific company strategies which set out our future business aspirations and ambitions.



All WPD Business Strategies are available at www.westernpower.co.uk



Specifically the structure for the Environment Strategy as shown in Fig.1 embeds our core business environmental ambitions in to not just the upcoming RIIO-ED2 price control period but also future price control review periods.

The two core strategic focus areas identified in this Strategy should be clearly reflected and referred to throughout our RIIO-ED2 Business Plan and detailed specifically in terms of RIIO-ED2 core commitments.

Environmental Action Plan (EAP) for RIIO-ED2, as an Annexe of the Business Plan, presents the methodology and implementation plans to deliver the RIIO-ED2 core commitments and demonstrate clearly how engagement with our Stakeholders has influenced the development of those commitments. Further information on our RIIO-ED2 Business Plan core commitments as detailed in our RIIO-ED2 EAP are provided on page 12.

At the end of each regulatory year within RIIO-ED2 a publicly available Annual Environmental Report (AER) will be published providing details of how we have performed in our core commitments and against the RIIO-ED2 Business Plan, the EAP and ultimately our overarching Environment Strategy.

Our Environment Strategy will continue to develop, evolve and improve over time via annual business reporting, future price review periods, stakeholder feedback and the need to address future societal obligations and concerns.

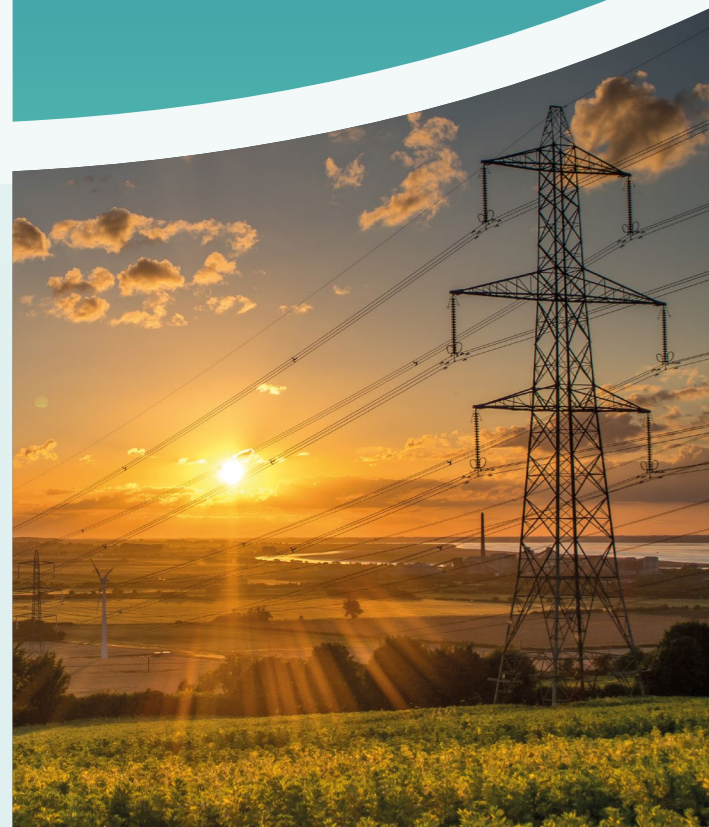
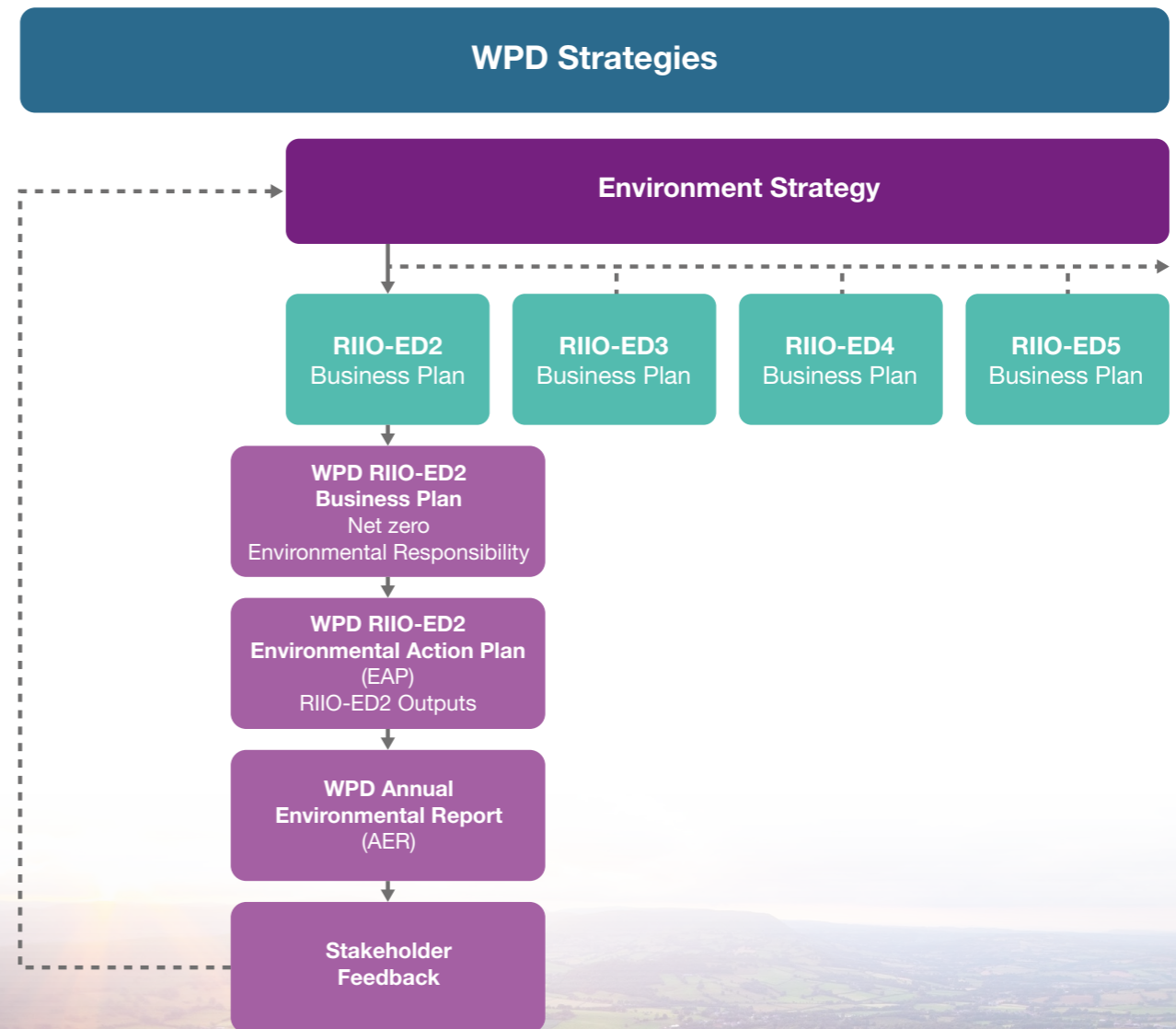


Fig. 1



Purpose and Aims of the Strategy

Our Environment Strategy has two broad purposes;

1

Establish the two core strategic focus areas which all future WPD business plans should reference, represent and deliver on;




-  **Becoming a net zero carbon organisation.**
-  **Ensuring we are environmentally responsible.**

These core strategic focus areas are the challenges which we face to ensure our business is sustainable.

2

Be applicable to all business activities and at all business levels of WPD.

The Strategy will be reviewed annually to ensure efficacy and relevance to WPD and our Stakeholders via managing the impact WPD activities have upon our environment and by monitoring and responding to our changing environment. Specifically the Strategy must;

-  **Ensure and enhance the protection of the environment.**
-  **Provide WPD with an overarching pathway to become net zero ahead of the Government target of 2050.**
-  **Help us to limit WPD's impact on global climate change to 1.5°C by following a verified Science Based Target (SBT) in line with the Paris Agreement.**

Becoming a Net Zero Organisation

In order to successfully become a net zero organisation we have identified the following issues which we need to understand and take account of within our current RIIO-ED2 Business Plan and future WPD Business Plans;

Focus: Net Zero

Topics



Operation of the Network



Communities



Transport



Business Carbon Footprint



Heat



Embodied Carbon



Global Climate Change



The Changing Operation of the Network

The operation of the UK electricity network is changing in a number of significant ways. Many large fossil fuel power stations are closing as they come to the end of their lives and being replaced with smaller, and in many cases renewable forms of electricity generation. These are often spread around the country, connected directly to the local distribution network rather than the national transmission electricity grid system.

Our industrial, commercial and domestic customers have also embraced government and regulatory incentives to install smaller scale generation at their own premises in the form of solar panels and other technologies. The type of generation deployed is often intermittent in nature, making flows across the electricity network much more complex to predict. Network requirements are also changing and during RIIO-ED2 we expect to see the rapid adaptation of new forms of electricity demand.

Electric vehicles are quickly becoming mainstream. With a typical electric car using a similar amount of electricity as an average domestic home, they have the potential to significantly alter the traditional daily energy usage profiles today's network was designed around.

Further details can be found in the WPD Network Strategy at www.westernpower.co.uk/smarter-networks/network-strategy



Transport

We are supportive of the Government's Clean Growth Strategy. This sets ambitious targets to have near zero emissions from transport by 2050. A significant challenge and opportunity exists as a large proportion of vehicles will become electric.

These vehicles will need to be able to charge in a manner that suits the customer but avoid the need for large-scale reinforcement caused by additional significant peaks on the electricity network.

We also need to consider our own WPD Company Car scheme which is to be adapted to facilitate the removal of combustion engine vehicles by 2025 as well as encouraging the continued adoption of remote working which, within a controlled framework, has proved efficient and effective throughout the COVID-19 pandemic.

Further details can be found in the WPD Electric Vehicle Strategy at www.westernpower.co.uk/smarter-networks/electric-vehicles

Becoming a Net Zero Organisation



Heat

Providing energy for heating currently accounts for around 32% of all UK emissions. In order to reduce this we need to increase heating from low carbon electricity and move away from traditional gas solutions. From 2025, no new homes will be able to be gas heated.

This will lead to a significant increase in electrically heated homes creating higher demand on the network. As existing properties transition to low carbon heating solutions such as Heat Pumps (HP), it is important to understand the impact they will have on the network.

Further details can be found in the WPD Heat Pump Strategy at: www.westernpower.co.uk/smarter-networks/heat-pumps



Communities

The rapid changes in the electricity network are bringing challenges for DNOs but are also introducing new opportunities for our customers. We want to ensure that all of our customers have access to those opportunities so that they can be part of the energy transition.

To do that, we need to work with communities and local energy groups to understand how we can collaborate together to help our future networks to be flexible and achieve net zero. We will build on our existing community energy work and strengthen the links we have with our communities. Most importantly, with the help of local community groups we will focus on understanding how we can best support our vulnerable customers through this transition.

We must ensure that we are always available and supportive to vulnerable customers and communities.



Business Carbon Footprint

We must continue to measure and reduce our own Business Carbon Footprint (BCF). Our annual BCF provides clear and transparent information regarding the current state of carbon emissions being produced by our business activities.

In order to become a net zero organisation we must address our own Scope 1 and 2 carbon emissions (including our building energy use, releases of sulphur hexafluoride (SF₆) from our equipment, and operational transport fleet emissions) and aim to understand the full extent and reduce Scope 3 indirect emissions and network distribution losses.

Further details can be found in the WPD annual Environment & Innovation Report and our RIIO-ED2 Business Plan documentation: www.westernpower.co.uk/environment



Embodied Carbon

Embodied carbon is the carbon footprint of a material or a product. Whilst a carbon footprint can be used to express the associated carbon of, for example operating a transformer, the embodied carbon would instead describe the carbon footprint of the manufacture/use/disposal of the transformer.

Embodied carbon calculations therefore require an understanding of all materials (including extraction), methods of manufacture/ construction and other related activities such as storage and transport, in-use and end of life disposal.

We need to understand the extent and scope of our embodied carbon emissions as well as develop a methodology for its accurate measurements and future plans for reduction.

Further details can be found in our [RIIO-ED2 Business Plan documentation](#).



Global Climate Change

In order to limit our impact on global climate change we need to set our own science based target through the UN Science Based Target Initiative; this will provide a trajectory target of associated carbon emissions to limit global temperature increases to 1.5°C. Engagement with the Science Based Target Initiative (SBTi) ensures that our SBTs are valid and effective.

By following a SBT trajectory for our carbon emissions we will not only limit the impact on global climate change and achieve a SBT but also reach net zero (including network losses) by 2043, seven years ahead of the UK government's target date of 2050.

Further details can be found in the WPD annual Environment & Innovation Report and our RIIO-ED2 Business Plan documentation: www.westernpower.co.uk/environment



Being Environmentally Responsible

Ensuring Environmental Responsibility

Our second core strategic focus area is to ensure that we continue to be environmentally responsible. We recognise that we have a duty to protect the environment in which we work and live and to play our part in ensuring that the region in which we operate will be environmentally sustainable. We are mindful of the balanced inter-relationships between environmental and ecological receptors and how these affect socio-economic outcomes for our customers.

Since 2011, when as an organisation of four UK distribution licence areas we gained certification to the ISO14001 standard, we have formally been able to demonstrate our commitment in ensuring that we meet all of our environmental compliance obligations, minimising all aspects of pollution to the environment and ensuring continual improvement in environmental management throughout all aspects of our organisation. As part of this our Strategy and future price control periods need to continue to acknowledge, understand and take account of the following issues within our current RIIO ED2 Business Plan and future WPD Business Plans;

Focus: Environmental Responsibility

Topics



Pollution Prevention



Supply Chain



Biodiversity



Air Quality



Waste and Resources



Visual Amenity



Pollution Prevention

We will continue to see challenges around the use of SF₆, the reduction of fluid filled cable leaks, the removal of polychlorinated biphenyl (PCB) contaminated equipment, and minimising the environmental damage from our network.

Sulphur hexafluoride (SF₆) is a gas which is used throughout the electricity industry as an insulating medium in switchgear, and whilst SF₆ provides many tangible benefits it is a potent greenhouse gas with a high global warming potential (GWP). To address this we must continue to work and collaborate with colleagues both in SF₆ manufacturing and in other UK distribution network operators via the Energy Networks Association (ENA).

We operate and manage a network of over 730 km of fluid filled cable (FFC). Older styles of cable contain oil to improve their insulation properties and to enhance cooling. Occasionally, these older cables leak when equipment is damaged, seals deteriorate or as a result of changing ground conditions. When this happens we must continue to take steps to ensure that any damage to the environment is minimised

through the removal of contaminated ground and that the leak is fixed as quickly as possible. The risks associated with operating FFC and related assets can be reputational, regulatory and financial. The primary risk is associated with the leakage of insulation oil into the environment causing pollution.

While PCBs were never specified for use in any WPD licenced area, their use in other electrical applications led to a very small percentage of the equipment in use on WPD's network being unintentionally contaminated during manufacture.

In 2000 a complete ban on the use of PCBs was imposed, but an exemption was made for electricity network transformers which could be left in service until the end of their useful life. This exemption ended in July 2019 when new regulations required the removal of all potentially PCB contaminated equipment by 31 December 2025.

For these reasons we have developed a comprehensive strategy to ensure that all PCB contaminated equipment will be removed from the WPD network by 2025.



Improving Biodiversity

We must continue to endeavour to minimise the impact of our business activities on UK protected species of flora and fauna.

The decline of our native species diversity in the UK is well documented and is of concern. We are conscious that our activities can impact on habitats and therefore species' ability to thrive.

We are committed to working with Wildlife Trusts, Natural England and Natural Resources Wales to identify priority habitats and species where improvements are needed and to support their ongoing work to maximise the benefit to biodiversity via biodiversity action plans and in the use of natural capital assessment tools.



Waste and Resource Use

The topic of waste reduction is not a new one for WPD and in recent years by working in collaboration with our waste partners we have made good progress in reducing the amount of waste which we send to landfill. However, going forward we need to focus on reducing the total amount of waste which we dispose of. By actively limiting and examining the materials which we have entering into our business we can work with manufacturers and suppliers to reduce packaging, develop take back schemes and ensure any residual packaging materials, including single use plastics, are re-useable or recyclable.

We must also consider material and product life cycle analysis (LCA). We should ensure that items placed on our network or at our depots are the most appropriate for their longevity, cost benefit, operational fit, embodied carbon profile and final disposal route.



Supply Chain

We have to maintain and build upon our relationships with our suppliers and in turn manufacturers to evaluate how goods are manufactured, packaged, transported and stored, and take into account product and material life cycle analysis as well as the principles of the circular economy.

We should influence our suppliers through driving improvements via our Procurement Tender process providing feedback on developments made to materials, goods and services to ensure that further improvements are possible.



Air Quality

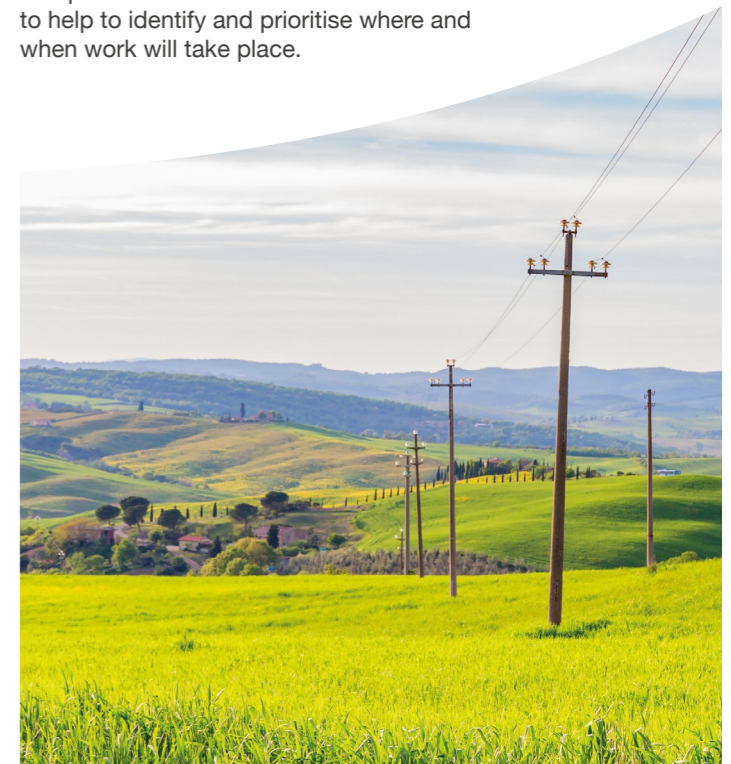
Air pollution, especially pollution from nitrous oxides (NO_x), sulphurous oxides (SO_x) and particulates arising from the use of diesel engines, is well documented and we are supportive of local authority clean air zones. In order to reduce our impact in this area we must ensure the successful roll-out of our electric vehicle (EV) van replacement programme, revised company car leasing scheme and increase our use of mobile battery generation where feasible.



Visual Amenity

Our duty to improve the visual amenity in our protected and valued landscapes is a duty we take very seriously. We are mindful that the improvement of our Areas of Outstanding Natural Beauty (AONBs) not only provides benefit for the local communities which live in or near those areas, but also supports economic welfare by making these areas more attractive to the visitor industry.

We will continue to coordinate the undergrounding of overhead lines with established steering groups consisting of representatives from AONBs and National Parks to help to identify and prioritise where and when work will take place.



RIIO-ED2 Environmental Action Plan

The WPD RIIO-ED2 Environmental Action Plan (EAP) sets out all of our RIIO-ED2 ambitions to meet our stakeholders' net zero and environmental responsibility expectations, by reducing our environmental impact and decarbonising our business activities.

Our ambitious commitments for RIIO-ED2 as detailed in our EAP include;



Achieve net zero in our internal business carbon footprint by 2028 (excluding network losses) and follow a verified science based target of 1.5° to limit the climate impact of our activities.



Reduce the volume of oil leaked from fluid filled cables by 50% by 2028 and replace 90km of the worst leaking circuits with non-oil alternatives; putting WPD on track to remove all oil-filled cables by 2060.



Deliver a 20% reduction in SF₆ losses from RIIO-ED1 and collaborate with industry partners to develop technological alternatives to reduce overall volumes of SF₆.



Achieve zero waste to landfill by 2028 (excluding hazardous waste) and deliver an overall 30% reduction in tonnage waste produced.



Remove up to 50km of overhead lines in Areas of Outstanding Natural Beauty.

United Nations Sustainable Development Goals

WPD: United Nations (UN) Sustainable Development Goals

As part of our Environment Strategy we are aligning our activities and core strategic focus areas to a number of UN Sustainable Development Goals or SDGs.

In 2015 the member states of the United Nations agreed to 17 global goals for sustainable development and environmental benefit. Through governments, businesses (like WPD) and individuals achieving these goal it could mean an end to extreme poverty, inequality and climate change by 2030.

The benefits of aligning our core strategic focus areas and future business aspirations to the UN SDGs are twofold;

- 1 Provide a framework against which we can align, measure and explain our actions.
- 2 Provide a basis to deliver not just positive environmental impacts but also beneficial social and economic impacts too.

With this in mind we are proposing to align with the following three SDGs;



To make communities inclusive, resilient and sustainable.



Ensuring sustainable consumption and production patterns. The on-set of the global corona-virus pandemic (COVID-19) offers an opportunity to develop recovery plans that will reverse current trends and shift our consumption and production patterns to a more sustainable course. A successful shift will mean improvements in resource efficiency, and consideration of the entire life-cycle approach.



Taking urgent action to tackle climate change and its impacts. To limit global warming to 1.5°C as called for in the Paris Agreement.

As we progress and develop our Environment Strategy we may in the future look to align additional SDGs to our activities and network operations.

United Nations Sustainable Development Goals

WPD Environment Strategy and activity link to UN SDGs

WPD Environment Strategy
Become a net zero organisation - Be environmentally responsible

WPD Business as Usual Activities

Network Services - operation, maintenance, resilience and end of life process	Introduction of low carbon technologies through Innovation and transition to a DSO
Sustainable procurement and resource use - purchased products, services, collaboration with manufacturers and other distribution network operators (DNOs)	Responsible contractor management
Sustainable operational vehicle fleet and roll-out of fleet electrification	Stakeholder engagement and community initiatives
Building management (depots and substations) - energy use, new builds, refurbishment, renewable energy installation	Customer communication

WPD RIIO-ED1 and RIIO-ED2 activities

- | | | |
|--|--|--|
| <ul style="list-style-type: none"> Support vulnerable customers and reduce fuel poverty Community education initiatives Protection of local habitats Implementation of biodiversity net gain Minimise environmental pollution Collaboration with local authorities and communities on net zero ambitions | <ul style="list-style-type: none"> Engagement with manufacturers and suppliers to minimise resource use, packaging and to source materials responsibly Monitor and reduce waste produced within the business Employee engagement, training and awareness Certification to ISO14001: Environmental Management Systems | <ul style="list-style-type: none"> Adoption of the WPD Climate Change Adaptation Plan Sourcing alternatives to SF₆ Setting Business Carbon Footprint targets and future SBT's Collaboration with LAs and communities on net zero ambitions Implementation of biodiversity net gain |
|--|--|--|

UN Sustainable Development Goals (SDGs)

Sustainable Cities and Communities	Responsible Consumption and Production	Climate Action
------------------------------------	--	----------------

The 17 UN Sustainable Development Goals (SDGs);

Goal 1	End poverty in all its forms everywhere	
Goal 2	End hunger, achieve food security and improved nutrition, promote sustainable agriculture	
Goal 3	Ensure healthy lived and promote well-being for all at all ages	
Goal 4	Ensure inclusive and equitable quality education and promote lifelong learning and opportunities for all	
Goal 5	Achieve gender equality and empower all women and girls	
Goal 6	Ensure availability and sustainable management of water and sanitation for all	
Goal 7	Ensure access to affordable, reliable, sustainable and modern energy for all	
Goal 8	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	
Goal 9	Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation	
Goal 10	Reduce inequality within and among countries	
Goal 11	Make cities and human settlements inclusive, safe, resilient and sustainable	
Goal 12	Ensure sustainable consumption and production patterns	
Goal 13	Take urgent action to combat climate change and its impacts	
Goal 14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	
Goal 15	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	
Goal 16	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	
Goal 17	Strengthen the means of implementation and revitalise the Global Partnership for Sustainable Development	

WESTERN POWER DISTRIBUTION

Serving the Midlands, South West and Wales

Western Power Distribution (East Midlands) plc, No2366923
Western Power Distribution (West Midlands) plc, No3600574
Western Power Distribution (South West) plc, No2366894
Western Power Distribution (South Wales) plc, No2366985

Registered in England and Wales
Registered Office: Avonbank, Feeder Road, Bristol BS2 0TB

www.westernpower.co.uk

     @wpduk

