



Environment Strategy

December 2021

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How this strategy impacts other areas of our plan

Our focus is to achieve the best possible positive outcomes for our customers, by utilising innovative solutions and smarter working practices to drive efficiency in all we do. This strategy forms part of a suite of wide ranging, ambitious and interconnected strategies that we will be implemented in RIIO-ED2. Each one is designed to contribute towards the delivery of the same four overarching strategic outcomes we will achieve for customers:



1. Sustainability

Lead the drive to net zero as early as possible.



2. Connectability

Customers can easily connect their electric vehicles, heat pumps and renewable generation.



3. Vulnerability

First class vulnerable customer support programme where everyone benefits in a smart future.



4. Affordability

Maintain excellent customer service, safety and network performance and transform the energy grid for future generations, while keeping bills broadly flat.

Each of our strategies is embedded across our operations and never delivered in silos. This will lead to joined up delivery, utilise opportunities to share knowledge and expertise across WPD teams, and achieve maximum benefits for customers. By doing so we will ensure each of our strategies has a far reaching impact and identifies opportunities to improve our service, performance and efficiency in every possible area of our business. Our strategies are therefore highly interrelated and co-dependent.

The following table provides a snapshot of some of the extensive impacts of this Environment & Environmental Action Plan Strategy, and signposts to other areas of our plan upon which its successful delivery will be dependent.

Strategy	Reference within the strategy:		
Climate Resilience	✓	Adopting the Science Based Target - limiting the impact on climate change to 1.5°C	Page 4
Customer Vulnerability	✓	Facilitating community initiatives to help to decarbonise our operations, ensuring they are fully inclusive of customers in vulnerable situations	Page 13
Destination Net Zero: Business Innovation and Efficiency	✓	Achieving net zero in our own operations by 2028	Page 4
Digitalisation Strategy and Action Plan	✓	Facilitating the wider decarbonisation of the network by utilising more accurate data and digitalised solutions	Page 10
DSO	✓	Facilitating the wider decarbonisation of the network by developing a range of DSO capabilities that help to maximise the utilisation of the existing network before new assets are required	Page 10
Environment & Environmental Action Plan			
Innovation	✓	Developing innovation projects specifically focussed on sustainability	Page 15
Major Connections	✓	Ensuring that new connections have a biodiversity enhancement plan	Page 39
Network Visibility	✓	Facilitating the wider decarbonisation of the network by utilising more accurate network performance information	Page 10
Net Zero Communities	✓	Working with local community energy groups to connect to the network in large numbers, helping the drive to achieve net zero	Page 13
Social Contract	✓	Delivering significant social value and enhanced community wellbeing through improvements in biodiversity and our local natural environment	Page 16
Whole Systems	✓	Delivering regional collaboration schemes across a range of sectors and energy vectors to deliver solutions that reduce the environmental impact of our operations and drive decarbonisation	Page 10
Workforce Resilience	-	-	-

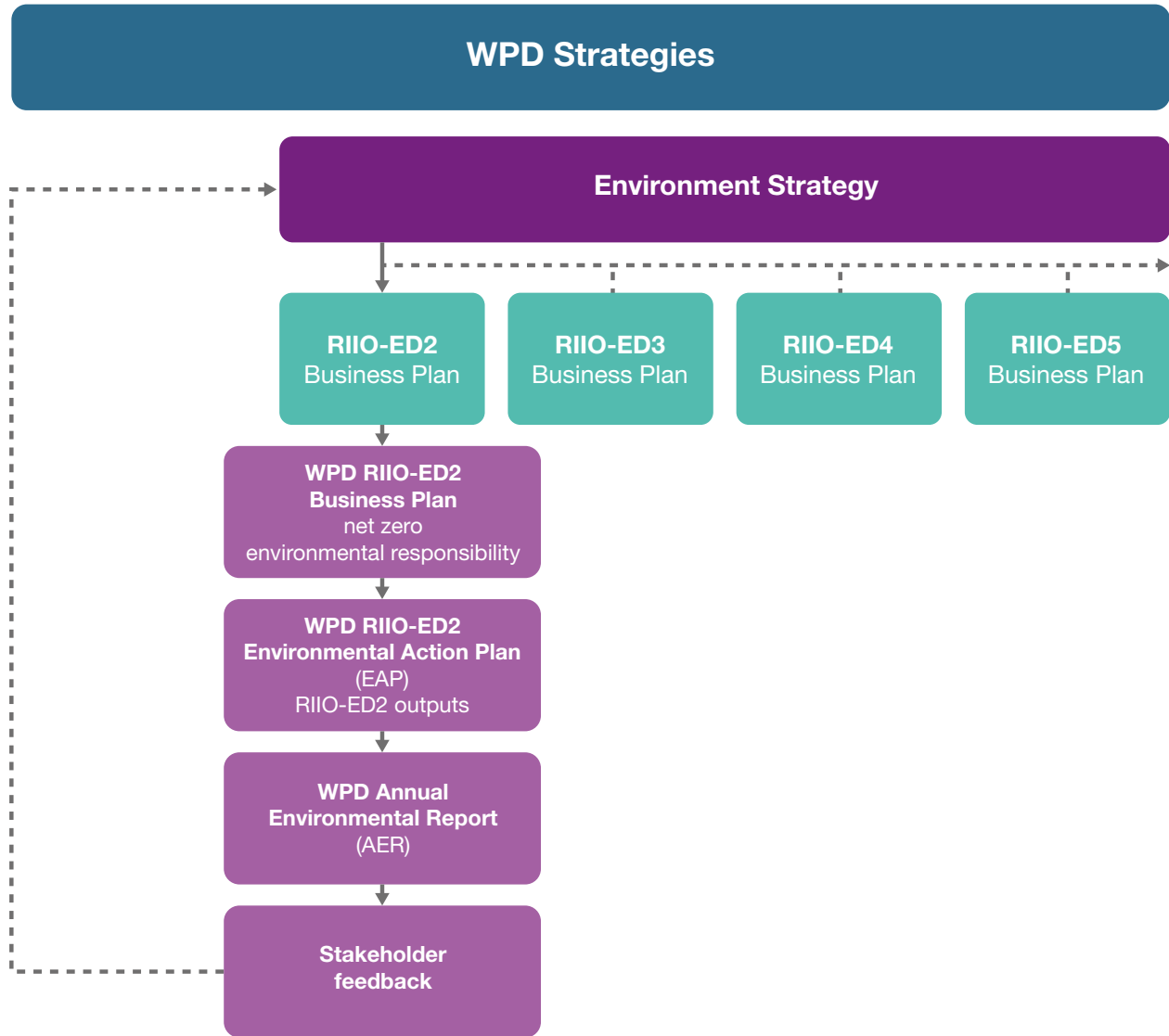
Overview

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

This document describes the structure of our strategy in relation to RIIO-ED2 and future price control review periods (see figure 1) before considering the necessary action required to address each of our two core strategic business areas. The document then goes on to describe how our strategy aligns with the United Nations Sustainable Development Goals (SDGs). The structure and content of this strategy have been endorsed 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 determined course to achieve net zero whilst being environmentally responsible throughout the remainder of RIIO-ED1, RIIO-ED2 and future price control periods.

Figure 1:



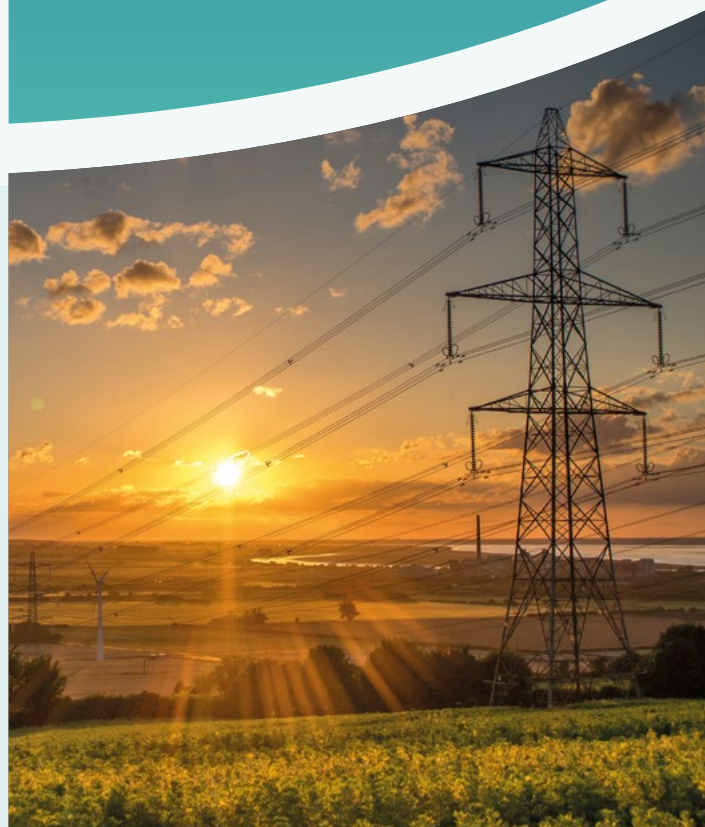
Our Environment Strategy - structure



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 figure 1 embeds our core business environmental ambitions into 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 are clearly reflected and referred to throughout our RIIO-ED2 Business Plan and detailed specifically in terms of RIIO-ED2 core commitments.

Our Environmental Action Plan (EAP) for RIIO-ED2, as an annex 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 is provided on page 13.

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. We will capture learning points to feed into future performance improvements.

Our Environment Strategy will continue to develop, evolve and improve over time via annual business reporting, future price review periods, collaboration on innovative solutions and stakeholder feedback. We will act on the need to address future societal obligations and concerns and employ our ISO 14001 approach of constantly checking our actions to ensure we implement improvements.

Our Environment Strategy - structure

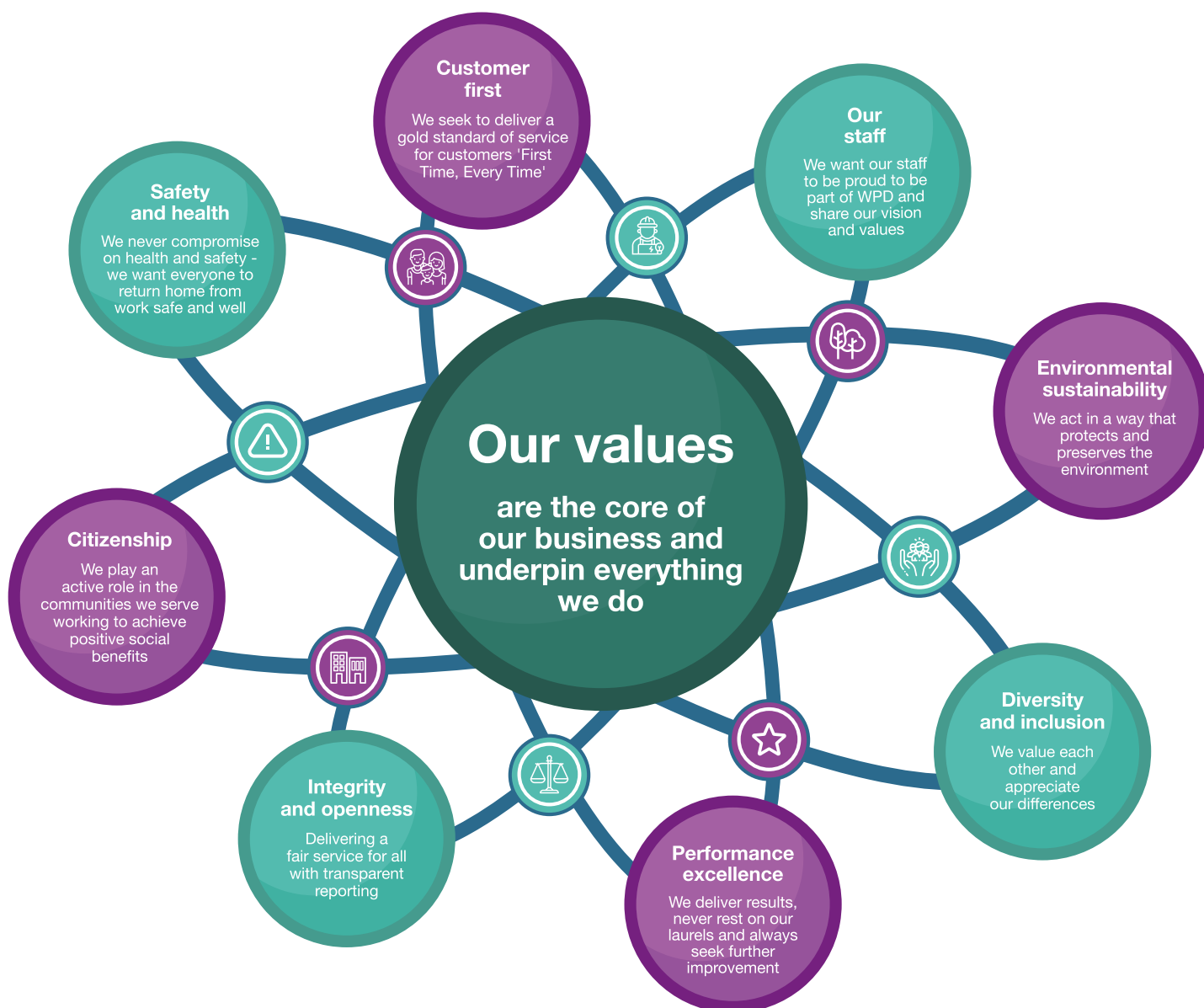
In line with WPD's values, feedback received from our stakeholders and our current RIIO-ED2 Business Plan, this strategy details our business aspirations and our ambitions in the following two core strategic business areas;



Becoming a net zero carbon organisation.



Ensuring we are environmentally responsible.



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 by 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 to meet.

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 achieve 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 will 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 fossil fuel solutions. From 2025, gas heating will no longer be installed in new homes.

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 Distribution Network Operators (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 to help our future networks to be more flexible and support 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. Further details can be found in our Net Zero Communities Strategy, Vulnerability Strategy and our Social Contract.



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 and 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 submission](#).

Becoming a net zero organisation



Global climate change

In order to limit our impact on global climate change we need to set our own science based target (SBT) 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 SBT is 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.

Our Climate Change Resilience Strategy sets out how we will minimise the impact of environmental change on our operations.



Achieving net zero

In line with the above, and to help us to achieve our net zero ambitions, we will form direct partnerships with charities and organisations involved in the development and operation of UK based greenhouse gas removal schemes.

We do not intend to purchase carbon credits via a third party; we will instead ensure that all carbon sequestered directly from our involvement and investment with our partnerships is appropriately validated and independently verified so that it can be accounted for in our Business Carbon Footprint.

Further details can be found in the WPD annual Environment and 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 interrelationships 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 to ensuring that we meet all of our environmental compliance obligations, minimising all aspects of pollution to the environment and making continual improvements 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 DNOs via the Energy Networks Association (ENA).

We operate and manage a network of over 730km 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.

Being environmentally responsible



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 enter 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 reuseable 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

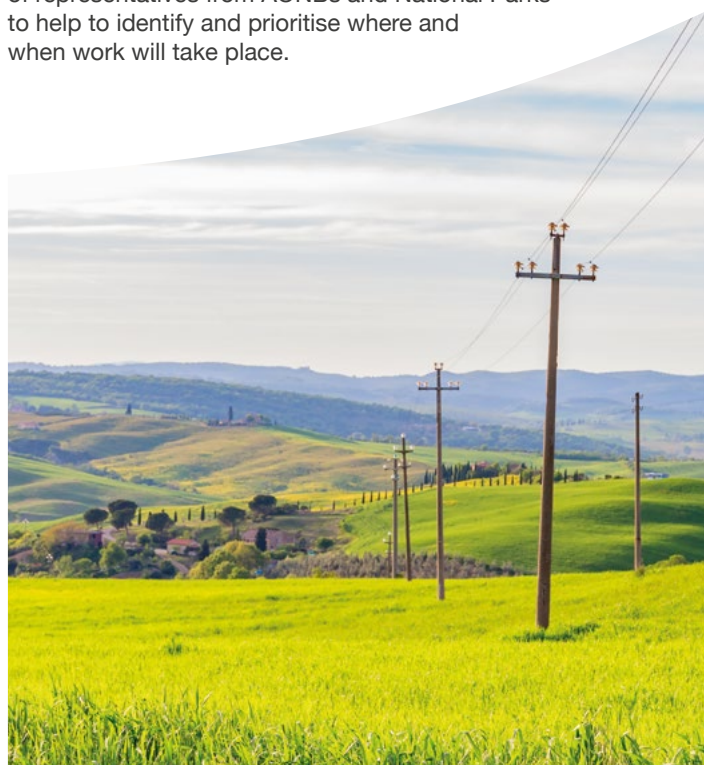
Air pollution, especially pollution from nitrous oxides (NOx), sulphurous oxides (SOx) and particulates arising from the use of diesel engines, is well documented and we are supportive of local authority clean air zones. In order to reduce our impact in this area we must ensure the successful rollout of our electric vehicle (EV) van replacement programme, revised company car leasing scheme and increased 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 National Parks and 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 visitors.

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 core 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°C to limit the climate impact of our activities.



Avoid damage to the environment by reducing the volume of oil leaked from fluid filled cables by 50% by 2028 and replacing 90km of the worst leaking circuits with non-oil alternatives putting WPD on target to remove all oil filled cables by 2060.



Significantly reduce our impact on climate change by delivering a 20% reduction in SF₆ losses and drive industry partners to develop technological alternatives to reduce overall volumes of SF₆ on the system.



Significantly reduce the environmental impact of our operations by achieving zero waste to landfill by 2028 (excluding hazardous waste) and delivering an overall 30% reduction in tonnage waste produced.



Improve visual amenity by removing at least 50km of overhead lines in National Parks and Areas of Outstanding Natural Beauty.



Achieve a 10% net gain in biodiversity (in line with nationally recognised assessment tools) for new major projects and selected primary and grid substation sites.

United Nations Sustainable Development Goals

WPD: United Nations Sustainable Development Goals

As part of our Environment Strategy we are aligning our activities and core strategic focus areas to a number of United Nations 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 goals 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 and activities to the United Nations SDGs are twofold;

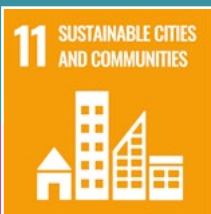
1

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 onset of the global coronavirus 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 lifecycle 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 United Nations 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 processes. |  Introduction of low carbon technologies through innovation and development of Distribution System Operator (DSO) capability. |
|  Sustainable procurement and resource use - purchased products, services, collaboration with manufacturers and other DNOs. |  Responsible contractor management. |
|  Sustainable operational vehicle fleet and rollout 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 SBTs. • Collaboration with LAs and communities on net zero ambitions. • Implementation of biodiversity net gain. |
|--|--|--|

United Nations Sustainable Development Goals (SDGs)



Sustainable cities and communities



Responsible consumption and production



Climate action

The 17 United Nations 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 living and promote wellbeing 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.	



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